NEC3 Engineering & Construction Contract

Between	**ESKOM HOLDINGS SOC Ltd (Reg No. 2002/015527/30)**	
and	**[Insert at award stage] (Reg No. _____)**	
for	**Monitoring Tube Leaks in The Boiler for a Period of 2 Years at Arnot Power Station**	
Contents:		**No of pages**
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:

Monitoring Tube Leaks in The Boiler for a Period of 2 Years at Arnot Power Station

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

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

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

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

Signature(s)			
Name(s)			
Capacity			
For the tenderer:			
Name & signature of witness	*(Insert name and address of organisation)*	Date	
Tenderer's CIDB registration number (if applicable)			

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

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

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

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	**[●]**	**[●]**

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*

[Instructions to the contract compiler: (delete these two notes in the final draft of a contract)

1. Please read the relevant clauses in the conditions of contract before you enter data. 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.

1. Some ECC3 options are always selected by Eskom Holdings SOC Ltd. The remaining ECC3 options are identified by shading in the left hand column. In the event that the option is not required select and delete the whole row. Where the following symbol is used "**[•]" -** data is required to be inserted relevant to the specific option selected.]

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

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	
		X1: Price adjustment for inflation
		X2: Changes in the law
		X7: Delay damages
		X16: Retention
		X18: Limitation of liability
		Z: *Additional conditions of contract*
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The *Employer* 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 *Project Manager* is: (Name)	**TBA**
	Address	**Eskom Holdings Soc Ltd Arnot Power Station Private Bag X2**

		RIETKUIL 1097		
	Tel	**TBA**		
	e-mail	**TBA**		
10.1	The *Supervisor* is: (Name)	**TBA**		
	Address	**Eskom Holdings Soc Ltd Arnot Power Station Private Bag X2 RIETKUIL 1097**		
	Tel No.	**TBA**		
	e-mail	**TBA**		
11.2(13)	The *works* are	**Monitoring Tube Leaks in The Boiler**		
11.2(14)	The following matters will be included in the Risk Register	**● Access to Site ● Adverse weather; quality non-conformance; and safety, environmental or permit delays. ● Lead times of materials ● Pulling of Cables to the EDS ● Scaffolding ● All matters notified on Early warnings**		
11.2(15)	The *boundaries of the site* are			
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	**One (1) week or agreed between the parties and specified in the task order**		
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	**TBA**		
11.2(9)	The *key date*s and the *condition*s to be met are:	***Condition* to be met**		***key date***
		1	**Contractor submits a final and approve design report and construction**	**TBA**

			drawings	
30.1	The *access dates* are:	**Part of the Site**		**Date**
		1	**Unit 1-2**	**TBA**
		2	**Unit 3-4**	**TBA**
		3	**Unit 5-6**	**TBA**
31.1	The *Contractor* is to submit a first programme for acceptance within	**2 Weeks of the Contract Date.**		
31.2	The *starting date* is	**TBA**		
32.2	The *Contractor* submits revised programmes at intervals no longer than	**4 Weeks.**		
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.	[No data needed if this statement is included]		
4	**Testing and Defects**			
42.2	The *defects date* is	**Defect date is 52 weeks after Completion of the whole of the works.**		
43.2	The *defect correction period* is	**The defect correction period is 1 week, or any other period agreed between the parties.**		
5	**Payment**			
50.1	The *assessment interval* is	**Between the 25th day of each successive month or as per the task order issued.**		
51.1	The *currency of this contract* is the	**ZAR (South African Rand)**		
51.2	The period within which payments are made is	**30 days after the receipt of correct and undisputed tax invoice**		
51.4	The *interest rate* is	**The publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands**		
6	**Compensation events**			
60.1		**All Compensation Events arising under the contract shall be notified, assessed and implemented in accordance with Clauses 60 to 66 of the NEC3 ECC**		
60.1(13)	The place where weather is to be recorded is:	**Rietkuil - Arnot Power Station**		
	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	**South African Weather Service records, as applicable**
	The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:	**Arnot Power Station or the nearest applicable official weather station stated in Annexure A**
	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*.**
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. Natural disaster**
		2. Industrial action or Community Unrest
		3. Any additional *Employer* risks are those expressly stated in the Risk Register and Works Information.
9	**Termination**	**To be managed as per core clause 91 of the NEC3 ECC, with the detailed process and amounts due dealt with in Clauses 92 and 93.**
10	**Data for main Option clause**	
A	**Priced contract with activity schedule**	
20.5	The Contractor prepares forecasts of the final total of the Prices for the whole of the service at intervals no longer than	**Monthly (30 days) or as stated on the Task Order**
11	**Data for Option W1**	
W1.1	The *Adjudicator* 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).		
	Address	**TBA**		
	Tel No.	**TBA**		
	Fax No.	**TBA**		
	e-mail	**TBA**		
W1.2(3)	The *Adjudicator nominating body* 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 *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	**Johannesburg, 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**			
X1	**Price adjustment for inflation**			
X1.1(a)	The base date for indices is			
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	**Proportion**	**linked to index for**	**Index prepared by**
		15%	**Fixed**	**Fixed Portion**
		20%	**Labour- (All hourly paid)**	**SEIFSA Table – C3A**
		40%	**Material - (Electrical Engineering)**	**SEIFSA Table – G1**
		15%	**Material - (Mechanical Engineering)**	**SEIFSA Table – G1**
		5%	**Transport**	**SEIFSA Table – L1B**
		5%	**CPI**	**SEIFSA Table – D4**
		100%		

