NEC3 Engineering & Construction Contract

Between **ESKOM HOLDINGS LIMITED**
(Reg No. 2002/015527/06)

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

for **The supply and installation of sample conditioning system for HP heater and LP heater.**

Contents:

Part C1 **Agreements & Contract Data**

Part C2 **Pricing Data**

Part C3 **Scope of Work**

Part C4 **Site Information**

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

Part C1: Agreements & Contract Data

Contents:

		No of pages
C1.1	**Form of Offer and Acceptance**	**[●]**
	[to be inserted from Returnable Documents at award stage]	
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 supply and installation of sample conditioning system for HP heater and LP heater.**

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**
	Sub total	**R**
	Value Added Tax @ 14% is	**R**
	The offered total of the amount due inclusive of VAT is[1]	**R**
	(in words)	

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

Signature(s) .....

Name(s) .....

Capacity .....

For the tenderer: .....

(Insert name and address of organisation)

Name & signature of witness

Date

Tenderer's CIDB registration number:

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

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 *conditions of contract* 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	
		X5: Sectional Completion
		X7: Delay damages
		X16: Retention
	[always used by Eskom]	**X18: Limitation of liability**
		Z: *Additional conditions of contract*
	of the NEC3 Engineering and Construction Contract, June 2005 (ECC3) (with amendments June 2006)	
10.1	The *Employer* is (Name):	**Eskom Holdings Limited (reg no: 2002/015527/06), a juristic person incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
	Represented by:	**Emma Mokubedi**
	Tel No.	**+27 13 690 0604/0497**
	Fax No.	**+27 86 609 1432**
10.1	The *Project Manager* is: (Name)	**Emma Mokubedi**
	Address	**Duvha Power Station PO Box 2199 Witbank 1035**
	Tel	**+27 13 690 0604/0497**
	Fax	**+27 86 609 1432**
	e-mail	**mokubeem@eskom.co.za**

10.1	The *Supervisor* is: (Name)	**Emma Mokubedi**
	Address	**Duvha Power Station** **PO Box 2199** **Witbank** **1035**
	Tel No.	**+27 13 690 0604/0497**
	Fax No.	**+27 86 609 1432**
	e-mail	**mokubeem@eskom.co.za**
11.2(13)	The *works* are	**The supply and installation of sample conditioning system for HP heaters (5A, 5B, 6A, 6B) and LP heater 3.**
11.2(14)	The following matters will be included in the Risk Register	**1. Dust Inhalation** **2. Slip, Trip & Fall.** **3. Falling Objects** **4. Electric Shock** **5. Permit to Work.**
11.2(15)	The *boundaries of the site* are	**Turbine Plant.**
11.2(16)	The Site Information is in	**Part 4: Site Information**
11.2(19)	The Works Information is in	**Part 3: Scope of Work and all documents and drawings to which it makes reference.**
12.2	The *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**Two working days.**
2	**The *Contractor's* main responsibilities**	**Data required by this section of the core clauses is provided by the *Contractor* in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.**
3	**Time**	
11.2(3)	The *completion date* for the whole of the *works* is	**31st March 2016.**
11.2(9)	The *key dates* and the *conditions* to be met are:	***Condition* to be met** / ***key date***
		1. Have one authorised person as a Responsible Person as per the Duvha Power Station Plant Safety Regulations. — **28th February 2014**
		2. Submit QCP for approval. — **30th November 2013**
		3. Material to be delivered — **13th December 2013**

