



NEC3 Engineering & Construction Contract

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

and **[Insert at award stage]**
(Reg No. _____)

for
The design, manufacture, supply, construction, installation and commissioning of 2 X 3MVAR, 22 kV Shunt Capacitors and C-Type Filters at Makhathini Substation in the Empangeni Area of the KZN Operating Unit, for a period of twenty-four (24) months.

Contents:	No of pages
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Part C4 Site Information	[•]

ENQUIRY No. KZN171

Part C1: Agreements & Contract Data

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

C1.1 Form of Offer & Acceptance

Offer

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

The design, manufacture, supply, construction, installation and commissioning of 2 X 3MVAR, 22 kV Shunt Capacitors and C-Type Filters at Makhathini Substation in the Empangeni Area of the KZN Operating Unit, for a period of twenty-four (24) months.

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

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

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

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

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*.

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

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

Signature(s)

Name(s)	Brenda Cebekhulu
Capacity	Senior Manager Asset Creation
for the Employer	Eskom Holding SOC Limited

(Insert name and address of organisation)

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

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	_____	Brenda Cebekhulu
Capacity	_____	Senior Manager
		Asset Creation
On behalf of	(Insert name and address of organisation)	Eskom Holdings SOC Limited
Name & signature of witness	_____	_____
Date	_____	_____

C1.2 Contract Data

Part two - Data provided by the Contractor

Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)¹ 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	Makhathini Substation – GPS: 27°27'06.4"S 32°07'00.5"E
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

¹ 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 works is	31 July 2027	
11.2(14)	The following matters will be included in the Risk Register	1. Community unrest; Business forums & land occupant demands. 2. Late delivery of long lead imported goods. 3. Inclement weather. 4. Rock and boulders for bay 1 5. Live equipment within an energised substation. 6. Site access for abnormal vehicles.	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	Part 3: Scope of Work and all documents and drawings to which it makes reference.	
31.1	The programme identified in the Contract Data is	4 weeks.	
B	Priced contract with bill of quantities		
11.2(21)	The <i>bill of quantities</i> is in	(in figures) (in words), excluding VAT	
11.2(31)	The tendered total of the Prices is		
F	Management contract		
20.2	Work which the <i>Contractor's</i> will do himself is	Activity	price (lump sum or rate)
	Data for Schedules of Cost Components	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).	
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components	
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	Not applicable	
	The percentage for adjustment for Equipment in the published list is	Not applicable	

C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract

[Note to contract compiler:

Once it has been decided which securities are required for this contract delete from this file the ones not required, revise the notes below accordingly and delete this note.]

The *conditions of contract* stated in the Contract Data Part 1 include the following Secondary Options:

- Option X4: Parent company guarantee
- Option X13: Performance Bond
- Option X14: Advanced payment to the *Contractor*

Each of these secondary Options requires a bond or guarantee "in the form set out in the Works Information". Pro forma documents for these bonds and guarantees are provided here for convenience but are to be treated as part of the Works Information.

Option X16: Retention (not used with Option F)

The *Contractor* may provide a Retention Money Guarantee in the form stated here. When the *Employer* receives and accepts a Retention Money Guarantee exactly in the form stated he will instruct the *Project Manager* not to assess any amount be retained in terms of secondary Option X16.

The *Contractor* shall guarantee his ASGI-SA Obligations by providing the *Employer* with an ASGI-SA Guarantee in the form provided here.

[Note to contract compiler: If there are no ASGI-SA Obligations in this contract, delete the above statement]

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

Pro forma Parent Company Guarantee (for use with Option X4)

(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs,

Parent Company Guarantee for Contract No

With reference to the above numbered contract made or to be made between

Eskom Holdings SOC Ltd

(the *Employer*) and

{Insert registered name and address of the *Contractor*}

(the *Contractor*), for

{Insert details of the *works* from the Contract Data}

(the *works*).

I/We the undersigned

on behalf of the *Contractor's*
parent company

of physical address

and duly authorised thereto do hereby unconditionally guarantee to the *Employer* that the *Contractor* shall Provide the Works in accordance with the above numbered Contract.

1. If for any reason the *Contractor* fails to Provide the Works, we hereby agree to cause to Provide the Works at no additional cost to the *Employer*.
2. If we fail to comply with the terms of this Deed of Guarantee, the *Employer* may itself procure such performance (whether or not the Agreement be formally determined). The *Employer* is to notify us and we shall indemnify the *Employer* for any additional cost or expense it incurs.
3. Our liability shall be as primary obligor and not merely as surety and shall not be impaired or discharged by reason of any arrangement or change in relationship made between the *Contractor* and the *Employer* and/or between us and *Contractor*; nor any alteration in the obligations undertaken by the *Contractor* or in the terms of the Agreement; nor any indulgence, failure, delay by you as to any matter; nor any dissolution or liquidation or such other analogous event of the *Contractor*.
4. The *Employer* shall not be obliged before taking steps to enforce the terms of this Deed of Guarantee to obtain judgement against the *Contractor* in any court or other tribunal, to make or file any claim in liquidation (or analogous proceedings) or to seek any remedy or proceed first against the *Contractor*.
5. This Deed of Guarantee shall be governed by and construed in accordance with the laws of the Republic of South Africa and we hereby submit to the non-exclusive jurisdiction of the High Court of South Africa.

Signed at _____ on this _____ day of _____ 200_

Signature(s)	
Name(s) (printed)	
Position in parent company	
Signature of Witness(s)	
Name(s) (printed)	

Pro forma Performance Bond – Demand Guarantee (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs

Reference No. [●] [Drafting Note: Bank reference number to be inserted]

Performance Bond – Demand Guarantee: [Drafting Note: Name of Contractor to be inserted]

Project [] Contract Reference: [Drafting Note: Contractor contract reference number to be inserted]

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]
 - 1.2 "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]
 - 1.3 "Contract" – means the written agreement relating to the Project, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. [.]as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted])
 - 1.4 "Contractor" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]
 - 1.5 "Eskom" - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30].
 - 1.6 "Expiry Date" - means the date on which the Defects Certificate is issued in terms of the Contract.
 - 1.7 "Guaranteed Sum" - means the sum of R [●] ([●] Rand);
 - 1.8 "Project" - means [insert if applicable.].
2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:
 - 3.1 be signed on behalf of Eskom by a Group Executive, Divisional Executive, Senior General Manager, General Manager or its delegate;
 - 3.2 state the amount claimed ("the Demand Amount");

- 3.3 state that the Demand Amount is payable to Eskom in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:
- 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
- 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between Eskom and the Contractor.
6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.
7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
- 8.1 shall expire on the Expiry Date until which time it is irrevocable;
- 8.2 is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;
- 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
- 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
- 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
- 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____

Date _____

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

Bank's seal or stamp

Pro forma Advanced Payment Bond (for use with Option X14)

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Bond)

Eskom Holdings Limited
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs,

Advanced Payment Bond for Contract No.

With reference to the above numbered contract made or to be made between

Eskom Holdings SOC Limited

(the *Employer*) and

{Insert registered name and address of the Contractor}

(the *Contractor*), for

{Insert details of the works from the Contract Data}

(the *works*).

I/We the undersigned

on behalf of the Surety

of physical address

and duly authorised thereto do hereby bind ourselves as Surety and co-principal debtors in solidum for the due and proper repayment by the *Contractor* to the *Employer* of the advanced payment made by the *Employer* to the *Contractor* under the Contract, and for all losses and expenses that may be suffered or incurred by the *Employer* as a result of non-payment by the *Contractor*, subject to the following conditions

1. The terms *Employer*, *Contractor*, and the *works* have the meaning as assigned to them by the *conditions of contract* listed in the Contract Data for the aforesaid Contract.
2. We renounce all benefits from the legal exceptions "Benefit of Excussion and Division", "No value received" "Revision of Accounts", "Cession of Action" and any other exceptions which might or could be pleaded against the validity of this bond, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted.
3. The *Employer* has the absolute right to arrange his affairs with the *Contractor* in any manner which the *Employer* deems fit and without being advised thereof the Surety shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the Surety. Without derogating from the foregoing compromise, extension of the construction period, indulgence, release or variation of the *Contractor's* obligation shall not affect the validity of this Advance Payment bond.
4. This bond expires on the date when the Surety receives a notice from the *Project Manager* stating that the advanced payment has been repaid to the *Employer* in terms of the Contract, or liquidated by deductions from other payments due to the *Contractor*.
5. The amount of the bond shall be payable to the *Employer* upon the *Employer's* demand and no later than 7 days following the submission to the Surety of a certificate signed by the *Project Manager* stating the amount of the *Employer's* losses, damages and expenses incurred as a result of the non-

performance aforesaid. The signed certificate shall be deemed to be conclusive proof of the extent of the *Employer's* loss, damage and expense.

