



NEC3 Engineering & Construction Contract

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

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

For The assessment design, detailed engineering, manufacture, testing at works, supply, delivery, removal of existing transformers, placement on foundation, installation, erection, testing and commissioning of transformers at various sites

Contents:

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Part C1 Agreements & Contract Data

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CONTRACT No. [Insert at award stage]

Part C1: Agreements & Contract Data

Contents:

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C1.1 Form of Offer and Acceptance

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[to be inserted from Returnable Documents at award stage]

C1.2a Contract Data provided by the *Employer*

[•]

C1.2b Contract Data provided by the *Contractor*

[•]

[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 assessment design, detailed engineering, manufacture, testing at works, supply, delivery, removal of existing transformers, placement on foundation, installation, erection, testing and commissioning of transformers at various sites

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	The offered total of the Prices exclusive of VAT is	R [•]
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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)

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)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

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

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

Note:

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

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

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

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

For the tenderer:

For the Employer

Signature _____

Name _____

Capacity _____

On behalf of _____
(Insert name and address of organisation)

(Insert name and address of organisation)

Name & signature of witness _____

Date _____

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
		A: Priced contract with activity schedule
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	X1: Price adjustment for inflation
		X2 Changes in the law
		X3: Multiple currencies
		X4: Parent Company Guarantee
		X5: Sectional Completion
		X7: Delay damages
		X13: Performance Bond
		X15: Limitation of <i>Contractor's</i> liability for design to reasonable skill and care
		X16: Retention
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
10.1	The <i>Project Manager</i> is: (Name)	[•]
	Address	[•]
	Tel	[•]

	Fax	[•]
	e-mail	[•]
10.1	The <i>Supervisor</i> is: (Name)	[•]
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	e-mail	[•]
11.2(13)	The <i>works</i> are	The assessment design, detailed engineering, manufacture, testing at works, supply, delivery, removal of existing transformers, placement on foundation, installation, erection, testing and commissioning of transformers at various s
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The <i>boundaries of the site</i> are	Eskom site as stated in the purchase order
11.2(16)	The Site Information is in	To be stated in the purchase order
11.2(19)	The Works Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period for reply</i> is	Two weeks
2	The Contractor's main responsibilities	Data required by this section of the core clauses is provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.
3	Time	
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	To be stated in the purchase order
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<i>To be stated in the purchase order</i>
30.1	The <i>access dates</i> are:	To be stated in the purchase order
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	4 weeks of the Contract Date.
31.2	The <i>starting date</i> is	dd mm yyyy
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	8 weeks.
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	

4 Testing and Defects		
42.2	The <i>defects date</i> is	Three (3) years after the completion of the works relative to transformer in service or five (5) years after delivery for transformers put in long term storage whichever expires first. The Employer complies with the contractor's instructions for long term storage
		Latent defect is seven (7) years from defects date relative to a transformer after the three (3) or five (5) years defects period, whichever applicable
	The site works	The defects date for site works is one (1) year from the completion of the works
43.2	The <i>defect correction period</i> is	One weeks. The contractor is to correct the defects within the period, if not possible, the contractor should submit program for approval by Project Manager
5 Payment		
50.1	The <i>assessment interval</i> is	between the 1 st day of each successive month.
51.1	The <i>currency of this contract</i> is the	Multi-currency.
51.2	The period within which payments are made is	30 days after submitting valid tax invoice.
51.4	The <i>interest rate</i> is	the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and (ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted <i>mutatis mutandis</i> every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.
6 Compensation events		
60.1(13)	The place where weather is to be	

recorded is:

Eskom site as described in Part 3C Works Information

The *weather measurements* to be recorded for each calendar month are,

the cumulative rainfall (mm)

the number of days with rainfall more than 10 mm

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

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

and these measurements:

The *weather measurements* are supplied by

[•]

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

[•]

and which are available from:

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

7	Title	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. [•] 2. [•] 3. [•]
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
A	Priced contract with activity schedule	
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers.

(See www.ice-sa.org.za) or its successor body.				
W1.4(2)	The <i>tribunal</i> is:	arbitration.		
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.		
	The place where arbitration is to be held is	Johannesburg South Africa		
	The person or organisation who will choose an arbitrator	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.		
	- if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is			
12	Data for secondary Option clauses			
X1	Price adjustment for inflation			
X1.1(a)	The <i>base date</i> for indices is	[•].		
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	proportion	linked to index for	Index prepared by
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		[•]	non-adjustable	
	Total	1.00		
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
X3	Multiple currencies			
X3.1	The <i>Employer</i> will pay for these items or activities in the currencies stated	Items & activities	Other currency	Maximum payment in other currency
		[•]	[•]	[•]
		[•]	[•]	[•]
		[•]	[•]	[•]
		[•]	[•]	[•]
X3.1	The <i>exchange rates</i> are those published in	[•] on [•] (date)		
		The items & activities will be paid in the other		

		currency - to a foreign Bank account nominated by the <i>Contractor</i> - to a valid SARB approved CFC account in South Africa - in accordance with an alternative payment method agreed with the <i>Employer</i> before the Contract Date. (select one of the three methods as agreed with successful tenderer and delete the others and this note)		
X4	Parent company guarantee	To be confirmed after evaluations		
X5	Sectional Completion			
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>works</i> is:			
		Section	Description	Completion date
		1	[•]	[•]
		2	[•]	[•]
		3	[•]	[•]
X7	Delay damages			
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	0.5% of the task order value per week (To be concluded during negotiations)		
X13	Performance bond	To be confirmed after evaluations		
X13.1	The amount of the performance bond is	R[•].		
X15	Limitation of the <i>Contractor's</i> liability for his design to reasonable skill & care	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
X16	Retention (not used with Option F)	XX		
X16.1	The <i>retention percentage</i> is	5 %		
X17	Low performance damages			
X17.1	The amounts for low performance damages are:	Amount R [•]	Performance level for [•] The total additional loss above the guaranteed level is multiplied by the R/MW given to obtain the performance damage, determined by using the criteria in schedules a A&B and as provided in the signed and approved specification 240-68973110	
X18	Limitation of liability			

X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	R0.0 (zero Rand)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The greater of • the total of the Prices at the Contract Date and • the amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	the total of the Prices other than for the additional excluded matters. The <i>Contractor's</i> total liability for the additional excluded matters is not limited. The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for • Defects due to his design which arise before the Defects Certificate is issued, • Defects due to manufacture and fabrication outside the Site, • loss of or damage to property (other than the <i>works</i>, Plant and Materials), • death of or injury to a person and • infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	(i) 3 years after the <i>defects date</i> for latent Defects and (ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter. A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.