		4.	**Unit completion (Outage Works).**	**As per agreed outage dates with the Project Manager.**
		5.	**Completion of the plant activities.**	**28th February 2016**
30.1	The *access dates* are:	**Part of the Site**		**Date**
		1	**Turbine Plant**	**01 November 2013.**
31.1	The *Contractor* is to submit a first programme for acceptance within	**5 working days of the Contract Date.**		
31.2	The *starting date* is	**01 November 2013.**		
32.2	The *Contractor* submits revised programmes at intervals no longer than	**2 days.**		
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.			
4	**Testing and Defects**			
42.2	The *defects date* is	**52 weeks after Completion of the whole of the works.**		
43.2	The *defect correction period* is	2 working days after the Contractor is being notified about the defect.		
5	**Payment**			
50.1	The *assessment interval* is	**25th of every month.**		
51.1	The *currency of this contract* is the	**South African Rand.**		
51.2	The period within which payments are made is	**Four weeks.**		
51.4	The *interest rate* is	**(i) zero percent above 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 (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 *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.
6	**Compensation events**	
60.1(13)	The place where weather is to be recorded is:	**Duvha Power Station**
	The *weather measurements* to be recorded for each calendar month are,	**the cumulative rainfall 10 (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 Project Manager or the System Engineer on request.**
	The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:	**Duvha Power Station**
	and which are available from:	**the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer***
60.1(13)	Assumed values for the ten year return *weather data* for each *weather measurement* for each calendar month are:	**As stated in Annexure A to this Contract Data provided by the *Employer*.** **Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.**
7	**Title**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
8	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**1.** The Employer will not make payment if the invoice from the Contractor does not correspond with the price assessed by the Project Manager on the payment certificate.
84.1	The *Employer* provides these insurances from the Insurance Table	**as stated for "Format A" / "Format B" / "Format Dx" {choose the applicable format then delete the others and delete this note} available on** http://www.eskom.co.za/live/content.php?Item_ID=9248

		(See Annexure B for basic guidance)
84.1	The *Employer* provides these additional insurances	**as stated for "Format A" / "Format B" / "Format Dx" {choose the applicable format, then delete the others and delete this note} available on** http://www.eskom.co.za/live/content.php?Item_ID=9248 **(See Annexure B for basic guidance)**
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the *works*, Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) caused by activity in connection with this contract for any one event is	**Whatever the *Contractor* deems necessary in addition to that provided by the *Employer*.**
84.2	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract for any one event is	**As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the *Contractor's* common law liability for people falling outside the scope of the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rands).**
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**	**There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.**
11	**Data for Option W1**	
W1.1	The *Adjudicator* is (Name)	**The Adjudicator will be appointed by the NEC user's Group Association should the dispute arise.**
W1.2(3)	The *Adjudicator nominating body* is:	**the Chairman of the Joint Civils Division of the South African Institution of Civil Engineering. (See www.jointcivils.co.za)**
W1.4(2)	The *tribunal* is:	**arbitration.**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	The place where arbitration is to be held is	**South Africa**
	The person or organisation who will	

	choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**

12 Data for secondary Option clauses

X5	**Sectional Completion**			
X5.1	The *completion date* for each *section* of the *works* is:	***Section***	**Description**	***Completion date***
		1	**Have one authorised person as a Responsible Person as per the Duvha Power Station Plant Safety Regulations.**	**28th February 2014**
		2	**Submit QCP for approval.**	**30th November 2013**
		3	**Delivery of Material**	**13th December 2013**
		4	**Unit completion (Outage Works).**	**As per agreed outage dates with the Project Manager.**
		5	**Completion of the plant activities.**	**28th February 2016**

X5 & X7	**Sectional Completion and delay damages used together**			
X7.1 X5.1	Delay damages for late Completion of the *section*s of the *works* are:	***section***	**Description**	**Amount per day**
		1.	**Have one authorised person as a Responsible Person as per the Duvha Power Station Plant Safety Regulations.**	**R5000-00**
		2.	**Submit QCP for approval.**	**R5000-00**
		3.	**Delivery of Material**	**R5000-00**
		4.	**Unit completion (Outage Works).**	**R5000-00**
		5.	**Completion of the plant activities.**	**R5000-00**

	The total delay damages payable by the *Contractor* does not exceed:	**10% of the contract value.**
X16	**Retention (not used with Option F)**	
X16.1	The *retention free amount* is The *retention percentage* is	**0%** **10% of the contract value.**
X18	**Limitation of liability**	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**10% of the contract value.**
X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to:	**the amount of the deductibles relevant to the event described in the insurance policy format selected in the data for clause 84.1 above, which policy is available on** http://www.eskom.co.za/live/content.php?Item_ID=9248
X18.3	The *Contractor*'s 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 *Employer*'s assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus R15M first amount payable in terms of the *Employer*'s assets policy.**
X18.4	The *Contractor*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	**the total of the Prices other than for the additional excluded matters.** **The *Contractor's* total liability for the additional excluded matters is not limited.** **The additional excluded matters are amounts for which the *Contractor* is liable under this contract for** • **Defects due to his design which arise before the Defects Certificate is issued,** • **Defects due to manufacture and fabrication outside the Site,** • **loss of or damage to property (other than the *works*, Plant and Materials),** • **death of or injury to a person and** • **infringement of an intellectual property right.**
X18.5	The *end of liability date* is	**(i) seven years after the *defects date* for latent Defects and**