6. Our total liability hereunder shall not exceed the sum of (R) which is equal to the advance payment.
7. This Advanced Payment Bond is neither negotiable nor transferable and is governed by the laws of the Republic of South Africa.

Signed at _____ on this _____ day of _____ 200_

Signature(s)

Name(s) (printed)

Position in Surety company

Signature of Witness(s)

Name(s) (printed)

Pro forma Retention Money Guarantee (may be used when Option X16 applies)

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)

Eskom Holdings SOC Limited
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs

Reference No. [●] [Drafting Note: Bank reference number to be inserted]

Retention Money Guarantee: [Drafting Note: Name of Contractor to be inserted]

Project [] : Contract Reference: [Drafting Note: Contractor contract reference number to be inserted]

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]
 - 1.2 "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]
 - 1.3 "Contract" – means the written agreement relating to the Project, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted])
 - 1.4 "Contractor" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]
 - 1.5 "Eskom" - means Eskom Holdings SOC Limited, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30
 - 1.6 "Expiry Date" - means the date on which the Defects Certificate is issued in terms of the Contract.
 - 1.7 "Guaranteed Sum" - means the sum of R [●] ([●] Rand); [Drafting Note: Insert amount of Retention Money Guarantee.].
 - 1.8 "Project" - means the.....
2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:
 - 3.1 be signed on behalf of Eskom by a director of Eskom or his authorised delegate.

- 3.2 state the amount claimed ("the Demand Amount");
- 3.3 state that the Contractor has failed to carry out his obligation(s) to rectify certain defect(s) for which he is responsible under the Contract (and the nature of such defect(s)) alternatively that the Demand Amount is payable to Eskom in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:
- 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
- 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed by the fact that a dispute may exist between Eskom and the Contractor.
6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.
7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
- 8.1 shall expire on the Expiry Date until which time it is irrevocable;
- 8.2 is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;
- 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
- 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
- 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
- 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ Date _____ Bank's seal or stamp

For and behalf of the Bank

Bank Signatory: _____ Bank Signatory: _____

Witness: _____ Witness: _____

Pro forma ASGI-SA Guarantee

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)

Eskom Holdings Limited
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs

Reference No. [●] [Drafting Note: Bank reference number to be inserted]

Pro-Forma ASGI-SA Guarantee: [Drafting Note: Name of Contractor to be inserted]

Project [] Contract Reference: [●] [Drafting Note: Contractor contract reference number to be inserted]

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]
 - 1.2 "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]
 - 1.3 "Contract" – means the written agreement relating to the Project, entered into between the *Employer* and the *Contractor*, on or about the [●] day of [●] 200[●] (Contract Reference No. [●] as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted])
 - 1.4 "*Contractor*" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]
 - 1.5 "*Contractor's ASGI-SA Obligations*" – means the *Contractor's ASGI-SA Obligations* under and as defined in the Contract.
 - 1.6 "*Employer*" - means Eskom Holdings Limited, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/06.
 - 1.7 "Expiry Date" - means the [●] day of [●] 200[●]; [Drafting Note: anticipated date of issue of ASGI-SA Performance Certificate to be inserted.]
 - 1.8 "Guaranteed Sum" - means the sum of R [●] ([●] Rand);
 - 1.9 "Project" – means the
2. At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer*, as security for the proper performance by the *Contractor* of the *Contractor's ASGI-SA Obligations* and hereby undertake to pay to the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:
 - 3.1 state the amount claimed ("the Demand Amount");
 - 3.2 state that the Demand Amount is payable to the *Employer* in the circumstances contemplated in

the Contract.

4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:
 - 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
 - 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
 - 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
 - 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.
6. The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.
7. Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
 - 8.1 shall expire on the Expiry Date until which time it is irrevocable;
 - 8.2 is, save as provided for in 7 above, personal to the *Employer* and is neither negotiable nor transferable;
 - 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
 - 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
 - 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the courts of the Republic of South Africa.
 - 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____

Date _____

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

Bank's seal or stamp

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

1. 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 - 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.

2. Function of the Bill of Quantities

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

3. Guidance before pricing and measuring

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

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

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

plus Fee is used.

4. Measurement and payment

4.1. Symbols

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

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m 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)

4.2. General assumptions

- 4.2.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 4.2.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.
- 4.2.3. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.
- 4.2.4. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.
- 4.2.5. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Works Information.

4.3. Departures from the *method of measurement*

4.3.1.

4.4. Amplification of or assumptions about measurement items

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

4.4.1.

C2.2 the *bill of quantities*

A copy of the Bill of Quantities is attached below:

SUMMARY OF BILL OF QUANTITIES MAKHATHINI SUBSTATION CAPACITOR BANKS		
Page No	Description	Amount
NB: ALL MATERIAL TO COMPLETE THE ENTIRE SCOPE OF WORK TO BE SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE STATED		
1	Bill No. 1 - Preliminary and General	
2	Bill No. 2 - Bulk Earthworks	
3	Bill No. 3 - Surface Drainage	
4	Bill No. 4 - Bund Areas	
5	Bill No. 5 - Main Earthmat	
6	Bill No. 6 - Security Fencing	
7	Bill No. 7 - Foundations	
8	Bill No. 8 - Steelwork	
9	Bill No. 9 - Equipment	
10	Bill No. 10 - Control Plant	
11	Bill No. 11 - Stringing	
12	Bill No. 12 - Capacitor Banks	
TOTAL (Excl. VAT)		
VAT @ 15%		
TOTAL (Incl. VAT)		

BILL NO. 1 - PRELIMINARY AND GENERAL					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
1	Contractual Requirements				
1.1	"The sum shall cover the contractor's initial costs of providing sureties, insurance of the Works and plant, third party or public liability insurance and unemployment insurance to cover his compliance with the requirements of the Workmen's Compensation Act, 1941 (Act NO. 30 of 1941) and any other initial financing obligations of a preliminary and general nature, such as contributions to the CEITB."	Sum	1		
2	Establishment of facilities on site:				
2.1	a) Supply and Install Diamond mesh fencing at 1.8 Meters high	Sum	1		
2.2	b) Temporary diamond mesh lockable double leaf gate 1.8m high x 6m wide	No.	1		
2.3	c) Temporary diamond mesh lockable pedestrian gate, 1m wide	No.	1		
2.4	d) Site Office/Meeting Room	Sum	1		
2.5	e) Storage shed	Sum	1		
2.6	f) Water Supply & Ablution facilities	Sum	1		
2.7	g) Plant, tools & equipment	Sum	1		
3	Removal of all items indicated above upon completion of construction and making good and restoring of the Site to the satisfaction of the Project Manager.	Sum	1		
4	Provision of "As Built" drawings.	Sum	1		
5	Construction Name Board - The Contractor shall supply, install and maintain one project signboard bearing the name of the project, the name and logo of Eskom, and the Contractor.	Sum	1		
6	Provision of samples of materials to be used (only materials supplied by contractor). <i>(Provisional)</i>	Sum	1		
7	Provision for the compilation of the Construction Programme, updated on a fortnight basis and Quality Assurance Programme for the works.	Sum	1		
8	Occupational Health & Safety Requirements				
8.1	Provision of personal protective equipment and clothing for all the contractor's staff, including sub-contractors.	Sum	1		
8.2	Provision of safety measures, e.g.. Fall arrest systems, shoring for safety purposes etc.	Sum	1		
8.3	Compliance with OH&S Act & Construction Regulations, for other provisions not accounted for elsewhere	Sum	1		
9	Compliance with the Requirements for the Expanded Public Works Programme				
	<i>Note: The reports are to be submitted with the contractors monthly invoice.</i>				
9.1	Compliance with the Requirements for the Expanded Public Works Programme (incl. monthly reports).	No Charge			
SUB TOTAL SECTION A					