**Z The Additional conditions of contract
 are**

Z1 to Z15 always apply.

Z1 Cession delegation and assignment

- Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*.
- Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.

Z2 Joint ventures

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

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

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

Z4 Confidentiality

- Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

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

Z5 Waiver and estoppel: Add to core clause 12.3:

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

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

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

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

- Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in

time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

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

Z8 Notifying compensation events

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

Z9 Employer's limitation of liability

- Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor's* entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer's* liability under the indemnity is limited.

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

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

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

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

Z12 Ethics

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

- Affected Party** means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,
- Coercive Action** means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,
- Collusive Action** means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,
- Committing Party** means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractor or the Subcontractor's employees,
- Corrupt Action** means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,

Fraudulent Action means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,

Obstructive Action means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and

Prohibited Action means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

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

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover 84

84.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

84.2 The *Contractor* provides the insurances stated in the Insurance Table A.

84.3 The insurances provide cover for events which are at the *Contractor's* risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

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

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

Z 13.2

Replace core clause 87 with the following:

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

INSURANCE TABLE B

Insurance against or name of policy	Minimum amount of cover or minimum of indemnity
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

Z14 Nuclear Liability

Z14.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z14.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the

presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z14.3 Subject to clause Z14.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z14.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.

Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

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

AAIA	means approved asbestos inspection authority.
ACM	means asbestos containing materials.
AL	means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
Ambient Air	means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
Compliance Monitoring	means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
OEL	means occupational exposure limit.
Parallel Measurements	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
Safe Levels	means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
Standard	means the <i>Employer's</i> Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
SANAS	means the South African National Accreditation System.
TWA	means the average exposure, within a given workplace, to airborne asbestos fibres, normalized to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per

the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short-term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

- Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are affected by an independent, competent, and certified occupational hygiene inspection body, i.e., a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance, the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z15.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z15.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
- Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

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

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

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

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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)

Whenever a cell is shaded in the left hand column it denotes this data is optional. If not required select and delete the whole row, otherwise insert the required Data.]

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	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities:	

¹ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za

	Qualifications: Experience:	CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .
11.2(3)	The <i>completion date</i> for the whole of the works is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	
31.1	The programme identified in the Contract Data is	
A	Priced contract with activity schedule	
11.2(20)	The <i>activity schedule</i> is in	(in figures) (in words), excluding VAT
11.2(30)	The tendered total of the Prices is	
	Data for Schedules of Cost Components	<i>Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).</i>
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components

C1.3 Forms of Securities

Pro forma forms for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract

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

Option X13: Performance Bond

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

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.

DRAFT

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 thereof.
- 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 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 thereof.

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 A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	
C2.2	The <i>activity schedule</i>	

C2.1 Pricing assumptions: Option A

How work is priced and assessed for payment

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

Identified and defined terms	11	
	11.2	(20) The Activity Schedule is the <i>activity schedule</i> unless later changed in accordance with this contract.
		(27) The Price for Work Done to Date is the total of the Prices for • each group of completed activities and • each completed activity which is not in a group. A completed activity is one which is without Defects which would either delay or be covered by immediately following work.
		(30) The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

This confirms that Option A is a lump sum form of contract where the work is broken down into activities, each of which is priced by the tendering contractor as a lump sum. Only completed activities are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date.

Function of the Activity Schedule

Clause 54.1 in Option A states: "Information in the Activity Schedule 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 Activity Schedule 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 Activity Schedule. The Activity Schedule is only a pricing document.

Link to the programme

Clause 31.4 states that "The *Contractor* provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance". Ideally the tendering contractor will develop a high level programme first then resource each activity and thus arrive at the lump sum price for that activity both of which can be entered into the *activity schedule*.

Preparing the *activity schedule*

Generally, it is the tendering contractor who prepares the *activity schedule* by breaking down the work described within the Works Information into suitable activities which can be well defined, shown on a programme and priced as a lump sum.

The *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the *Contractor* to include in his *activity schedule* and be priced accordingly.

It is assumed that in preparing his *activity schedule* the *Contractor*:

- Has taken account of the guidance given in the ECC3 Guidance Notes pages 19 and 20;
- Understands the function of the Activity Schedule and how work is priced and paid for;
- Is aware of the need to link the Activity Schedule to activities shown on his programme;
- Has listed and priced activities in the *activity schedule* which are inclusive of everything necessary and incidental to Providing the Works in accordance with the Works Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate activity within the Prices of other listed

- activities in order to fulfil the obligation to complete the *works* for the tendered total of the Prices.
- Understands there is no adjustment to the lump sum Activity Schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event.

An activity schedule could have the following format: Details from Price Activity Schedule from the Tender will be incorporated in this section of the contract

Estimated Demand Forecast that may vary On as and when required basis

Name	Class	Quantity	Mva	HV	Phasing (Years)
Generator Transformer	Class 4	2	700	420	2025
Generator Transformer	Class 3B	2	700	300	2024
Generator Transformer	Class 3B	1	700	300	2023
Generator Transformer	Class 4	5	800	420	2023-2027
Generator Transformer	Class 4	2	800	420	2024-2025
Generator Transformer	Class 4	2	910	420	2024-2025
Generator Transformer	Class 3B	1	405	400	2024
Generator Transformer	Class 3B	1	310	400	2023
Station transformer	Class 3B	3	30	400	2023
Generator Transformer	Class 1	3	130	132	2023 & 2027
Generator Transformer	Class 3B	1	260	400	2023

C2.2 the *activity schedule*

Use this page as a cover page to the *Contractor's activity schedule*.