		(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter. **A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period. If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.**
Z	**The *Additional conditions of contract* are**	**Z1 to Z12 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 and the Electricity Distribution 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 substantially 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 Ethics

Z4.1 Any offer, payment, consideration, or benefit of any kind made by the *Contractor*, which constitutes or could be construed either directly or indirectly as an illegal or corrupt practice, as an inducement or reward for the award or in execution of this contract constitutes grounds for terminating the *Contractor*'s obligation to Provide the Works or taking any other action as appropriate against the *Contractor* (including civil or criminal action).

Z4.2 The *Employer* may terminate the *Contractor*'s obligation to Provide the Works if the *Contractor* (or any member of the *Contractor* where the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations) is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices.

Such practices include making of offers, payments, considerations, or benefits of any kind or otherwise, whether in connection with any procurement process or contract with the *Employer* or other people or organisations and including in circumstances where the *Contractor* or any such member is removed from the an approved vendor data base of the *Employer* as a consequence of such practice.

Z4.3 Notwithstanding the provisions of core clause 90.2, the procedures on termination in terms of this clause are P1, P2 and P3 as stated in the core clause 92 and the amount due is A1 and A3 as stated in core clause 93.

Z5 Confidentiality

Z5.1 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.

Z5.2 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*.

Z5.3 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.

Z5.4 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*.

Z5.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z6 Waiver and estoppel: Add to core clause 12.3:

Z6.1 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.

Z7 Health, safety and the environment: Add to core clause 27.4

Z7.1 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 2003 (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.

Z7.2 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.

Z8 Provision of a Tax Invoice and interest. Add to core clause 51

Z8.1 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.

Z8.2 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.

Z8.3 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.

Z9 Notifying compensation events

Z9.1 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".

Z10 *Employer's* limitation of liability

Z10.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z10.2 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 to compensation as provided for under the compensation events stated in this contract.

Z11 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

Z11.1 or had a judicial management order granted against it.

Z12 Addition to secondary Option X7 Delay damages (if applicable in this contract)

Z12.1 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.

Outage Works

"In an event where an outage starts date changes, thus changing the start date of the works, a minimum 30 calendar days notice will be given. If this notice is given, the compensation for time change will be nil."

Annexure B: Insurance provided by the Employer

These notes are provided as guidance to tendering contractors and the Contractor about the insurance provided by the Employer. Details of the insurance itself are available from the internet web link given below.

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

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

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

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

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

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

   In the case of contracts / packages within a project:

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

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

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

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

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

3. Tendering contractors should note that cover provided by the *Employer* is only per the policies available on the internet web link listed below and may not be the cover required by the tendering contractor or as intended by each of the listed insurances in the left hand column of the Insurance Table in clause 84.2. In terms of clause 84.1 "the *Contractor* provides the insurances stated in the Insurance Table except any insurance which the *Employer* is to provide". Hence the *Contractor* provides insurance which the *Employer* does not provide and in cases where the *Employer* does provide insurance the *Contractor* insures for the difference between what the Insurance Table requires and what the *Employer* provides.

4. When the Marine Insurance is required the *Contractor* needs to obtain a copy of the latest edition of Eskom's Marine Policies Procedures found at internet website given below.

5. **Further information and full details of all Eskom provided policies and procedures may be obtained from:**

   http://www.eskom.co.za/live/content.php?Item_ID=9248

Annexure C: The *Employer*'s Panel of Adjudicators

The following persons listed in alphabetical order of their surname have indicated their willingness to be included in the Eskom Panel of Adjudicators. Their CV's may be obtained by using the contact details provided.