10	Time Related Items (To maintain site for the duration of the project)				
	Operate and Maintain Facilities on Site:				
10.1	a) Site Office/Meeting Room	Month	24		
10.2	b) Storage shed	Month	24		
10.3	c) Staff living accommodation	Month	24		
10.4	b) Ablution facilities	Month	24		
10.5	c) Plant, tools & equipment	Month	24		
10.6	d) Temporary water supply	Month	24		
10.7	e) Temporary electric power supply	Month	24		
11	Construction Manager				
11.1	Contractor shall provide a competent SACPCMP registered Construction Manager for the management and the supervision of the whole construction works on a full-time basis	Month	24		
12	Community Liaison Forum				
12.1	The contractor is to establish a local stakeholder steering committee made up of the community traditional leadership, political leadership, business forums and other parties deemed necessary for the forum. This committee must hold formal monthly meetings (at a minimum) and manage the allocation of sub-contractor work, community and land-owner issues related to this project and mitigate disruptions to work on site. Time and money must be allowed for this committee and time for the disruptions that may occur is to be accommodated in the construction programme. <i>(Rate is Provisional)</i>	Month	24		
12.2	Community Liaison Officer conversant in Zulu and local cultural norms	Month	24		
13	Safety Officer				
13.1	Contractor shall provide a competent SACPCMP registered Safety Officer to ensure the safety of all individuals on site. The Safety Officer is to ensure all construction and safety regulations are adhered to on site.	Month	24		
14	Storeman				
14.1	Storeman is required to reconcile and quantify All material on site including Eskom supplied material using the correct material return to stores forms. The Storeman shall adhere to the implementation and maintenance plan for Materials Management System for the duration of the contract.	Month	24		
15	Security				
15.1	Contractor shall provide security guard/s to ensure the site including offices, storage sheds and all Eskom material are protected from theft or any damage. The Contractor needs to ensure that the above mentioned is guarded 24hrs a day.	Month	24		
SUB TOTAL SECTION B					
TOTAL SECTION A & B					

BILL NO. 2 - BULK EARTHWORKS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
	EXTERNAL WORK				
	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
	EARTHWORKS				
	<u>Excavations, filling, base courses, etc</u>				
1	Preparation of site and stripping of topsoil and grass to a depth of 150mm and stockpile. To be stockpiled in an accessible position adjacent to the site.	m ³	56.00		
2	Cut to spoil for yard extension compacted to 90% MOD AASHTO, measured in cut. (<i>Provisional</i>)	m ³	170.00		
3	Rip and recompact upper 150mm layer of in-situ subgrade to 90% MOD AASHTO, measured in cut.	m ³	56.00		
4	Construct base (150mm thick) using imported G4 graded crusher stone compacted to 95% MOD AASHTO. <i>Note: Certificate to be provided for the required material. If Quarry cannot provide certificate, Contractor to provide Geotech Specialist to certify the mat</i>	m ³	81.00		
5	<i>Extra over Earthworks for excavation of boulders and hard rock (provisional). All rock and boulder holes to be verified by the Project Engineer prior to excavation.</i>				
5.1	Hard Rock (<i>Provisional</i>)	m ³	170.00		
5.2	Boulders (<i>Provisional</i>)	m ³	12.00		
	WEED KILLERS, INSECTICIDES, ETC (complete with certificate)				
6	Application of herbicide and pesticide to substation yard prior to placing yard stone	m ²	490.00		
7	YARD STONE				
7.1	Removal of existing Yard Stone (11mx11m 0.1m x 2) to required depth	m3	30.00		
7.2	Supply & spread 100mm thick layer of 26.5mm Granite/Tillite, single size, unweathered stone (to cover the Yard platform). <i>Note: Stone needs to be washed before being laid on Yard platform.</i>	m3	100.00		
7.3	Top up the existing yard stones with 50mm thick layer of 26.5mm Granite/Tillite, single size, unweathered stone (to cover the Yard platform). <i>Note: Stone needs to be washed before being laid on Yard platform</i>	m3	100.00		
	REHABILITATION				
9	Site rehabilitation	m ²	300.00		
	TESTS				
	<u><i>Prescribed tests to determine degree of compaction or other properties of ground or filling</i></u>				
10	Modified AASHTO Density test	No	1.00		
TOTAL					

BILL NO. 3 - SURFACE DRAINAGE						
ITEM NO.	REF.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
		<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
		CONCRETE STORMWATER CHANNELS ETC				
		ER00024-17-01-07				
1		<u>New dissipator</u> (ER00024-20-06-01)				
1.1		Excavation in earth not exceeding 2m deep	m ³	2.12		
1.2		100 - 150mm Boulder stone to dissipator	m ³	2.12		
1.3		Extra over for excavation in Rock (Provisional QTY)	m ³	2.12		
2		<u>Concrete cut-off drain</u> (ER00024-20-06-01)				
2.1		Excavation in earth not exceeding 2m deep	m ³	43.00		
2.2		Soil poisoning to excavations	m ²	144.00		
2.3		25MPa concrete	m ³	21.00		
2.4		Construction joints at 5000mm centres using 10mm polystyrene sheet in 100mm thick slab	m	28.00		
2.5		0.15mm Polyethylene sheeting	m ²	144.00		
3		<u>Stormwater Pipe</u> (ER00024-20-11-00)				
3.1		Excavation for trench, including backfilling, not exceeding 2m deep	m ³	16.00		
3.2		Extra over for excavation in Rock (Provisional QTY)	m ³	16.00		
3.3		Soil poisoning to excavations	m ²	54.00		
3.4		Class C bedding	m ³	6.00		
3.5		450mm Dia Concrete pipe	m	18.00		
4		<u>Manhole</u>				
4.1		Manhole complete including all excavation, brickwork, plaster, reinforcement and concrete	No.	1.00		
5		<u>Headwall</u> (ER00024-20-06-01)				
5.1		Excavation in earth not exceeding 2m deep	m ³	0.70		
5.2		25Mpa concrete, including formwork	m ³	1.00		
5.3		Type ref 311 weldmesh reinforcement	m ²	3.35		
6		<u>Stilling Basin</u> (ER00024-20-06-01)				
6.1		Excavation in earth not exceeding 2m deep	m ³	4.00		
6.2		100 - 150mm boulder - grouted stone pitching	m ³	4.00		
TOTAL						

BILL NO. 4 - BUND AREAS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
	EARTHWORKS				
	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
1	EXCAVATION, FILLING, ETC., OTHER THAN BULK EXCAVATION				
	Excavation in earth not exceeding 2m deep				
1.1	Strip footings to capacitor banks 1 & 2 bundwalls	m ³	16.00		
2	SOIL POISONING				
	Approved brand of anti - termite poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten:				
2.1	To bottoms and sides of trenches, bases, etc.	m ²	95.00		
	CONCRETE, FORMWORK AND REINFORCEMENT				
3	REINFORCED CONCRETE				
3.1	20MPa/19mm concrete				
3.2	Strip footings to capacitor banks 1 & 2 bundwalls	m ³	2.60		
4	CONCRETE SUNDRIES				
	Test cubes, etc.				
4.1	Making and testing 150 x 150 x 150mm concrete strength test cube and complete with certificate.	No.	4.00		
	Precast concrete				
4.2	500 x 500 x 30mm Precast concrete slab	No.	2.00		
	MASONRY				
5	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of Firelight Satin facebricks in class II mortar				
5.1	220mm one brick wall to capacitor banks 1 & 2 bundwalls	m ²	19.00		
5.2	Roller course capping to bundwalls	m	47.00		
6	FACE BRICKWORK				
	35 Mpa Min firelight satin facebrick laid fairface with pointed joints finish:				
6.1	Extra over brickwork for facing	m ²	18.00		
7	BRICKWORK SUNDRIES				
7.1	75mm Galvanised pipe, fitted with tee-off syphon pipe and gate valve	No	2.00		
8	SCREEDS				
	Screeds on concrete:				
8.1	100mm concrete screed to inside of capacity bundwalls in minimum slope 1:200 as per drawings ER00024-20-09 and ER00024-20-10	m ²	63.00		