PART 3: SCOPE OF WORK

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

C3.1: EMPLOYER’S WORKS INFORMATION

Contents

Part 3: Scope of Work 1

C3.1: Employer’s Works Information 2

1 Description of the *works* 3

2 Work to be performed by the Contractor for the *works* 4

DRAFT

Description of the works

The *works* includes site survey & assessment, design, manufacture, factory testing, transportation, delivery to site, off-loading, assembly, installation, in transit & site testing and commissioning of complete fully functional, generator step-up transformer systems. The *works* is done strictly in accordance with the *Employer's* detailed requirements from Schedule A and Specification 240-68973110: SPECIFICATION FOR POWER TRANSFORMERS RATED FOR 1.25MVA AND ABOVE AND WITH HIGHEST VOLTAGE OF 2.2KV OR ABOVE, for spare Generator Step-up Transformers at Power Stations.

The transformers may have to be stored temporarily with dry air or with oil at the power stations for long term storage. The *Contractor* will fully assemble and commission (as if to be used in an operational state, except work required at the time of energisation) the transformer on the spare plinth. Any storage procedures will be specified by the *Contractor* and adhered to by the *Employer*. Thereafter, or during this period of storage, the *Contractor* will move the transformer (fully assembled as appropriate, with a functional impact recorder fitted) from the spare bay to the bay of operation (final position to be announced at that time). It will then be installed and commissioned by the *Contractor* as required by the Works information. In order to move the transformer from the spare bay to the bay of operation, the *Contractor* will disconnect the cooler control cabinet and re-connect it at the bay of operation. Commissioning includes handover to the *Employer*.

The *Contractor* will perform the complete movement process of the transformer from the spare bay to its final position in the bay of operation.

The *Employer* will disconnect the old transformer. The *Contractor* will remove the old transformer and move it to a location specified by the *Employer*.

The *works* forms part of the system that links the generator terminals to the inter-connected power system at the relevant Power Stations. The *works* transforms the output power of the generators from a medium voltage to an extra high voltage such that is compatible to connect to the relevant interconnected power system HV yards at each power station. The *works* are therefore connected between the Generator busbars and the High Voltage (HV) yards, referred to as the generator step-up transformer system (GSU). Note that for certain power plants namely, Drakensberg and Ingula the GSU's are installed below ground level.

At the time of delivery of the transformer to site, the complete fire system will be designed, manufactured and delivered to the relevant Power Stations in a weather proof container in order to prevent damage or corrosion by the *Contractor*. It will then be stored by the *Employer* according to the *Contractor's* storage requirements and procedure until the time of final installation and commissioning which will be done by the *Contractor*.

The fire protection system design will be submitted to the *Employer* for acceptance and approval no later than 8 weeks prior to delivery to site. The *Contractor* disconnects and removes the old fire system and supplies, installs and commissions a complete new fire protection system for the generator transformers forming part of the *works*.

The *Contractor* provides all engineering services, material and labour necessary to provide the *works* to fully functional units. The new generator step-up transformer systems complete with tap-changers, comply with this document and the relevant standard specifications listed under Section 12 of this Works Information and in 240-68973110.

The *works* includes the entire generator step-up transformer auxiliary equipment normally supplied with a new transformer including but not limited to conservator tank, breathers, HV and LV Bushings, Radiators/Heat exchangers and Fans, Tap Changer, Protection equipment, Instrumentation, provision of connection points for On-line Dissolved Gas Monitoring Equipment, Valves, Pumps controls, marshalling kiosks and full fast depressurisation system.

The *works* operates effectively for at least 35 years (expected design life).

Work to be performed by the Contractor for the works

2.1 SCOPE OF WORK

2.1.1 Assessment and Removal of existing Plant and Materials

The *Contractor* surveys and assesses the existing plant, auxiliary plant equipment, interface plant, and any material that are either determined to be incompatible with the new generator step-up transformers or obsolete, remove and place it in the designated area as indicated by the *Supervisor* at the Power Station. This includes the assessment of the LV Busbar arrangement and the plinth arrangement (according to the drawings supplied by the *Employer*) leading from the Generator, to ensure compatibility with the new generator step-up transformer. The *Contractor* will specify the tolerances for the plinth at the time of supplying the outline drawings.

All relevant site factors must be assessed and taken into account to ensure that the *works* is designed to allow for a “plug-and-play” situation. When any of the old or new transformers are to be exchanged, no modifications must be required to any of the interfaces and structures connecting the *works* to the existing plant.

2.1.2 Contractors Design Responsibilities

The *Contractor* performs the design and detailed engineering with drawings of the *works* and affected generator step-up transformer auxiliary equipment as detailed in schedule “A&B” for each of the relevant power stations including all the changes necessary, embracing all features, accessories, auxiliary plant equipment and material necessary to manufacture complete and functional generator step-up transformer systems. The *Contractor* takes into account that there can be geomagnetic induced DC currents present during normal operation of the *works* as stated in the attached Schedules. For this purpose, the scope of supply includes but is not limited to the following:

- a) All windings,
- b) Core
- c) Internal surge arrestors
- d) Bushings
- e) Tap changer (on-load)
- f) Cooling system
- g) Protection equipment related to the transformer, such as PRD,
- h) Buchholz relays, etc.
- i) Temperature Indicators,
- j) Bagged Conservator tank,
- k) Cabling – transformer to marshalling kiosk only.
- l) Kiosks , panels
- m) On-line Dissolved Gas monitors where applicable
- n) Corrosion protection system (painting of transformer)
- o) On-line Filter (Drykeep) where applicable
- p) Fast depressurising systems, where applicable
- q) Insulating Oil
- r) Temperature sensors
- s) Integrated online condition monitoring system, where applicable.