Name	Location	Contact details (phone & e mail)
Nigel ANDREWS	Gauteng	+27 11 836-6760 nigela@quoin.net
Andrew BAIRD	Gauteng	+27 11 803 3008 andrewbaird@ecsconsult.co.za
Christopher BINNINGTON	Gauteng	+27 11 888-6141 cdb@bca.co.za
Peter HIGGINS	UK	+44 1293 873 868 peterhiggins@pdconsult.co.uk
Bruce LEECH	Gauteng	+27 11 290 4000 leech@counsel.co.za
Nigel NILEN	Gauteng	+27 11 465 3601; nilences@global.co.za
Robert St. LEGER	Cape Town	+27 21 794 7488 bobst@iafrica.com
Peter THURLOW	Gauteng	+27 11 787 6226 info@thurlowassoc.com

Information about the Panel and appointment of the selected *Adjudicator* is available from Eskom Supply Chain Operations management, by contacting Leighton Itholeng (Tel.: +27 (0)11 800 4031) (Fax :+27 (0)86 668 0419) E-mail: Leighton.Itholeng@eskom.co.za

C1.2 Contract Data

Part two - Data provided by the *Contractor*

Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (June 2005) and the relevant parts of its Guidance Notes (ECC3-GN)[2] in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 152 to 154 of the ECC3 Guidance Notes.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [ ] appears, data is required to be inserted relevant to the option selected. Click on the form field ***once*** and type in the data. Otherwise complete by hand and in ink.

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

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

[2] Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009

11.2(3)	The *completion date* for the whole of the *works* is	
11.2(14)	The following matters will be included in the Risk Register	
31.1	The programme identified in the Contract Data is	
A	**Priced contract with activity schedule**	
11.2(20) 11.2(30)	The *activity schedule* is in The tendered total of the Prices is	 **(in figures)** **(in words), excluding VAT**

PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	
C2.2	The *activity schedule*	

C2.1 Pricing assumptions: Option A

The *conditions of contract*

How work is priced and assessed for payment

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

Identified and defined terms 11
11.2 (20) The Activity Schedule is the *activity schedule* 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 instructions to do work or 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”. Hence when compiling the *activity schedule*, the tendering contractor needs to show each activity on the programme he submits with his tender.

Preparing the *activity schedule*

The tendering contractor prepares the *activity schedule* and should study the ECC3 Guidance Notes pages 19 and 20 before doing so. The *Employer* may have instructed the tendering contractor to include particular activities which he has specified and requires the *Contractor* to identify them in his *activity schedule*.

1 Generally it is the Contractor who prepares the Activity Schedule as part of his tender by breaking down the work described within the Works Information into suitable activities which can be well defined, priced as a lump sum and shown on the programme. The Employer, in his Conditions of Tender 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.

2 The Prices are defined in clause 11.2(20) as the lump sum for each activity in the activity schedule and the Price for Work Done to Date (PWDD) (the amount due to the contractor) is defined in clause 11.2(24) as the total of the Prices for each activity that has been completed. Hence activities in the activity schedule should be structured so as to provide an acceptable monthly cash flow as they are only assessed for payment on the assessment date if they have been completed.

3 As the Contractor has an obligation to correct Defects (core clause 43.1) and there is no compensation event for this unless the Defect was due to an Employer's risk, the lump sum Prices must also include for the correction of Defects.

4 If the Contractor has decided not to identify a particular activity, the cost to the *Contractor* of doing the work must be included in, or spread across, the other Prices in order to fulfil the obligation to complete the works for the tendered total of the Prices.

5 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. See Clause 60.1.

6 Hence the Prices tendered by the Contractor in the *activity schedule* 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.

7 However, the Contractor does not have to allow in his Prices for matters that may arise as a result of a compensation event. It should be noted that the list of compensation events includes those arising as a result of an Employer's risk event listed in core clause 80.1.