	EXTERNAL WORK				
9	KERBING				
	Channelling, kerbing, edging, etc				
9.1	Precast concrete kerbing as per ER00024-17-04-05, including excavation, concrete and backfilling	m	58.00		
10	FENCING				
	Fencing, posts, gates, etc				
10.1	Diamond mesh fence for capacitor banks, 1.8m high complete with steel posts and foundations, no overhang in accordance with detailed drawings: D-DT-5237 SH2A & 2B, latest revision	m	40.00		
10.2	Diamond mesh single leaf gate - 1.5m opening in accordance with the detailed drawings:D-DT-5237 SH 2A & 2B	No.	2.00		
	ELECTRICAL WORK				
11	EARTHING				
11.1	Excavation for Earth Mat trenches (500mm Wide x 1000mm Deep Trench), including backfilling and compaction	m ³	20.00		
11.2	Extra Over for Excavation in Rock (<i>Provisional QTY</i>)	m ³	10.00		
11.3	The supply and installation of Main Grid Earth Mat – Ø: 10mm Annealed Cu Round Bar (0,7kg/m)	m	40.00		
11.4	The supply and installation of Earth Tails – 50mm x 3mm Flat Copper Strips (1,4kg/m)	m	30.00		
TOTAL					

BILL NO. 5 - MAIN EARTHMAT					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
	ELECTRICAL WORK				
	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
	EARTHMAT INSTALLATION				
1	Earthworks, etc.				
1.1	Excavation for Earth Mat trenches (500mm Wide x 1000mm Deep Trench), including backfilling and compaction	m ³	74.00		
1.2	Extra Over for Excavation in Rock (<i>Provisional QTY</i>)	m ³	22.20		
2	Earth Mat & Earth Tails				
	<i>The unit rate shall include the supply and installation of earth mat as per Eskom Earthing Standard D-DT-5240 (Sheets 01 to 21), Eskom Foundation Drawings and Design Drawings ER00024-17-04-05</i>				
2.1	Main Grid Earth Mat – Ø: 10mm Annealed Cu Round Bar (0,7kg/m)	m	147.00		
3	Earth Mat Connections				
3.1	Main Earth Mat to Main Earth Mat	No.	21.00		
4	Testing				
	<i>Allowance shall be made for the testing of the Earth Mat in accordance with SANS 10199 and Eskom Specifications (SCSASAAL9 Rev2 and SCSASABK3 Rev0). Included shall be the provision of test certificates and all documentation as required. Tests to be done using the 61.8% and four potential method. There shall be two of these tests done diagonally on the opposite sides of the substation platform. Test shall be approved and witnessed by the Project Engineer or Site Representative. The above mentioned needs to be carried out by a professional earthing contractor.</i>				
4.1	Measuring of Earth Mat Resistance (in accordance to SANS 10199).	Sum	1.00		
5	Soil Resistivity Testing				
	<i>Allowance shall be made for the testing of the Soil Resistivity in accordance with SANS 10199 and Eskom Specifications (SCSASAAL9 Rev2 and SCSASABK3 Rev0). Test to be done only after completion of the Cut and Fill for the platform. Included shall be the provision of test certificates and all documentation as required. Test to be done using the Wenner method. Two sets of readings shall be taken diagonally across the site, maintaining the centre position of the probes. Test shall be approved and witnessed by the Project Engineer or Site Representative. The above mentioned needs to be carried out by a professional earthing contractor.</i>				
5.1	Measuring of Soil Resistivity	Sum	1.00		RATE ONLY
TOTAL					

BILL NO. 6 - SECURITY FENCING					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
	DISMANTLING				
	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
	Taking down and removing				
1	Steel palisade security fence with concrete posts, including gate. To be disposed off at an appropriate waste site	m	29.00		
	EXTERNAL WORK				
	KERBING				
	<u>Channelling, kerbing, edging, etc</u>				
2	Precast concrete kerbing as per ER00024-17-04-05, including excavation, concrete and backfilling	m	40.00		
3	FENCING				
	<u>Fencing, posts, gates, etc</u>				
3.1	Steel Palisade security fence, 2.4m in height, complete with posts and foundations as detailed in ER00024-17-04-05	m	40.00		
3.2	Extra Over for Excavation in Rock (<i>Provisional QTY</i>)	m ³	2.00		
	ELECTRICAL WORK				
	EARTHING				
4	Earth Tails – 50mm x 3mm Flat Copper Strips (1,4kg/m)	m	1.20		
5	Earth Mat Connections				
5.1	Installation of main earth mat to fence tails	No	2.00		
5.2	Installation of earth tails to fence posts	No	2.00		
TOTAL					

BILL NO. 7 - FOUNDATIONS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
	CONCRETE, FORMWORK AND REINFORCEMENT				
	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
	CONCRETE SUNDRIES				
1	Equipment Foundations				
	<i>Setting out, excavation, removal of excavated material, shuttering, casting, curing and finishing of the following concrete foundations (incl. the supply delivery and installation of all holding down bolts, nuts, steel reinforcement, earth tails and including curing compound). Refer to Drawing ER00024 Set 17 (Sht 03) for foundation layout.</i>				
1.1	22kV Capacitor Bank Foundation	No.	2.00		
1.2	22kV Isolator Foundation (D-DT 5205/AR9)	No.	2.00		
1.3	22kV Kiosk Breaker Foundation (D-DT 5216/BR6)	No.	2.00		
1.4	22kV Neutral CT Foundation	No.	2.00		
1.5	22kV Reactor Foundation	No.	2.00		
1.6	Extra Over for Excavation in Rock (<i>Provisional QTY</i>)	m ³	11.00		
2	CONCRETE SUNDRIES				
	Test cubes, etc.				
2.1	Making and testing 150 x 150 x 150mm concrete strength test cube and complete with certificate. (Provisional)	No.	12.00		
2.2	Concrete slump test	No.	3.00		
3	Certificates				
3.1	Concrete work, Test Certificates, compaction	Sum	1.00		
TOTAL					

BILL NO. 8 - STRUCTURAL STEELWORK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
-	STRUCTURAL STEELWORK				
-	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
-	<u>Supply, Assembling and Erection of Steelwork (As per standard drawings)</u>				
-	<i>This activity includes the supply of all bolts, nuts, washers etc. according to the bolt schedules on the Standard Drawings and for attaching the equipment to the steel work. Refer to Drawing ER00024 Set 17 (Sht 2) for General Arrangement and Steelwork Marking Plan.</i>				
1	Support, 22kV Isolator, 167.08kg	Each	2		
2	Support, 22kV, Combo Breaker	Each	2		
TOTAL FOR STEELWORK					

BILL NO. 9 - EQUIPMENT						
ITEM NO.	DESCRIPTION	UNIT	QTY	SUPPLY RATE	INSTALL RATE	TOTAL PRICE (SA RANDS)
-	EQUIPMENT					
-	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>					
-	<i>Install and adjust, fit for operation, the following equipment to the relevant manufacturers' specification and requirements on the erected supports, including earthing and labelling:</i>					
1	ISOL, 22kV 2500A 25kA CRDB 16Aux Sw, 31mm/kV, 50mm Pad	Each	2			
2	BKR,CIRC:COMBO ;22 KV ;1250 A ;25 KA (110VDC)	Each	2			
3	S/ARRESTER, 22kV 10kA, S/class, Polymer, MCOV 24kV, 31mm/kV	Each	6			
TOTAL FOR EQUIPMENT						

BILL NO. 10 - CONTROL PLANT					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE (SA RANDS)
	CAPACITOR BANK PROTECTION SCHEME				
	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
1	Design, Supply and installation of C70 type Scheme for Protection and Control of Capacitor bank and associated equipment including commissioning , terminations, design drawings, etc	Each	2		
2	Supply, mount and earth Swing Frame Panel 2400mm h x 800mm d x 600mm w	Each	2		
3	2nd Rear communication port for IED where applicable	Each	2		
4	SERIAL TRAY WITH 1 MOXA . 01 X 4 U MOXA RACK MOUNT BOX WITH SILK SCREEN (ISTE-304300)	Each	1		
	PROTECTION CABLING AND MISCELLANEOUS				
	<i>Note: The cables must be laid and buried in trenches 700 mm deep and 450 mm wide. The cables buried in a trench outside the HV yard must have warning tape (PVC org/blk d 8013) installed 300 mm above and the total length of the cables.</i>				
5	<u>Earthworks, etc.</u>				
5.1	Excavate trenches to install new control technology cables, including backfilling and compaction. <i>Quantity is Provisional. To be re measured on site.</i>	m	600		
5.2	Extra Over for Excavation in Rock (<i>Provisional QTY</i>)	m ³	56.70		
	<u>Supply and Install 1kV control cables:</u>				
	<i>Quantity is Provisional and should be confirmed with the Eskom PM and Eskom Control Plant engineer before ordering and installation.</i>				
6	BVX 12 DCV of size = 2.5 mm ²	m	300		
7	BVX 19 DCV of size = 2.5 mm ²	m	300		
8	BVX 4 ECV of size = 4 mm ²	m	500		
9	BVX 4 ECV of size = 2.5 mm ²	m	500		
	<u>Supply and Install cable glands:</u>				
10	Size 1	Each	30		
11	Size 2	Each	15		
	<u>Labelling</u>				
12	Label all the cables according to Eskom standards	ITEM	1		
	SCADA CABLING AND MISCELLANEOUS				
13	Cable, Communication: Armoured; Conductor: 4 Pair Twisted; Conductor Size: 22/24 AWG; For EIA - RS 485 DATA;	m	30		
TOTAL FOR CONTROL PLANT					