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X2	**Changes in the law**	**Becomes a Compensation Event only if the changes in the Law of the Republic of South Africa took place after the Contract Date.**
X7	**Delay damages (but not if Option X5 is also used)**	
X7.1	Delay damages for Completion of the whole of the *works* are	**R2000 per day up to a limit of R50 000**
X16	**Retention (not used with Option F)**	
X16.1	The *retention free amount* is	**R**
X16.1	The *retention percentage* is	**The retention percentage is 5%**
X16.2	The retention release	**The release of retention is managed in accordance with Option X16 and the stated Completion and Defects requirements.**
X18	Limitation of liability	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**R0.0 (zero Rand)**
X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to:	**the amount of the deductibles relevant to the event**
X18.3	The *Contractor*'s liability for Defects due to his design which are not listed on the Defects Certificate is limited to	**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 the applicable deductible as at contract date.**
X18.4	The *Contractor*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	**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) 2 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 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	**84**	

<table>
<tr><td>cover</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td>84.1</td><td>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.</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td>84.2</td><td>The Contractor provides the insurances stated in the Insurance Table A.</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td>84.3</td><td>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.</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>INSURANCE TABLE A
<table>
<tr><th>Insurance against</th><th>Minimum amount of cover or minimum limit of indemnity</th></tr>
<tr><td>Loss of or damage to the works, Plant and Materials</td><td>The replacement cost where not covered by the Employer's insurance

The Employer's policy deductible, as at Contract Date, where covered by the Employer's insurance</td></tr>
<tr><td>Loss of or damage to Equipment</td><td>The replacement cost</td></tr>
<tr><td>Liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract</td><td><u>Loss of or damage to property</u>
<u>Employer's property</u>
The replacement cost where not covered by the Employer's insurance

The Employer's policy deductible, as at Contract Date, where covered by the Employer's insurance

<u>Other property</u>
The replacement cost

<u>Bodily injury to or death of a person</u>
The amount required by applicable law</td></tr>
<tr><td>Liability for death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with this contract</td><td>The amount required by the applicable law</td></tr>
</table></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Z 13.2</td><td></td><td>Replace core clause 87 with the following:
The Employer provides the insurances stated in the Insurance Table B.</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>INSURANCE TABLE B
<table>
<tr><th>Insurance against or name of policy</th><th>Minimum amount of cover or minimum limit of indemnity</th></tr>
<tr><td>Assets All Risk</td><td>Per the insurance policy document</td></tr>
<tr><td>Contract Works insurance</td><td>Per the insurance policy document</td></tr>
</table></td></tr>
</table>

		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	means compliance sampling used to assess whether or not the personal exposure of

Monitoring	workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
OEL	means occupational exposure limit.
Parallel Measurements	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
Safe Levels	means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
Standard	means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
SANAS	means the South African National Accreditation System.
TWA	means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z15.1	The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.
Z15.2	Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
Z15.3	The *Employer* manages asbestos and ACM according to the Standard.
Z15.4	In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
Z15.5	The *Contractor*'s personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
Z15.6	The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
Z15.7	Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer*'s expense, and

	conducted in line with South African legislation.