- An activity schedule could have the following format:

Item no.	Description	Quantity	Rate	Price
1.	Health and safety			
3.	Installation	6		
4.	Commissioning	6		
5.	Training			
6.	5 x weld-in Isokinetic sampling probes type.	6		
7.	Installation of sample probes including welding.	6		
8.	Five way manifold complete with isolation valves & fittings	6		
9.	Primary Cooler	6		
10.	CPS – Corrosion Product Sampler	6		
11.	CPS – Corrosion Product Sampler (Economiser Inlet Sample)	5		
12.	Secondary Cooler	6		
13.	Grab/Offline sampler	6		
14.	Supply and Installation of analysers, this will include the following: • PH analyser complete with probe • Specific conductivity complete with probe & cell • Dissolved oxygen analyser complete with probe & flow cell	6		
15.	Dust proof enclosure for analysers and CPS.	6		
16.	Installation and Commissioning of Sample Conditioning System	6		
17.	Supply and install square tube and expanded metal cage +/- 2 x 2meter to close equipment	6		
18.	High Temperature (Thermal) Shut-Off Valve (HTSV)	6		
19.	Back Pressure Regulation/Relief Valve (BPR/RV)	6		
20.	Pressure Reduction	6		
21.	High Pressure/High Temperature (HP/HT) Sample Line Piping/Tubing	6		

	Others (As per scope of work) Cost breakdown to be supplied.			

The prices are fixed and firm and exclude VAT

***Contractor*:**

....
PRINT NAME SIGNATURE DATE

C2.2 the *activity schedule*

The scope of work for this project includes the following:

Supply, Installation, Commissioning of the overall Sample Conditioning System which includes but not limited to the following:

- Supply, Installation and Commissioning of five isokinetic probes and all the isolations.
- Supply, Installation and Commissioning of all the pipework necessary for the Sample Conditioning System.
- Supply, Installation and Commissioning of secondary and primary coolers and all the necessary isolations
- Supply, Installation and Commissioning of Corrosion Product Sampler (CPS) and all the necessary isolations and valves.
- Supply, Installation and Commissioning of PH, Oxygen and Conductivity analysers.
- Supply, Installation and Commissioning of all the necessary valves, flowmeters and temperature indicators.
- Supply, Installation and commissioning of 5 corrosion product monitors (CPM) for the economiser inlet sample in units 1, 2, 3, 5 and 6. Unit 4 already has a CPM installed.
- Supply, Installation and Commissioning of power and signal cables.
- Supply Maintenance and Operating documents.
- Provide training to Duvha personnel.

The *works* comprises the following for the Sample Conditioning System and Permanent Sampling System.

- Design
- Manufacture and procurement
- Delivery to and offloading at site
- Installation of civil, mechanical and electrical work
- Plant labeling
- Corrosion protection
- Interfacing with existing plant
- Commissioning, Testing and Optimisation
- Initial training of *Employer's* personnel in the operation and maintenance of the system
- Documentation as specified
- Quality management for all activities
- Safety and plant signage

Included in the implementation is the installation of analysers, CPS, primary cooler, secondary cooler, HTSV, BPR/RV, flowmeters, offline sampler, isolation valves and all the necessary pipe work to ensure that a sample is collected in a reliable as well as safe manner.

The Employer's design requirements are as follows:

3.1.1 Sample Point and Isokinetic Sample Probe

The Contractor shall design, procure, supply and install sample piping between the sample probe and double isolating valves in series. The contractor will also be responsible for the design, procurement and supply of the transition stub and appropriate isokinetic probe.

The transition from the isokinetic probe tip to the sample tube should avoid a 90° change of direction.

The works will involve welding of the isokinetic probes into the heater drain pipes. A total of five isokinetic probes will be welded to the following drain lines:

- HP Heater 5A drain line to the DST
- 5B distillate drain line to the DST
- HP Heater 6A cascade line to HP Heater 5A
- HP Heater 6B cascade lines to HP Heater 5B
- LP heater 3 normal distillate drain

All welding and non-destructive testing must be TUV approved.

3.1.2 Sample Conditioning System

The works shall include the design, procurement, supply, installation and commissioning of the sample conditioning system on the heater distillate drains for each generating unit and shall comprise a fixed installation of a primary and secondary cooling system. The sample that shall be presented for offline and/or local analysis of pH, conductivity and dissolved oxygen content shall be conditioned to < 30°C, or as required by the instruments supplied. The sample that shall be used for corrosion product sampling shall be conditioned to < 45°C, or as required by the instruments supplied. The sample conditioning system must be installed in a lockable enclosure that is dust proof which must be situated at the turbine ground floor below the HP heaters.