BILL NO. 11 - STRINGING					
ITEM. NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
-	STRINGING				
-	<i>Contractor is to undertake site survey and quantity verification and price accordingly. Rates to include all work, plant, equipment, labour & material necessary to complete the Item as per the Detailed Specification. Contractor to supply all material required to complete the work unless otherwise stated.</i>				
-	<i>Install clamps to manufacturer specifications and string conductor jumpers and droppers as per design specifications</i>				
1	CONDUCTOR, AAC, HORNET 16.3mm, 26kN	m	6		
2	CONDUCTOR, AAC, CENTIPEDE, 26.5mm, 67kN	m	60		
3	Clamps, bolted - compression	No.	48		
4	Clamps, bolted - bolted	No.	12		
TOTAL FOR STRINGING					

BILL NO. 12 - CAPACITOR BANKS						
MAKHATHINI 2 X 22kV 3MVAR CAPACITOR BANK C-TYPE 3H FILTER						
BILL OF ACTIVITIES AND DURATION						
Note	<i>The Bill of Activities for the Makhathini Capacitor Bank is as below, but not limited to these activities. The contractor can add additional activities to the following. The contractor is to provide timelines for the following activities. Rates to be inclusive of labour & material to complete the activity</i>					
No.	ACTIVITY	Unit	Quantity	Rate	Total (ZAR)	Duration (days)
1.1	Completion of Switching and other related Studies					
1.2	Project Management & Planning					
1.3	Design and Engineering of Capacitor Bank and associated equipment					
1.4	Design and Drawings Review					
1.5	Manufacture of Capacitor Bank, Filter and associated equipment (Material and Labour)					
1.6	Inspection and Testing (Factory Acceptance Tests and Type Tests) - Type test rates only					
1.7	Transport, Freight and off loading on site					
1.8	Site Erection and Installation Works, excluding stringing and clamping from bay equipment to cap bank yard measured under "stringing", and cap bank foundations, measured under "foundations"					
1.9	Field Acceptance Tests & Commissioning					
1.10	Manufacture and Supply of Spares, Safety Earthing kit, capacitance meters, special tools, etc					
1.11	Training of Eskom Employees					
1.12	Supply of all related documentation, manuals and drawings					
1.13	RAM Monitoring and Reporting					
	TOTAL					

PART 3: SCOPE OF WORK

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

C3.1: EMPLOYER'S WORKS INFORMATION

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1 Description of the works

1.1 Executive overview

Put yourself in the position of the *Contractor's* senior management who need a high level overview of what is involved – the scope of work - so that they can decide when tendering whether they have the resources and capability to undertake the work. Include a description of the different services and disciplines of work involved within the *works* and the location where most of the work will be carried out

1.2 Employer's objectives and purpose of the works

Provide an outline of the *Employer's* business case for the delivered project / contract. Describe the purpose of the *works* in such a manner that a legal test of 'fitness for purpose' can be applied in the event of any dispute about overall performance of the *works*.

1.3 Interpretation and terminology

If required include here definitions additional to those used in the *conditions of contract* which are required only for the purpose of making the Works Information easier to draft and read. Also list abbreviations used and provide a full interpretation of each one, for example:

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for construction
OBL	Outside battery limits

2 Management and start up.

2.1 Management meetings

The *conditions of contract* (e.g. Clause 16.2) require and other sections of the Works Information (e.g. safety risk management) may require (mandate) that a meeting shall be held. However the intention of all NEC contracts is that the Parties and their agents use the techniques of partnering to manage the contract by holding meetings designed to pro actively and jointly manage the administration of the contract with the objective of minimising the adverse effects of risks and surprises for both Parties.

Depending on the size and complexity of the *works*, it is probably beneficial for the *Project Manager* to hold a weekly risk register meeting (Clause 16.2). This could be used to discuss safety, compensation events, subcontracting, overall co-ordination and other matters of a general nature. Separate meetings for specialist activities such as programming, engineering and design management, may also be warranted.

Describe here the general meetings and their purpose. Provide particulars of approximate times, days, location, and attendance requirements, stipulating that attendees shall have the necessary delegated authority to make decisions in respect of matters raised at such meetings.

The right to hold specialist meetings should be stated generically and in such a way that ambiguity with other parts of the Works Information is avoided.

The following text could be used as a model for this section:

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Weekly on _____ at _____		
Overall contract progress and feedback	Monthly on _____ at _____		<i>Employer, Contractor, Supervisor, and _____</i>

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

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

2.2 Documentation control

Specify how documentation will be identified with an alpha numeric which indicates source, recipient, communication number etc. Provide details of any particular format or other constraints; for example that all contractual communications will be in the form of properly compiled letters or forms attached to e mails and not as a message in the e mail itself. State any particular routing requirements but note from ECC who issues what to whom.

2.3 Health and safety risk management

In addition to the requirements of the laws governing health and safety, Eskom may have some additional requirements particular to the *works* and the Working Areas for this contract. The text below provides for these being attached as an Annexure to this Works Information. PLEASE ALSO READ CORE CLAUSE 27.4 TOGETHER WITH Z7 IN THE ADDITIONAL CONDITIONS OF CONTRACT TO MAKE SURE THAT WHATEVER IS INCLUDED IN THE ANNEXURE FOLLOWS ON FROM THOSE CLAUSES.

The Divisional/Regional Safety Risk Manager or his representative having jurisdiction over the *works* must provide the relevant safety, health and environmental (SHE) criteria for incorporation into this Works Information. The SHE specification / scope must be signed off by the Divisional/Regional Safety Risk Manager or his representative confirming that the applicable safety criteria have been taken into account.

The Commodity Manager / Buyer must refer the tender to the Divisional/Regional Safety Risk Manager or his representative in order to evaluate against enquiry-specific safety criteria.

The Divisional Safety Risk Managers who will be responsible for the allocation of resources to assist P&SCM with the above processes are as follows:

- Generation: Roley McIntyre
- Transmission: Tony Patterson
- Distribution: Alex Stramrood
- Enterprises: Jace Naidoo
- Corporate: Kerseri Pather

The *Contractor* shall comply with the health and safety requirements contained in Annexure _____ to this Works Information.

SAFETY CONTRACTUAL REQUIREMENTS

Ref	OHS Tender Returnable
1.	Is the acknowledgement of Eskom's OHS rules and requirements form (Annexure B) signed by the Owner / CEO / MD and 2 witnesses?
2.	OH&S Organogram (<i>Approved by CEO/Director</i>)-Including names and appointment reference
3.	Occupational, Health and Safety Plan (OHS Plan) This must be relevant to the Scope of work of Electrical Work addressing and responding to the Eskom Health and Safety Specification (SHE Plan numbering must align to the left-hand side numbers in the SHE Specification). Review date to be included in the document). To be signed off by the Owner / CEO / MD.
4.	Risk Assessment procedure / Method Statement. Baseline Risk Assessment (Provided by the Client)
5.	Valid Letter of Good Standing or equivalent, i.e. COID, RMA or FEMA, (with applicable nature of business with relevant to the scope of work).
6.	Health and Safety Policy- <i>signed by the Owner / CEO or MD</i> , (Including review date).
7.	SHE Competency; proof of the following training certificates and appointment letters for each of the following. NB accreditation certificate to be provided by training provider for each competency. • CR 8(1) Construction Manager (Registered with SACPCMP) • Sec. 17 Health and Safety Representative (Appointment if not yet trained) • GSR 3(4) First Aid (Perform Basic Life support training) • CR 29 (h&i) Fire fighter • CR 9(1) Risk Assessor • CR 8(7) Construction Supervisor (With MV/LV line Construction) • CR 8(5) Safety Officer (Registered with SACPCMP) • CR 10(1) Fall protection planner/developer- SANS 229994 • Fall rescuer (Competency Certificate)-SANS 229998 • GAR 9(2) Incident investigator • CR 13 (1) Competent person for Excavation work • Stacking and Storage supervisor CR28(a)
8.	Medical Fitness Certificate (including Annexure 3 template)- (done by Occupational Health Practitioner / Nurse / Doctor (Minimum of 3)
9.	Fall Protection Plan as per CR10 (with Rescue Plan & Fall Risks) (Next Review date to be included and to be signed by CEO/MD)
10.	Substance Abuse Procedure or Policy. Policy must be sign by CEO/MD (With review date)
11.	Costing for SHE

2.4 Environmental constraints and management

Describe or cross refer to environmental constraints applicable to the *Contractor's* design and his activities on Site and how they should be managed. Include here or cross refer to an Annexure to the Works Information.