In most cases the transformers and auxiliary components will be transported and shipped from overseas factories. The *Contractor* will demonstrate at design review stage the intended mitigation against possible damage due to abnormal transportation conditions like severe sea conditions or transportation impacts.

The Contractor will design all the transformer components whether assembled or packaged separately for transportation, to withstand sea and road transportation conditions. The design limits as well as the specific design features will be evaluated at the design review stage. Special attention will be given to the core, core clamping and core insulation design. The packaging of the transformer components must be able to withstand sea and road

transportation conditions as well as storage on site. Not later than 1 month after the design approval, the *Contractor* will be required to demonstrate all the controls in place for packaging and transportation.

2.1.3 Transportation, Delivery and Off-loading

The transformers are delivered to the Power Stations as per Purchase Order or as otherwise specified by the *Employer*.

The applicable INCOTERM 2010 is DDP site.

The *Contractor* is responsible for all shipping, transportation and offloading arrangements and execution thereof, from the factory to the final destination at the power station. Transportation of all components pertaining to a single transformer should be undertaken in a single consolidated consignment e.g. main tank shipped together with bushings and all auxiliaries. All shipping and local transport contractors must be approved and accepted by the *Employer*.

ERI (Rotran) will have first right of refusal for local road transportation. It is the responsibility of the *Contractor* to manage all logistical arrangements for road transportation.

The *Contractor* specifies any requirements e.g. checks, limitations, monitoring, preservation systems etc. related to the transportation and delivery to site, including the following stages:

- Road transport
- Rail transport
- River and sea transport
- Loading and
- Offloading.

The *Contractor* will provide an 80-ton crane and any necessary lifting equipment for use on site throughout the provision of the *works*.

This information including a quality assurance system to control the transportation process must be provided to the *Employer* for acceptance and approval by not later than 1 month after the design approval.

A minimum of 2 impact recorders on the transformer. At least one is fitted internal to the tank to the active part as well as one roll and tilt recorder. These are fitted to the transformer immediately after successful factory acceptance test, before disassembly and preparation for transport. The recorders are only stopped or removed once the transformer is finally positioned on its plinth (Storage position or final operating position). One continuous record of both horizontal and vertical shock and impact is recorded starting at the commencement of lifting in the factory Ex Works and ending after final placement in the bay. The impact recorders remain the property of the *Contractor*. Dry-air pressure indication must be provided and must be readable from ground level.

The design must be such that SFRA (Sweep Frequency Response Analysis) and insulation resistance test can be performed at any stage during transportation, without compromising the integrity of the preservation system. This is to enable condition assessment of the active part in the unlikely event of an abnormal mechanical impact during transportation of the main tank and to demonstrate to the *Employer* that the equipment is still in good condition.

In addition, a Sweep Frequency Response Analyses test (SFRA Test) (Fully assembled) is done on all the windings after completion of testing while filled with oil, before the transformer is loaded for transportation (dry state fitted with test bushings), after offloading from ship, onsite after offloading and the SFRA test is repeated once the transformer is in position on its plinth. This test is aimed at the early detection of winding movement during the transportation of the transformer as well as to provide a baseline for future condition monitoring of the windings.

Regular test and monitoring of the condition of the transformer should be performed at various hold points set out in the transportation QCP. Tests are performed according to 240-68973110. In the event that monitoring indicates a possible compromised condition of the transformer, the *Employer* must be informed within 24 hours of the event.

- Final impact recorder downloads will be done by the *Contractor* once the transformer is in its final position and included in the final PQP and report.
 - All bushings must be transported with shock/impact indicators.
 - Insulation resistance tests (Megger) shall be done at all points as mentioned for the SFRA test above.

The *Contractor* submits the results of the SFRA tests and the transport impact monitoring results to the *Project Manager* and illustrates that no damage or movement of the windings has taken place during the transport process.

The *Contractor* notifies the *Project Manager* at least six (6) weeks in advance of the proposed despatch date from factory. Giving the relevant dates of FOB (where applicable) or final delivery date with description of the plant, the packing list, the mass, and any other information deemed necessary for identification. This program reflects all the key milestones and dates pertaining to the transportation and delivery to site.

The *Contractor* endeavours to ensure that the *Employer* has access to and may inspect the works at any time during any of the transportation stages.

2.1.4 Installation

Installation is comprehensive and includes all the auxiliary plant necessary for the proper operation of the transformer, such as, but not limited to, the bushings, tap changers, conservator tank, radiators, pumps, marshalling kiosk, buchholz relays, fast depressurisation system and fire protection systems, etc. The *Contractor* provides outline drawings of the works to the *Project Manager* before closure of the detail design.

The *Contractor* maintains a safe and clean condition working environment for the duration of the *Contract* whilst at any of the Power Station sites. No work will commence on any Power Station site without the submission and acceptance of the *Contractor's* safety file. Prior to start of the installation phase, a clean conditions method and procedure must be agreed to by the *Contractor* and the *Employer*.

Any installation sub-contractor will be approved by the *Employer*.

The *Contractor* ensures that the installation work is in accordance with Generation's Clean Conditions and Peer Review standards.

2.1.5 Testing and Commissioning

All the tests listed in 240-68973110 are done and the results are properly documented. The *Contractor* performs all the necessary testing, verification of test results and inspections on the plant to ensure the safe commissioning of the works. The *Contractor* compiles and signs a handover certificate allowing permit clearance and assuring the *Employer* that the transformer can be safely energized and loaded within its capacity.

All electrical testing will be performed by Eskom Protection Telecommunications and Metering provider (PTM). The *Employer* will procure this service directly from PTM. It is the responsibility of the *Contractor* to manage all logistical arrangements for electrical testing including timeous notifications and scheduling.