- **Location**

The sample conditioning system shall be located as close as possible to the sample point as reasonably possible, The sample conditioning system shall not obstruct any equipment, pipeline or structures, nor be positioned in an area utilized during major overhaul of the generating unit. The sample condition system together with the coolers, analysers, CPS must be located in a lockable enclosure at the turbine ground floor and not in the CPP analyser room as there is no space. The analysers (O2, PH and Conductivity) and CPS must be inside a dust proof enclosure. Only the corrosion product monitors for the economizer inlet sample must be located in each unit's analyser room.

- **Isolation Valves**

All sample isolation valves shall be appropriate for the sample probe and meet the safety requirements of the sample conditioning system.

- **High Pressure/High Temperature (HP/HT) Sample Line Piping/Tubing**

Sample lines for samples led to the primary sample cooling shall be kept as short as possible, within the constraints of the location of the sample extraction point.

Sample velocity in the sample line shall preferably be maintained at >2 $m.s^{-1}$ (but less than 2.3 $m.s^{-1}$) after the primary cooler. The Reynolds Number within the tubing should be > 4000: however, it is deemed more critical that the velocity requirement be met.

The sample line shall be sized to be capable of delivering a minimum sample flow of 1500 $mL.min^{-1}$. Actual tubing size shall be selected to comply with the velocity and volume requirements of the sample line. The smallest tubing size that ensures adherence to these requirements shall be used.

- **Primary Cooling**

High efficiency sample coolers used for primary temperature reduction shall be designed for the temperature/pressure of the sample source. The primary coolers shall be of the submerged helical coil-in-shell type design, with full counter flow of sample and cooling water.

All coolers shall have a single flange and gasket design and a removable shell for ease of maintenance. The coolers shall be constructed of Inconel. The sample tubing shall be of seamless construction with no welds and/or other joints inside the cooling jacket.

Coolers shall be located for ease of access to throttling valves and for simplified maintenance and replacement as necessary. In addition, cooling water piping shall not disturb sample piping. Equally, sample piping shall not interfere with the removal and replacement of cooler coils and/or shells. Temperature and pressure indication of the sample shall be provided.

- **Secondary Cooling**

The secondary coolers shall be of the submerged helical coil-in-shell type design, with full counter flow of sample and cooling water.

All coolers shall have a single flange and gasket design and a removable shell for ease of maintenance. The coolers shall be constructed of Inconel. The sample tubing shall be of seamless construction with no welds and/or other joints inside the cooling jacket.

The secondary cooling system shall control sample temperature to < 30°C.

Coolers shall be located for ease of access to throttling valves and for simplified maintenance and replacement as necessary. In addition, cooling water piping shall not disturb sample piping. Equally, sample piping shall not interfere with the removal and replacement of cooler coils and/or shells. Temperature and pressure indication of the sample upstream and downstream of the secondary cooler shall be provided.

- **Pressure Reduction**

Pressure reduction shall preferably be effected by a variable capillary rod-in-tube type pressure reducing valve. This shall have tapered rods with a threaded shaft extension into a bushing for support and guidance for the nut with tapered rod. The pressure reducing valve shall be capable of reducing and regulating the downstream pressure to an adjustable value between 100 and 300 kPa. For pressure regulators drag valves are not acceptable.

- **Back Pressure Regulation/Relief Valve (BPR/RV)**

In order to ensure adequate flow to the analysers and provide precise flow control, a back-pressure regulator/relief valve shall be provided on the sample line. The BPR/RV shall provide pressure relief capability downstream of the pressure reducing valve. The relief shall protect the associated analysers in accordance with pressure limitations imposed by the analyser manufacturer.

The BPR/RV shall ensure a constant flow to the online analysers and shall be of a lockable type to prevent interference once flow has been established. Offline (“grab”) samples shall be collected from the drain line of the BPR/RV.

- **High Temperature (Thermal) Shut-Off Valve (HTSV)**

An HTSV shall be installed to protect downstream equipment should the temperature after the primary cooler exceed 50°C.