The *Contractor* shall comply with the environmental criteria and constraints stated in Annexure _____

ENVIRONMENTAL CONTRACTUAL REQUIREMENTS

PART A

Ref	KPI's
1.	Pre-requisite Is the acknowledgement of Eskom's SHE rules and requirements form (Annexure B) signed and a copy thereof attached to this tender submissions by the tenderer?
2.	Environmental Management Plan for the Scope of work addressing the following as a minimum: Applicable to medium risk: • Waste management (reduction, re-use, recycling, disposal). • Environmental induction. • Environmental incident management. • Emergency planning for environmental incidents.
3.	All: Environmental (or SHE/SHEQ) policy signed by Company Owner/CEO/MD: Commitment to: (1) compliance to environmental compliance obligations; and (2) environmental duty of care.

Score:

0 = Document not submitted OR submitted but does not satisfy the minimum requirements

1 = Document submitted, and the content satisfy the minimum requirements

OR

PART B

Ref	KPI's
1.	Annexure B Is the acknowledgement of Eskom's SHE rules and requirements form (Annexure B) signed and submitted by the tenderer?
2.	ISO 14001 Environmental Management Standard certificate.

0 = Document not submitted OR submitted but does not satisfy the minimum requirements

1 = Document submitted, and the content satisfy the minimum requirements

2.5 Quality assurance requirements

Specify minimum requirements for the *Contractor's* Quality Plan and Work Procedures or provide the *Employer's* Quality Plan if that is to be used. Make sure witness and hold points are identified generally and describe any particular requirements for QA outside the *working areas*. Indicate how the *Contractor's* QA documentation is to be submitted for acceptance and any conditions that need to be imposed relating to acceptance. State whether ISO compliance is a condition and if so which ISO standard shall apply.

QUALITY CONTRACTUAL REQUIREMENTS

Category 3 - Quality Requirements									
SECTION A : Quality Management System Requirements ISO 9001									
Objective evidence of documented QMS that is not certified but complies with ISO 9001									
A.1 Product / Service Scoping on ISO 9001 that defines and describes the QMS and its scope									
A.2 Quality Policy Approved by top management.									
A.3 Quality Objectives Approved by top management.									
A.4 Control of documented information (i.e. document and record control) Clause 7.5 of ISO 9001:2015									
A.5 Documented information for Control of nonconforming outputs Clause 8.7 of ISO 9001:2015									
A.6 Documented information for Nonconformity and Corrective action Clause 10.2 of ISO 9001:2015									
A.7 Documented information for Internal audit									
Clause 9.2 of ISO 9001:2015									
SECTION B : Evidence of QMS in operation (Tender Quality Requirements Ref 240-105658000)									
B.1 Documented information for defined roles, responsibilities and authorities - Organization chart and Responsibility matrix (must include but not limited to quality management function/role) (Clause 5.3 of ISO 9001:2015)									
B.2 Documented information for Control of Externally Provided Processes, Products and Services - Must include criteria for evaluation, selection, monitoring of performance, and re-evaluation of external providers (Clause 8.4 of ISO 9001:2015)									
SECTION C: Contract Quality Plan Requirements (Ref 240-105658000 and 240-109253698).									
Draft Contract Quality Plan specific to the scope of work as described in the tender documents (Ref ISO 10005)									
NB!	Draft	Contract/Project	Quality	Plan	has	important	QA	deliverables	
SECTION D: Quality Control Plan (Requirements (Ref 240-109253302) QCP/Checklist/ITP(Quality Control Plans) as per Scope of works (Ref ISO 10005)									
NB! Draft/Example of an Inspection and Test Plan (ITP) or Quality Control Plan (QCP) on similar and/or previous work done									
SECTION E: User defined additional Requirements & miscellaneous (Ref 240-105658000)									
Customer specific requirements & other standards and required can be listed and evaluated here									
E.1 Form A is completed and signed.									

2.6 Programming constraints

Describe the programming system (application) to be used if it is necessary to dictate this for project coordination purposes. Read clause 31.2 first then state the work of the *Employer* and Others to be shown on the programme per 4th bullet of clause 31.2 and what additional information (if any) is to go in the programme per the last bullet of clause 31.2. Describe any particular constraints on the order and timing of the work which the *Contractor* must take into account in his programme.

2.7 Contractor's management, supervision and key people

State any additional constraining requirements on *Contractor's* supervision and key people that are not already stated in other sections such as for Health and Safety. This section could be used to solicit an organogramme from the *Contractor* showing his people and their lines of authority / communication. This would be essential if the *Contractor* is a Joint Venture.

2.8 Invoicing and payment

The Z clauses make reference to invoicing procedures stated here in this Service Information. Also include a list of information which is to be shown on an invoice.

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

The *Contractor* shall address the tax invoice to Eskom Holdings SOC Ltd and include on each invoice the following information:

- Name and address of the *Contractor* and the *Project Manager*;
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number 4740101508;
- Description of service provided for each item invoiced based on the Price List;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- (add other as required)

Add procedures for invoice submission and payment (e. g. electronic payment instructions)

2.9 Insurance provided by the Employer

First read ECC3 Core Clause 87.1 and then add anything necessary for the management of insurance related issues such as a cross reference to where procedures for making claims can be found. Also provide contact details for persons capable of being able to answer any insurance related queries the *Contractor* may have, as well as to whom the information required by Marine Insurance may be addressed.

2.10 Contract change management

This section is intended to deal with any additional requirements to the compensation event clauses in section 6 of the core clauses; such as the use of standard forms. Not the same thing as documentation control.

2.11 Provision of bonds and guarantees

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

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

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

If Option C, D, E or F applies first read clause 52.2 and then state whether the *Contractor* is required to keep any other records. Include any other constraint which may be required in regard to format and filing of the records, and whether access for the *Project Manager* shall be provided in hard copy or electronically.

Could delete if Options A & B apply unless the *Employer* requires some form of control over the *Contractor's* record keeping.

2.13 Training workshops and technology transfer

Describe type and frequency of on job training workshops, as well as any obligation for technology transfer being included as part of the contract on Completion of the *works*.

3 Engineering and the *Contractor's* design

The content of this section will depend on whether the contract is for construction only with most of the design done by (or for) the *Employer* or whether it is a 'design and construct' contract. ECC provides for design by either Party in any proportion, which proportion done by the *Contractor* must be stated in this part of the Works Information.

3.1 *Employer's* design

Either

Describe what the *Employer* has designed for the *works* when the *Contractor* is mainly doing construction only. Could even state who has done or is doing the design for the *Employer* as this will give the *Contractor* an idea of the standard he may expect.

Or

Provide the *Employer's* operating philosophy / user requirement specification (URS) / performance specification to which the *Contractor* is to comply when he is required to design the *works*.

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

This is a mandatory requirement of core clause 21.1 and must be addressed in detail. Even when the contract is a traditional 'construction only' contract, the *Contractor* is probably still required to carry out workshop details from overall drawings provided by the *Employer* and to design temporary works.

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

This is a mandatory requirement of core clause 21.2 and must be addressed. Identify the extent of detail (the particulars) of the *Contractor's* design which is to be submitted to the *Project Manager* for his acceptance. This procedure may also include a design stage activity matrix or requirements for co-operation with Others on a multi party project. State requirements for drawings to be prepared by the *Contractor*.