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	181	5	0	0	
February	124	4	0	0	
March	52	2	0	0	
April	0	0	0	0	
May	14	0	0	0	
June	35	1	1	0	
July	0	0	4	0	
August	14	1	0	0	
September	1.4	0	0	0	
October	140	6	0	0	
November	159	6	0	0	
December	191	5	0	0	

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

C1.2 Contract Data

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 *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:	

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

	Experience:		
		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .	
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		
11.2(19)	The Works Information for the *Contractor*'s design is in:		
31.1	The programme identified in the Contract Data is		
A	**Priced contract with activity schedule**		
11.2(20)	The *activity schedule* is in		
11.2(30)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**	
B	**Priced contract with bill of quantities**		
11.2(21)	The *bill of quantities* is in		
11.2(31)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**	
C	**Target contract with activity schedule**		
11.2(20)	The *activity schedule* is in		
11.2(30)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**	
D	**Target contract with bill of quantities**		
11.2(21)	The *bill of quantities* is in		
11.2(31)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**	
F	**Management contract**		
20.2	Work which the *Contractor's* will do himself is	**Activity**	***price*** **(lump sum or rate)**

	Data for Schedules of Cost Components	*Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).*		
A	**Priced contract with activity schedule**	**Data for the Shorter Schedule of Cost Components**		
B	**Priced contract with bill of quantities**	**Data for the Shorter Schedule of Cost Components**		
41 in SSCC	The percentage for people overheads is:	**%**		
21 in SSCC	The published list of Equipment is the last edition of the list published by			
	The percentage for adjustment for Equipment in the published list is	**Minus %**		
22 in SSCC	The rates of other Equipment are:	**Equipment**	**Size or capacity**	**Rate**
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are	**Category of employee**	**Hourly rate**	
	Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.			
	Please insert another schedule if foreign resources may also be used			
62 in SSCC	The percentage for design overheads is	**%**		
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			
	If Option C, D or E is used	**Data for Schedule of Cost Components**		
23 in SCC	The listed items of Equipment purchased for work on this contract, with an on cost charge, are:	**Equipment**	**Time related charge**	**Per (time period)**

24 in SCC	The rates of special Equipment are:	**Equipment**	**Size or capacity**	**Rate**
44 in SCC	The percentage for Working Areas overheads is:	: **%**		
51 in SCC	The hourly rates for Defined Cost of manufacture or fabrication outside the Working Areas are	**Category of employee**	**Hourly rate**	
	Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates			
	Please insert another schedule if foreign resources may also be used			
52 in SCC	The percentage for manufacture and fabrication overheads is	**%**		
	If Option C, D, or E is used	**Data for both schedules of cost components**		
61 in SCC & SSCC	The hourly rates for Defined Cost of design outside the Working Areas are	**Category of employee**	**Hourly rate**	
	Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.			
	Please insert another schedule if foreign resources may also be used			
62 in SCC & SSCC	The percentage for design overheads is	**%**		
63 in SCC & SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included as a cost of design of the *works* and Equipment done outside the Working Areas are:			

	If Option C, D or E is used	**Data for the Shorter Schedule of Cost Components**		
41 in SSCC	The percentage for people overheads is:	**%**		
21 in SSCC	The published list of Equipment is the last edition of the list published by			
	The percentage for adjustment for Equipment in the published list is	**%**		
22 in SSCC	The rates of other Equipment are:	**Equipment**	**Size or capacity**	**Rate**

PART 2: PRICING DATA
ECC3 Option A

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

C2.1 Pricing assumptions: Option A

1. 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 *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.

2. 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.

3. 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*.

4. 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:

Item No.	**Programme Reference**	**Activity description**	**Price**

C2.2 the *activity schedule*

Item No	Description	Unit	Qty	Rate	Total Price
1	**Instruments and Electrical Components**				
1.1	Supply of Humidity Instrument and Cell Kit	each	14		
1.2	4 mm2, PVC, 3 core, SWA power cable	m	2500		
1.3	Size 2 cable gland	each	24		
1.4	10A, 5kA Single pole miniature circuit breakers	each	12		
1.5	10A, 5kA Double pole miniature circuit breakers	each	12		
1.6	Wire mesh cable tray	m	500		
1.7	Electrical accessories, i.e. Cable straps, tapes	Sum	48		
1.8	Junction boxes	each	12		
1.9	UVG16 cable	m	2400		
1.10	UVG8 cable	m	200		
2	**Galvanised Reference Air Pipe, Fittings and Valves**				
2.1	½"' Galvanised pipe	m	300		
2.2	½" Galv. T-Piece	each	40		
2.3	½" Galv. Nipple	each	100		
2.4	½" Galv. Elbow	each	50		
2.5	½" Galv. Union	each	40		
2.6	½" Galv. Socket	each	30		
3	**Stainless Steel Reference Air Pipe , Fittings and Valves**				
3.1	½" Latch Lock Stainless Steel Ball Valve (Pad Lockable)	each	60		
3.2	½" NPT/12mm Stainless Steel Male Connector	each	20		
3.3	¼" NPT/12mm Stainless Steel Male Connector	each	20		
3.4	12mm Stainless Steel Tubing	m	20		
3.5	8mm Stainless Steel Braided Flexible Hose ¼" Connectors(2m)	each	30		
3.6	15mm Pipe Clamps	each	100		
4	**Reference Air Filter Regulator**				
4.1	Main Air Supply Drier Unit c/w Water Trap, Filter & Regulator	each	6		
4.2	By-pass Filter / Regulator with Water Trap	each	6		
4.3	Galvanised drip tray	each	6		
5	**Mechanical - Instrument Hook Up on Furnace**				
5.1	Design and engineering of probe mounting adapters, sleeves and flange assemblies, including detailed fabrication drawings and material specifications.	Sum	1		
5.2	Supply and fabrication of probe mounting adapter assemblies, including all required machining and mechanical interfaces.	Each	12		
5.3	Supply and fabrication of high-temperature probe mounting sleeves, including material preparation, cutting and machining to approved dimensions.	Each	12		