3.1.3 Sampling System

The permanent sampling system for the heater distillate drains shall consist of a CPS, pH, conductivity, and dissolved oxygen analysers and have the capacity to take an offline (“grab”) sample. It is to be installed permanently on each generating unit’s ground floor underneath the heaters in a lockable enclosure. The design should be as compact as possible due to space constraints.

- **Corrosion Product Sampler (CPS)**

The CPS on the sampling system is intended to operate at sample line pressure and shall be located after the fixed primary cooler on the heater distillate drains. The temperatures and pressure of the sample are as follows:

The temperature of the sample supplied to the CPS after cooling shall be below 45°C. The CPS shall be capable of withstanding the design pressure of the source stream being sampled. The sample line shall be capable of delivering a sample stream at a flow rate of at least 1500 $mL.min^{-1}$, 100 – 300 $mL.min^{-1}$ for the CPS and 1200 - 1400 $mL.min^{-1}$ for the bypass stream. There shall be no pressure reduction or filtration before the CPS unit.

The sampling flow rate through the filter holder shall be controllable up to 300 $mL.min^{-1}$ (normal sample flow rate 100 – 150 $mL.min^{-1}$).A pressure sustaining valve after the filter holder block shall ensure that the selected flow rate is maintained throughout the sample period. Excess sample shall be diverted through the bypass to the fixed secondary cooling system.

The filter block housing shall be of an easy to use, high pressure design, of stainless steel construction, capable of accommodating at least one particulate filter (0.45 micron). The design of the filter block housing should allow for ease of removal.

Flow indication shall be installed on both the sample stream and the bypass stream passing through the secondary cooling circuit. The sample stream shall be equipped with pressure indication and a flow totaliser after the filter block.

After the CPS, the sample pressure shall be reduced by a pressure reducing valve and then be directed to the closest tundish.

- **Online Chemical Analysers**

The bypass stream of the CPS of 1200 - 1400 $mL.min^{-1}$ shall be used for the online analysers and manual offline (“grab”) sampling at a velocity of $2m.s^{-1}$. This sample shall be cooled to <30 °C. The Contractor shall determine sample piping dimensions in his design.

From the bypass line prior to the CPS, the sample is routed through the secondary cooling system on the fixed sample conditioning system. The sample should be within the specifications required by the chemical analysers. The installed online analysers should measure pH, conductivity and online oxygen content. Non-linear temperature compensation algorithms shall be used for conductivity.

The flow through the different analysers shall be controlled by a flowmeter. A back pressure regulating valve shall be installed on the offline (“grab”) sample line to maintain the flow to the analysers.

- **Electrical Requirements**

The sampling system shall be powered with a 220V power supply 10A max. Should the location of the system be distant from the nearest power supply, a suitable protection system of the extended power cord shall be provided for by the Contractor to prevent the possible tripping hazard on the cord.

- **Protection**

The sample coolers shall be contained in a lockable enclosure large enough to incorporate the sample system. The enclosure shall be sturdy to prevent unauthorised interference on the sampling system, as well as accidental bumping of the unit. Should the enclosure require fixing into the floor, it shall be done in such a manner so as to enable easy removal should it be required in the case of obstruction during major maintenance on other equipment in the vicinity.

3.1.4 Economiser Inlet Corrosion product monitors (CPM)

The corrosion product monitor is obsolete and needs to be replaced in units 1, 2, 3, 5 and 6. Unit 4 has a CPM already installed so only a total of 5 corrosion product monitors are required.

3.1.5 Pre requisites and Plant Status

The plant must be off load when installing the isokinetic probes. Cooling water tap off points must also be done off load. Installation of the sample conditioning system, analysers, CPS and all the necessary pipework, valves and flowmeters can be done on load.

Design of Equipment

The *Contractor* shall make use of readily available equipment for the execution of *works*.

Important information: The activities are as per the attached works information.

PART 3: SCOPE OF WORK

C3.1: EMPLOYER'S WORKS INFORMATION

THE EPLOYERS'S WORKS INFORMATION IS ATTACHED HEREWITH THE CONTRACT,

PART 4: SITE INFORMATION

THE SITE INFORMATION IS ON THE WORKS I NFORMATION.