2.1.6 Interface with Existing Reticulation

The existing arrangement of terminating the primary and secondary connections to the transformer is not changed unless otherwise instructed by the *Employer*. The design of the new transformer is such that there will be no modifications to the existing Isolated Phase Ducts (IPD) from the Generators. In the event that a modification is required to the Employers IPDs, it will be for the cost of the *Contractor*.

2.1.7 Interface with Existing Systems

The new generator step-up transformer systems interfaces with the existing relevant Power Station systems such as but not limited to the protection, alarming, auxiliary supplies, control system and fire protection system. There will be no modification to the existing interphases unless otherwise instructed by the *Employer*.

The transformer is designed to be installed fully assembled and filled with oil. The transformer tank must be designed to ensure that no modifications are required to the existing plinths at the power stations. Consideration must be given to the positioning and location of jacking points on the main tank. The ability of the jacking pads must such that it allows jacking of the transformer when completely assembled and filled with oil.

2.2 QUALITY ASSURANCE AND QUALITY CONTROL

2.2.1 Quality

The power transformers are manufactured in accordance with a Quality Management System that is ISO 9001:2015 Certified and Eskom's Supplier Quality Management Specification 240-105658000(QM 58), the latest revision and accepted by the Employer. The Employer reserves the right to conduct surveillance and periodic inspections at the Contractor's works during the manufacturing phase. The Contractor submits a Project Quality Plan (PQP) to the Project Manager for acceptance 4 weeks after the Contract Date, and includes all quality control plans (QCP). The QCPs will be accepted prior to the execution of each stage of the project. No project stage can start without the Employer's acceptance of its QCP. Draft copies are submitted and discussed during the design review phase

The *Contractor* compiles QCPs to cover the following processes, but is not limited to:

- Manufacturing (includes the design stages and all processes during manufacturing). This quality documentation must be agreed to by not later than the design freeze date.
- Transport (Includes loading at factory, moving it to FOB). This quality documentation must be agreed to by not later than one (1) month prior to FAT date.
- Assembly and commissioning at site. This quality documentation must be agreed to by not later than FAT date. The *Contractor* to provide the *Employer*, at least one (1) month prior to the FAT, with all PQP's for the *Employer's* scope of work, for approval.

The Process Quality Plan (PQP) must include and provide for the following:

- Details of the process and reference to the project
- Acceptance by the *Employer*
- A list of signatures (and reference to the owner) which will be used to complete all the steps for the process. This is necessary for identification of the relevant Authority for signing off certain steps or tasks in the process.
- Hold Points and Witness Points as required by various steps in the processes.
- Reference to certificates or any important documentation e.g. acceptance criteria for inspection points or tests.

- The main process is broken down into individual tasks or steps, to a point as to reflect logical building blocks necessary to complete the main process.
- For each step/task there must be place for signature (with date of signature) of a relevant Authority (*Supervisor, Inspector* etc.).

The Contractor demonstrates compliance to:

- (a) The latest ISO 9001 Quality Management Standard
- (b) Eskom 240-105658000(QM 58) EST0002

The *Contractor* authorises all documents submitted as demonstration of compliance to the quality requirements of the contract.

Before Transformer and auxiliaries are placed in service the *Contractor* is to certify that it is in safe condition.

2.2.2 Reviews

Design review meeting is to be scheduled in consultation with the Project Manager at the factory after completion of electrical design to ensure that there is a common understanding of the specific requirements and the applicable standards.

The review meeting is structured as detailed in 240-68973110 and is scheduled by the *Project Manager* and the *Employer* is to be notified at least 12 weeks for non-South African factories / 4 weeks for local factories before the design review meeting. The design data must be supplied by the *Contractor* to the *Employer* at the latest of 14 days before the design review meeting.

The *Contractor* minutes all-important information during the design review process and ensures that all outstanding actions are addressed before manufacturing starts.

The *Contractor* ensures that the *Project Manager* is furnished with a copy of the signed design review minutes within two (2) weeks from date of the meeting. The minutes shall be signed at design review meeting closure.

In the event of a Scope Change with a cost implication during design review stage, the Eskom Project Manager must be notified immediately to obtain a mandate to approve within the *reply period* as stated in the contract.

All data/information/drawings provided for design purpose will be treated as confidential and will only be used for the purpose of executing this contract. None of this information will be handed to a third party, including Employer's employees who are not directly involved in the design review responsibility. All parties concerned must sign a non-disclosure and confidentiality form.

The Contractor procures the services of a design consultant selected/nominated by the Employer. The design consultant will form an integral part of the review team and will be present at the design review meetings as well as Factory Acceptance Tests. Design approval will be issued the Employer in consultation with the selected design consultant.

2.2.3 Factory Testing

The scope is detailed in the A&B schedules, the standard and the acceptance criteria shall be in accordance with the relevant and latest IEC standard as per date of the order.

The *Employer* reserves the right to be present during any or all of tests.

The Contractor shall inform the Employer of the testing date 12 (twelve) weeks in advance if the factory is outside of RSA, and 4 weeks in advance if it is local.

The *Project Manager* only releases the transformer for despatch when all tests have been successfully completed, and all the necessary quality documentation completed.

2.3 MISCELLANEOUS

2.3.1 Tools

The *Contractor* provides a list of special or non-standard tools or keys that are required for maintenance or effecting adjustments.

2.3.2 Blanking Plates

The *Contractor* supplies the transformers with all the required blanking plates.

2.3.3 Recommended Spares List

The *Contractor* supplies a list of recommended spares for the *works* for each of the individual power stations. This list includes item descriptions, reference numbers quantity recommended, prices, and guaranteed supply period. The *Contractor* also details the recommended routine maintenance required to maintain maximum availability.

2.3.4 Summary table of documentation

The *Contractor* supplies the following minimum documentation for each of the power stations.