3.4 Other requirements of the *Contractor's* design

Use this section to describe any particulars which must be taken into account by the *Contractor* in his design; for example codification (configuration management) of Plant and Materials.

3.5 Use of *Contractor's* design

First read core clause 22.1 and then include here the exceptions and other purposes if applicable. If there are none this section could be deleted leaving the core clause to stand.

3.6 Design of Equipment

On some complex projects requiring sophisticated temporary works, it could be in the Parties best interests that some details of the *Contractor's* design or proposed design of Equipment are shared with the *Project Manager*, not necessarily for his acceptance but as an assurance that the Equipment will be able to allow the

Contractor to Provides the Works efficiently and without delay. For example a tunnel boring machine, or specialised shuttering for a bridge or caisson. Draft in such a way that there is no doubt that the liability for such design and use of the Equipment remains with the *Contractor*. Clause 23.1 is always available to the *Project Manager* if this section is not used.

3.7 Equipment required to be included in the works

The defined term 'Equipment' in core clause 11.2(7) makes a cross reference to the Works Information concerning any Equipment which the *Contractor* is required to include in the works. Complete here or if not applicable either delete the heading or retain the heading and state 'None'.

3.8 As-built drawings, operating manuals and maintenance schedules

Use this section to describe these requirements. Pay particular attention to when and in what form they are required. Consideration should be given to obtaining operating manuals and maintenance schedules before Completion of the whole of the works when there is still considerable financial incentive for the *Contractor* to do so.

4 Procurement

There is a cross reference from the definition of Disallowed Cost in Options C D and E to the Works Information regarding procurement procedures. This part of the Works Information MUST include any such procedures to be able to administer this procedure. Options A & B may also require constraints on procurement procedures.

4.1 People

4.1.1 Minimum requirements of people employed on the Site

Specify any constraints relating to people employed to Provide the Works; for example permits for foreigners, training (other than H & S), use of labour from designated areas and industrial relations.

4.1.2 BBBEE and preferencing scheme

Specify constraints which *Contractor* must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures.

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

If the ASGI-SA requirements are to be included in this contract specify constraints which *Contractor* must comply with after contract award in regard to any ASGI-SA requirements. The ASGI-SA Compliance Schedule completed in the returnable tender schedules is reproduced here. If ASGI-SA does not apply, delete this paragraph.

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

[Insert the agreed ASGI-SA Compliance Schedule here]

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

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

4.2 Subcontracting

4.2.1 Preferred subcontractors

ECC does not make use of nominated subcontracting, but the *Employer* may list which subcontractors or suppliers the *Contractor* is required to enter into subcontracts with. This is usually only required where Plant and Materials need to be obtained from a particular supplier or group of suppliers in order to comply with operational standards.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

Specify any constraints on how the *Contractor* is to prepare subcontract documentation, whether use of the NEC system is compulsory or not (compulsory is recommended) and how subcontract tenders are to be issued, received, assessed (using a joint report?) and awarded.

4.2.3 Limitations on subcontracting

The *Employer* may require that the *Contractor* must subcontract certain specialised work, or that the *Contractor* shall not subcontract more than a specified proportion of the whole of the contract.

4.2.4 Attendance on subcontractors

State requirements for attendance on Subcontractors, if any

4.3 Plant and Materials

4.3.1 Quality

Quality is usually designed in or specified in the technical specifications referred to in section 6 of this Works Information. However to cover circumstances where quality may not be prescribed, this sub-paragraph could be used as an overarching default requirement. It could also be used to deal with how repairs are carried out after a Defect has been notified; for example can the item be fixed up or must it be replaced by a new one. See also SANS 1200A, sub-paragraph 3.1

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

State arrangements for collection by *Contractor* or delivery by others on behalf of the *Employer*, off loading, inspection, storage, care custody and control, return of unused Plant and Materials, etc. State whether any samples are to be provided by the *Employer* and if so how, where and when. Always include a statement to the effect that 'all other Plant and Materials are to be provided by the *Contractor*'.

4.3.3 *Contractor's* procurement of Plant and Materials

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

4.3.4 Spares and consumables

Some contracts may need to include provision for the supply of a minimum category of spares, fuel, oil or other feed stock and consumables which the *Employer* may need at or just after take over and that it is best the *Contractor* provide these initially as part of his Providing the Works.

4.4 Tests and inspections before delivery

Core Clauses 40 and 41 both make reference to the Works Information regarding tests and inspections. Specify any requirements here for any tests and inspections that are to be done by the *Supervisor* or Others before delivery to the Working Areas, particularly if such tests and inspections are to be carried out by agents of the *Employer* overseas.

4.5 Marking Plant and Materials outside the Working Areas

Core clauses 70.1 and 71.1 require the Works Information to state how the *Contractor* is to “mark” Plant and Materials which is outside the Working Areas if they are to be paid for before delivery to the Working Areas. Specify here how the *Contractor* is to mark the Plant and Materials.

4.6 Contractor's Equipment (including temporary works).

In contracts which require the *Contractor* to procure sophisticated or highly specialised Equipment that could have a major influence on the progress of the works, the *Employer* may wish to exercise constraints or include witness and hold points during manufacture, assembly or delivery of such Equipment. Include these constraints here taking care not to imply that the *Employer* or the *Project Manager* take on any liability as a result. See also section 3.6 above relating to the design phase of the *Contractor's* Equipment.

4.7 Cataloguing requirements by the Contractor

State whether cataloguing is applicable, if it is, reference the requirements for cataloguing that need to be satisfied by the *Contractor* (consult Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974).

5 Construction

This part of the Works Information addresses constraints, facilities, services and rules applicable to the *Contractor* whilst he is doing work on the Site during the construction and maintenance phase. It does not specify the work itself as that is included in Section 6 of the Works Information.

For contracts involving civil works the approach may be to incorporate SANS1200A or SANS 2000 into the contract. Whilst many of the headings below address the same issues, the list of headings below is more comprehensive. If the headings below are used, it may be prudent to delete paragraphs 3, 4 and 5 from 1200A after checking that their requirements have been included below as necessary. A similar approach can be used in contracts involving building works where the Model Trade Preambles are incorporated. Care should be taken to avoid inconsistency or ambiguity between this part of the Works Information and standard specifications incorporated by reference.

5.1 Temporary works, Site services & construction constraints

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

Sites such as Sasol Secunda and Koeberg Nuclear Power Station have very strict entrance requirements which tenderers need to allow for in their prices, and the *Contractor* has to comply with. State these or similar requirements here.

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

In addition to the above there may be other restrictions once on the Site, plus rules relating to roads, walkways and the provision of barricades

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

Restrictions and hours of work may apply on some Sites. It is very important that the *Contractor* keeps records of his people on Site, including those of his Subcontractors which the *Project Manager* or *Supervisor* have access to at any time. These records may be needed when assessing compensation events.

5.1.4 Health and safety facilities on Site

Section 2.3 deals with contractual H & S requirements in addition to those of the OHSA Act. This section allows the *Employer* to state what measures are to be taken on Site against disease and epidemics and in emergencies. Also describe where First Aid facilities provided by the *Employer* are located and any other emergency arrangements. Do not use if already addressed in 2.3. The cross reference from Clause 27.4 applies.

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

This sub-paragraph may not be required if these matters are dealt with in the general environmental requirements referred to in paragraph 2.4 above.

5.1.6 Title to materials from demolition and excavation

Clause 73.2 states that the *Contractor* has title to materials from excavation and demolition (e. g. copper) *only* as stated in the Works Information. Hence state here any special arrangements regarding such title. If nothing is stated then the default position is the *Contractor* has no such title.

5.1.7 Cooperating with and obtaining acceptance of Others

This sub-paragraph could be used to deal with two issues.

- 1) The cross reference from core clause 25.1 about cooperation generally as well as details about Others with whom the *Contractor* may be required to share the working areas. See clause 11.2(10) for the definition of Others.
- 2) Requirements for liaison with and acceptance from statutory authorities or land owners.

5.1.8 Publicity and progress photographs

State requirements for notice boards, advertising rights, media relations, photography and progress photographs if required.

5.1.9 Contractor's Equipment

This sub-paragraph is intended to address how records are to be kept of Equipment on Site including whether it is owned or hired. Include any constraints about scaffolding, rigs, heavy lifts and cranes, including removal from the Working Areas. Also silencing similar to Clause 4.1 in SANS 1200 A

5.1.10 Equipment provided by the Employer

Provide details of equipment made available for use by the employer and set out conditions relating thereto.