DOCUMENT NAME	HARD COPIES REQUIRED PER STATION	SOFT COPIES REQUIRED PER STATION	WHEN TO SUBMIT	REFER TO SECTION
Quality Dossier (Quality Data Book))	2	2	Before delivery	2.2.1
Operating & Maintenance Manual (Training)	2	2	Before commissioning of the <i>Works</i>	2.4
Operating & Maintenance Manual	5	5	Before delivery	240- 68973110

2.4 TRAINING

The Contractor shall provide training to the Employer. The training shall be given in different levels

Site staff - It is the responsibility of the Contractor to provide training to the Employer's personnel in the operation and maintenance of the works. The Contractor provides a list of recommended training activities including duration and location.

It is the responsibility of the *Contractor* to provide training to the *Employer's* personnel responsible for the operation and maintenance of the *works*. The *Contractor* provides a list of recommended training activities including duration. Training is provided at each of the power stations separately. Training is performed in a timeframe specified by the *Employer*.

The *Contractor* compiles a training and assessment curriculum. The *Contractor* assesses the trainees and certifies those who have successfully completed the training course.

The Contractor provides two (2) Master Training Manuals per power station. Each person trained receives an individual copy of the training manual, which allows them to make notes in the manual during the training sessions. The Project Manager will provide the number of Employer's personnel to be trained up to a maximum of 15 people and duration up to two days. The number of *Employer's* personnel, per power station, requiring training is:

Engineering Department: - 5 persons.

Maintenance Department: - 5 persons.

Operating Department: - 5 persons.

The training is performed prior to handover of the transformer. The Contractor shall submit proof of training conducted as part of the handing over documents.

Specialised Engineering training is to be arranged for Engineers at the *Contractor's* Facilities. Specialised training is completed before Completion of the *works*. The training for engineers shall be arranged on ad-hoc basis and this shall be in line with the design, manufacturing, testing, and life management of transformers. The Contractor shall bring proposal to the Employer for acceptance. During each contract review, the OEM shall produce the records of the training done.

2.5 SCHEDULES A & B

2.5.1 Schedule A: Specific requirements by the *Employer's*.

2.5.2 Schedule B: Guarantees and technical particulars of equipment offered by the *Contractor*.

The *Contractor* guarantees the values entered in Schedule B

The *Contractor* reviews all the specifications and lists any discrepancies or conflicts between Schedule A, 240-68973110 or any specific requests by the *Employer*.

Schedules A&B takes precedence over all other specifications.

3. DELIVERABLES, RECEIVABLES AND RESPONSIBILITIES APPLICABLE TO THE SUPPLY OF THE WORKS.

3.1 Responsibility of supply table: (C=Contractor, E=Employer, "X" = Responsible)

Item	Description	C	E	Comments
1.	Bund wall and fence, removal and rebuild	X		
2.	Supply of crane, forklift, cherry picker for off-loading, to handle auxiliaries and site assembly.	X		
3.	Removal of old transformer	X		
4.	Removal of old fire suppression system	X		
5.	Supervision of transformer installation work by the <i>Contractor</i> as described in the Works Information.	X		
6.	Connection of the LV cables from the cooler control panel to the rest of the plant, such as those to the Generator Protection Panels.		X	
7.	Scaffolding	X		Unless otherwise agreed with the Power Station, in which case the <i>Employer</i> will be compensated for the expense.
8.	Housekeeping around the transformer.	X		
9.	Electrical supply point for oil filtering plant		X	Contractor to supply necessary cabling
10.	220VAC electrical supply for domestic equipment e.g. small drills, lighting, pumps etc.		X	Contractor to supply necessary cabling
11.	Removal from site and safe disposal of all transformer oil in	X		

	accordance with Eskom corporate procedures			
12	Security clearance in order to gain access to sites. The responsible party must enquire as to the specific requirements for foreign and local contractors.	X		This includes required mandatory health and Safety induction and medical examinations.
13	Allow controlled access to site	X	X	Access to the demarcated assembly/installation area.
14	The physical connections to the <i>Employer's</i> LV and HV systems		X	
15	Supply of certified rigging equipment and quality documentation for this equipment	X		

3.2 SITE SERVICES

See Annexure C for drawings of each Power Station GSU for the details of the dimensional limitations to be met by the *Contractor*.

4 PROGRAMMES

The *Contractor* submits a first programme to the *Project Manager* for acceptance within two weeks of the Purchase Order date.

The programme contains all cash flows (FRI's), activities, durations, resource details, start date and completion date and relevant milestone dates.

Any changes to the programme should be accepted by the *Employer* and include updated FRI's. Such acceptance does not imply that delay damages for late delivery will not be effected. The Programme as well as updated FRI's must be submitted to the *Employer* every month.

The programme is submitted utilising MS Projects format.

5 COMPLETIONS

5.1 SECTIONAL COMPLETION

The following phases of work are to be completed for sectional completion of the transformer

5.1.1 Design freeze

- Design review has been completed
- Minutes of the design review meeting submitted to the Project Manager with all action items signed off.
- The design in totality is according to the Employer's specification requirements.
- Single line, general arrangement and outline and schematic drawings
- Manufacturing PQP's

5.1.2 Handover to *Employer at Delivery* with signed documentation

5.1.3 Installation

Signed clearance and test certificates

- One set of red lined (as-built) drawings available
- Completed and signed for acceptance PQPs/ITPs
- Operating and maintenance manuals delivered
- No operational defects after installation according to the *Works Information*
- All paint scratches and chips sustained during transport and installation have been rectified by the *Contractor* at no further compensation from the *Employer*.

- Oil samples taken before and after installation of the *works* Training manuals available
- Personnel fully trained as per item 2.4 above

5.1.3 Unit completion

- No outstanding defects.
- Unit on load or in storage for 2 weeks continuously with no visible abnormalities surfacing.
- All documentation as required in Section 2.3.4 delivered.
- All Quality Control documentation signed off, with no outstanding issues to address.

5.1.4 Alternative A: Installation as a spare for long term storage; *works* completion

- Signed handover certificate within 30 days after completion of installation. This is requested by the *Contractor*.
- Completed and signed assembly QCPs
- Training manuals available
- Training performed (refer to clause 2.4)
- Operating and maintenance manuals delivered
- No defects outstanding
- Transformer storage procedure executed by *Contractor* e.g. transformer oil filled and prepared for long term storage.
- Storage and maintenance procedures supplied to the *Employer*.
- Oil samples to be taken and analysed for abnormalities after the *works* has been put into storage.
- All documentation as required in Section 2.3.4 delivered.
- All Quality Control documentation signed off.

5.1.5 Alternative B: Installation and Commissioning for service; *Works* completion

- Signed handover certificate within 30 days after completion of installation. This is requested by the *Contractor*.
- Training manuals available
- Training course concluded and trainees assessed. (refer to clause 2.4)
- Operating and maintenance manuals delivered
- No defects outstanding. As detailed on the hand over certificate, minor defects can be corrected at an agreed future date.
- When the transformer is directly installed in the operating position, the *works* have been commissioned and loaded by the relevant generator set, continuously for at least two weeks without signs of any abnormalities present
- Oil samples to be taken and analysed for abnormalities two weeks after the *works* was put in service.
- All documentation as required in Section 2.3.4 delivered.
- All Quality Control documentation signed off.

5.2 WORK PROVIDED BY THE CONTRACTOR BY THE COMPLETION DATE

The following *works* are provided by the *Contractor* in accordance with the *Works Information*:

- a. Design
- b. Supply whole of the *works* excluding shipping and road transformer.
- c. Removal of all debris, tools and equipment used during erection of the *works*.
- d. Corrosion protection on whole of the *works*
- e. Operating and Maintenance Manuals
- f. *Employer* Staff Training on site and Training Manuals
- g. "As Built" Drawings for whole of the *works*

- h. All the Quality Documentation signed off with no outstanding actions to be resolved, including the NCRs.

7. LABOUR

All staff whether permanent, non-permanent, part-time, sub-contracted, and labour only supply, is the Contractor's responsibility in terms of supervision and control.

8 RESTRICTIONS APPLICABLE TO THE CONTRACTOR

8.1 DETAILS OF OTHER CONTRACTORS

The *Contractor* could be interfacing with the following Contractors, but is not limited to:

- The *Employer's* C&I department
- Scaffolding Contractor
- Cabling Contractor
- The *Employer's* Protection and Metering department (PT&M)
- The *Employer's* maintenance departments

9 TITLE TO SITE MATERIALS

All Plant and Material that are removed remains the property of the *Employer*. It is important to note that the *Contractor* stores the removed Plant and Material at a dedicated area as identified by the *Employer*.

10 ACCOUNTS AND RECORDS

10.1 THE FOLLOWING INFORMATION MUST BE AVAILABLE ON THE INVOICE:

- The registered name of the company
- The VAT registration number
- The *Employer's Contract* number
- The invoice sequence number
- The *Employer's* VAT registration number
- The *Employer's* Purchase Order number
- Where applicable, the assessment date for CPA calculations
- Indicate foreign or local payment

CPA invoices will be provided as a separate invoice referencing the Base Invoice

60 days payment terms after the invoice

11 DOCUMENTS AND DRAWINGS

Drawings and documents for each Power Station applicable to this contract are contained in the tender. At the time of receiving a Purchase Order, the *Contractor* will check that all required information has been supplied and will confirm if additional drawings and information is required to supply the *works*.

All new drawings and documents become the property of the Employer for maintenance and service purposes. All drawings and documents supplied to the *Contractor* remains the *Employers* intellectual property and should be treated as confidential.

12 SPECIFICATIONS

12.1 Specifications

The following standards and those listed in the annexure; contain provisions that, through reference in text, constitute requirements of this document, including reference documents referred to in these standards. The revision as at the date of *Contract* placement is applicable. The *Contractor* is responsible for obtaining the latest revision of these documents.

Eskom documents are available from the *Employer* at no cost.

The following main documents are issued with the enquiry:

- **240-68973110** Specification for power transformers rated 1.25MVA and above with a highest voltage of 2.2KV or above.

SABS 0142 is available from: StanSA, Private Bag x 191, Pretoria, 0001 or per telephone: +27 12-428-6883.

OHASA is available from: LEXIS NEXIS BUTTERWORTHS, telephone: +27 11 784 8009.

Document Title	Document number
Technical standard for dissolved gas analysers for application in power transformers for all Eskom divisions.	240 -64917195
Permanent online oil drying system used on transformers and reactors.	240-59083215
Technical Specification for Capacitor Bushings for Application in Power Transformers and Shunt Reactors in Eskom	240-56062799
Corrosion Protection of new and in-service power & station auxiliary transformers	240-56030674
Mineral insulating oils (uninhibited and inhibited) part 1: purchase, management, maintenance and testing	240 - 75661431
Standard for Intrusive work and Oil filling, under vacuum of transformers and reactors on site	240-56062726
Oil temperature thermometer	240-5606343
Rapid pressure relay - Quantity of 1 required	240-56063867
Oil- and gas-actuated relay	240-56063908
Pressure relief device	240-56063871
Dehydrating breathers	240-56063886
Oil level indicators	240-56356191
Bag leak detector	240-56356202
Oil Specification	240-75661431.
Eskom Waste Management Standard	32-245
Safety, Health, Environment, and Quality (SHEQ) Policy	32-727

Other documents

	ISO 14001 (1996)	Environmental Management Systems – Specification with Guidance for Use
	ISO 9001 (2008)	Quality Management Systems – Requirements
	OHASA (1993)	Occupational Health and Safety Act Of South Africa, Act 85 of 1993 – Construction Regulations
*	SP SER 003, Rev 1 (1995)	Safety Risk Management Directive for Contractors
	ORHVS Certificate	

13 SD&L REQUIREMENTS

Refer to the invitation to tender

14 SHEQ REQUIREMENTS

OCCUPATIONAL HEALTH AND SAFETY

The *contractor* shall at all times comply with the Eskom's Occupational Health and Safety (OHS), Legal and other requirements as amended for the duration of the contract. In addition, the contractor shall comply with the requirements contained in the OHS Specification. Eskom reserves the right to terminate the contract, in the event that the contractor has built up a history of poor performance or non-conformance in relation to matters of Eskom OHS and Legal compliance.