5.1.11 Site services and facilities

This is a mandatory cross reference from clause 25.2 in ECC3. State what the *Employer* will provide in the way of power, water, waste disposal, telecomms, ablutions, fire protection, lighting etc. Give hook up

locations and any constraints on how the hook up is to be done. Always conclude by stating that the *Contractor* shall provide everything else necessary for Providing the Works.

5.1.12 Facilities provided by the *Contractor*

Describe what the *Contractor* is to provide in the way of Site accommodation, laboratories, storage, vehicles and office equipment etc for the *Project Manager* and the *Supervisor*, and any restrictions or minimum requirements concerning the *Contractor's* own facilities. State requirements for facilities to be provided by the *Contractor* such as construction camps. Also state what happens to these facilities upon completion of the contract. Set out constraints, if any, as to the location by the *Contractor* of such facilities on the Site and requirements for drawings of Site facilities, as necessary.

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

Details under this sub-paragraph are very contract specific and may be quite extensive in some cases. State requirements for the inspection with the owners of adjacent buildings and properties and representatives of local authorities before commencing with the *works* that have the potential to damage surrounding buildings and property. State whether *Contractor* is required to inspect the work of Others to which he is required to connect and if so by when to avoid delays to his work.

5.1.14 Survey control and setting out of the *works*

Provide information on survey controls established by the *Employer*, if any, and state requirements for survey control and the setting out of the *works*.

5.1.15 Excavations and associated water control

State any particular requirements for handling deep foundations and controlling water from excavations.

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

Describe known services making reference to drawings containing known services and state requirements for locating, marking and recording such services.
State requirements for the treatment of existing services i.e. their termination, diversion or continued use, either temporarily or permanently, and set out the procedures relating thereto.
State requirements, as necessary, for the use and availability of detection equipment for the location of underground services.
State responsibility for damage to services, known and unknown, and requirements for working in close proximity to services etc.
State requirements and reinstatement procedures for the notification and repair of damage to services and any penalties applicable to the damage of services.

5.1.17 Control of noise, dust, water and waste

State requirements, if any.

5.1.18 Sequences of construction or installation

Only prescribe sequences of work where absolutely necessary such as when *Contractor* has to give access to Others (without take over) and for technical reasons such as under tidal conditions and in rivers.

5.1.19 Giving notice of work to be covered up

State the procedure for notifying the *Supervisor*

5.1.20 Hook ups to existing works

State any constraints

5.2 Completion, testing, commissioning and correction of Defects

5.2.1 Work to be done by the Completion Date

This is mandatory. Core clause 11.2(2) defines Completion as when the *Contractor* has done all the work which the Works Information states he is to do by the Completion Date. Rather than list all work to be done by the Completion Date, state that all work is to be done by the Completion Date except for [•]. For example:

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

Item of work	To be completed by
As built drawings of	Within days after Completion
Performance testing of the works in use as specified in paragraph of this Works Information.	See performance testing requirements.

5.2.2 Use of the works before Completion has been certified

Clause 35.2 in ECC3 provides that the *Employer* may use any part of the works before Completion has been certified but if he does so he takes over the part of the works except if the use is for a reason stated in the Works Information. State the reason here if this applies.

5.2.3 Materials facilities and samples for tests and inspections

State what materials facilities and samples for tests and inspections the *Contractor* and the *Employer* are to provide, per core clause 40.2.

5.2.4 Commissioning

Required mainly for contracts including mechanical and electrical work. Would typically refer to detailed commissioning procedure attached as an Annexure. Confirm whether commissioning is to be done before or after Completion. If after Completion, include this item of work in the list in sub-paragraph 5.2.1 above.

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

In order to put the *works* into operation the *Employer* may require the *Contractor* to either do this for him or be in attendance whilst he does it, depending on who is the responsible person. State requirements of the *Contractor* here together with any special arrangements associated with operating plant and machinery.

5.2.6 Take over procedures

Take over is after or at the same time as Completion. The *Employer* may require the *Contractor* to provide assistance, security personnel on a temporary basis etc.

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

Clause 43.4 requires that the *Project Manager* arranges for the *Employer* to allow the *Contractor* access to and use of a part of the *works* which has been taken over if needed to correct a Defect. After the *works* have been put into operation, the *Employer* may require the *Contractor* to undertake certain procedures before such access can be granted (for example barricading a motorway or in a nuclear power station). Include these here.

5.2.8 Performance tests after Completion

Many design and build or turnkey projects require the *Contractor* to demonstrate that the *works* can operate as guaranteed by the *Contractor* (in *Contractor's Works Information*) or specified by the *Employer* either here or elsewhere in this Works Information. State here the procedures for carrying out such proving tests. These details should link up with any performance levels stated in Contract Data if secondary Option X17 in ECC3 applies.

5.2.9 Training and technology transfer

Include if the *Employer* requires the *Contractor* to provide training in the use and maintenance of the *works* or any associated transfer of technology from him to the *Employer*.

5.2.10 Operational maintenance after Completion

The *Employer* may require the *Contractor* before the *defects date* to perform certain duties after Completion and take over which relate to maintenance of the *works*. (Not to be confused with Defect correction) For example oil and filter changes

6 Plant and Materials standards and workmanship

This section of the Works Information contains all the specifications for the work which is left behind; the permanent works. It is likely to be the largest section by far and may even be compiled in volumes, e. g. Section 6 Volume 1: Civil Engineering Works. In design and construct contracts, it may be compiled in accordance with systems within the *works*; e. g. Section 6 Volume 4: Crushers.

Because practice varies widely between employers it is not practical in a general template such as this to deal with all arrangements. Only the discipline based section subheadings are provided below in the order the *works* are likely to be constructed together with some notes of a general nature.

6.1 Investigation, survey and Site clearance

Some contracts may require the *Contractor* to carry out further investigation of existing facilities or of the Site before commencing final design. There could be constraints on Site clearance especially in pipeline or transmission grid servitudes.

6.2 Building works

Reference could be made to the latest Model Trade Preambles published by the Association of South African Quantity Surveyors. However these have been developed for use with the JBCC series of contracts and an approach where description of the work is made part of the bill of quantities, which is not the case in other forms of contract. Only parts of the Model Trade Preambles could be referenced by an ECC contract, with a covering note dealing with the changes in terminology. Further changes are required depending on which parts are to be selected.

This subsection would typically comprise

- a) Particular specifications provided by the *Employer*
- b) List of standardised specifications applicable to the *works* and
- c) Variations to the standardised specifications

6.3 Civil engineering and structural works

Reference could be made to the SANS1200 series of specifications developed and published by South African National Standards. However these are now very out of date and originally developed for use with SAICE general conditions of contract for works of civil engineering which have themselves been superseded twice.

All SANS 1200 specifications are in the process of being updated to make them more compatible with a wider range of contracts, including NEC, and users should check availability of the new SANS 2000 series of specifications.

Sections 3, 4 and 5 of SANS1200A are probably already covered in section 5 of this Works Information.

This subsection would typically comprise

- a) Particular specifications provided by the *Employer*
- b) List of standardised specifications applicable to the *works* and
- c) Variations to the standardised specifications

If use is made of the 1200 series, users should include a covering note dealing with the changes in terminology, such as the one provided below. Further changes are required depending on which specifications in the 1200 series are selected.

6.4 Electrical & mechanical engineering works

These specifications are usually project specific and developed by the *Employer* to suit his operations. Either include these specifications here, or refer to them in attached Annexure.

Check the specifications for inconsistencies in terminology and that they do not contain any provisions already dealt with in the chosen NEC *conditions of contract* or clash with them in any way.

6.5 Process control and IT works

These specifications are usually project specific and developed by the *Employer* to suit his operations. Either include these specifications here, or refer to them in attached Annexure.

Check the specifications for inconsistencies in terminology and that they do not contain any provisions already dealt with in the chosen NEC *conditions of contract* or clash with them in any way.

6.6 Other [as required]

7 List of drawings

7.1 Drawings issued by the *Employer*

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

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

Drawing number	Revision	Title
Refer to the "drawings" folder on the Tender Bulletin		

C3.2 CONTRACTOR'S WORKS INFORMATION

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

Typical sub headings could be

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

This section could also be compiled as a separate file.