Following the signing of the contract, the *contractor* will meet with Generation OHS professionals from the respective Eskom Business Units/ Power Stations to discuss the site and scope specific OHS requirements. The *contractor* will prepare and submit the Health and Safety file for evaluation within the time frame agreed upon by the *contractor* and the OHS representative at the specific site.

No work may commence until the Health and Safety file has been approved by the respective OHS personnel at the specific site. For the duration of the contract, the contractor shall adhere to the respective Business Unit's / Power Station/Site OHS, Legal, and other requirements, as amended.

ENVIRONMENTAL REQUIREMENTS

a) Environmental Management System (EMS)

The *Contractor* should note that Eskom and its sites is ISO14001:2015 certified. The *Contractor* is required to demonstrate commitment to the development, documented, implementation and maintenance of an environmental management system (EMS) that conforms to the requirements of ISO 14001: 2015 such as environmental policy, operational procedures relating to their activities, aspects/impacts register etc. In addition, the contractor must be aware that all Eskom sites stipulated as per scope of work have own specific Environmental Management Plan (EMP), Environmental Authorisation (EA) including any other environmental permits, licenses and environmental legislation as well as a set of procedures that the contractor need to comply with when working on their sites.

All activities taking place within the site must consider section 28 of the National Environmental Management Act (107 of 1998) which makes provision for the duty of care approach. The

Contractor's team must commit to review and to continually improve environmental management, with the objective of improving overall environmental performance. The *Contractor* must ensure sufficient funding is allocated for the implementation of environmental requirements.

b) Environmental Management Plan (EMP)

The *Contractor* shall prepare an EMP relating to their activities that will be carried out in line with the scope of work. The environmental management plan shall identify aspects and impacts for the project and actions to prevent, minimize and manage the environmental impacts.

Relevant site specific method statements which also address environmental measures shall be submitted for approval prior to commencement of an activity. No work shall commence without an approved method statement.

The *Contractor* shall comply with all relevant laws, environmental legislation and regulations, conditions of environmental approvals, environmental management plans, and Employers Policies and Procedures.

c) Other Environmental Obligations

- The *Contractor* shall appoint trained and competent personnel in writing, who will have the responsibilities of implementing all environmental requirements for this contract.
- The *Contractor* and its employees shall undergo environmental induction of their own as well as site specific SHE induction.
- The *Contractor* must conduct environmental awareness at regular intervals e.g. through toolbox talks.
- The *Contractor* must report and do investigations all environmental incidents and non-conformance. Such reports must include but not limited to the following information:
 - The cause of the non-conformance/incident;
 - The proposed actions to correct and prevent recurrence.
- Eskom will issue non-conformances where there are deviations from Eskom Procedures and any other environmental requirements.
- The *Contractor* must ensure measures are in place to manage the following at all Eskom sites:
 - Site establishment and de-establishment protocols (during delivery to site, off-loading, temporary storage, assembly, installation, and site testing and commissioning)
 - Hazardous chemical spill response
 - Fire control
 - Air, dust and noise control
 - Ablution facilities
 - Waste Management
 - Emergency plan and prepared response
 - Water management
 - Vegetation and soil management where relevant
 - Transportation, storage and handling of hazardous substances
 - Traffic and transport

d) Waste Management

- Eskom has a systematic and hierarchical approach to integrated waste management as stipulated in Eskom Waste Management Standard (32-245).
- The *Contractor* must follow a proactive prevention approach to ensure cleaner production, effective and sensible reuse, and recycling, as well as responsible treatment and safe disposal of waste generated.

- All packaging waste must be separated, recycled or disposed in designated bins and waste areas as per specific site requirement.
- Disposals of Eskom assets such as transformer will be in compliance with the commercial policies and procedures applicable and the process approved by the approved delegated authority.
- The Eskom Investment Recovery Section is responsible for ensuring proper selling and the disposal of oil, scrap metal and other materials from transformers.
- In the unlikely event that used transformer oils are mixed with other waste oil, polychlorinated biphenyls and terphenyls (PCBs/PCTs) may also be present.
- All insulating oil removed from any electrical equipment for inclusion in the Eskom oil pool must be tested for the presence of contaminants such as PCBs, solvents, and synthetic oils.
- If PCB-contaminated material greater than 51 mg/kg is found, such must be reported and managed according to Eskom procedures.
- All waste generated onsite must be managed according to Eskom Waste Management Standard (32-245), National Environmental Management: Waste Act (NEMWA) 59 of 2008, site specific requirements and legal and any other applicable requirements.

e) Documents and Records

The following minimum records shall be kept on all sites:

- Contractor site specific Environmental Management Plan;
- Contractor site specific method statements;
- Aspects/Impacts register;
- Incident registers and investigation reports;
- Non-conformance register;
- Public Complaints register;
- Waste disposal register;
- Hazardous Substances registers and Safety Data Sheet;
- All training and awareness records;
- Records of audit reports and audit findings close-out, where applicable;
- Records of inspections conducted.

f) Tender Submission Documentation and tender award

The following documentation shall be submitted with all tender submissions and also be available upon awarding of the contract and prior to commencement of any work:

- Environmental Management System (EMS)
If the contractor is certified under national or international listing scheme, a copy of the certificate shall also be sent with the tender, if not, the company's environmental management system supporting documents.
- Environmental Management Plan (EMP)
- Waste Management Plan
- Environmental Bill of quantities

Details are specified in the environmental tender evaluation document.

13 ANNEXURES:

Annexure A

Schedules A&B

Annexure B

Additional information for transportation requirement and limitations

Annexure C
Drawings

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