5.4	Supply and fabrication of mating flanges suitable for the probe mounting arrangement, including drilling, machining and surface finishing.	Each	12		
5.5	Supply of high-temperature flange gaskets, bolts, nuts and washers suitable for the operating environment.	Set	12		
5.6	Preparation of existing boiler furnace/flue gas duct mounting locations, including marking, cutting and preparation of openings for sleeve installation.	Each	12		
5.7	Welding of probe mounting sleeves onto the existing boiler furnace/flue gas duct structure, including joint preparation, alignment, welding consumables and execution in accordance with approved welding procedures.	Each	12		
5.8	Welding and fabrication of sleeve-to-flange connections, including alignment, joint preparation and welding in accordance with approved procedures.	Each	12		
5.9	Inspection and non-destructive testing (NDT) of welded joints, including visual inspection and applicable NDT methods in accordance with approved inspection and test plans.	Each	12		
5.10	Installation and mechanical assembly of probe mounting adapters, sleeves and flanges, including positioning, alignment, gasket installation and fastening.	Each	12		
5.11	Inspection and verification of completed mechanical installations, including flange alignment, mechanical integrity and leak-tightness verification where applicable.	Each	12		
5.12	Provision of welding quality documentation, including approved welding procedures, welder qualifications, material certificates, inspection records and NDT reports.	Sum	1		
6	**Labour Resources**				
6.1	Project Manager Times x 1	Monthly	24		
6.2	Supervisor x 1	Monthly	24		
6.3	Safety Officer x 1	Monthly	24		
6.4	Site Engineer x 1	Monthly	24		
6.5	Lead Electrician x 1	Monthly	24		
6.6	C&I Artisan x 4	Monthly	24		
6.7	Boiler Maker x 1	Monthly	24		
6.8	Fitter x 1	Monthly	24		
6.9	General Workers x 4	Monthly	24		
7	**Preliminaries and General (Fixed)**				
7.1	Site Establishment -One 6x3m Ablutions	Sum	2		
7.2	Site Establishment - One 6x3m office containers (including furniture)	Sum	1		
7.3	Site Establishment - One 12x3m open plan kitchen with furniture)	Sum	1		
7.4	Site Establishment - One 12x3m container for Stores (Storage of tools and components to be installed)	Sum	1		
7.5	Water and Electricity	Sum			

7.6	Site De-establishment	Sum	1		
7.7	Safety File	Sum	1		
7.8	Medical Surveillance	Sum	15		
7.9	Police Clearance	Sum	15		
7.10	As-built documentation and manuals (for client handover)	Sum	1		
7.11	Tools and Equipment	Sum	1		
7.12	Client training	Sum	1		
8	**Preliminaries and General (Time Related)**				
8.1	Safety File (year 1 and 2)	Annualy	1		
8.2	One 6x3m Ablutions,	Annualy	24		
8.3	One 6x3m office containers (including furniture)	Monthly	24		
8.4	One 12x3m open plan kitchen	Monthly	24		
8.5	One 12x3m container for stores	Monthly	24		
8.6	Water and Electricity	Monthly	24		
8.7	Travel and accommodation	Monthly	24		
8.8	Design and technical drawings (integration of humidity analyzers into furnace system)	Each	1		
8.9	Factory Acceptance Tests	Each	6		
8.10	Site Acceptance Tests	Each	6		
8.11	Intergration of system with control systems, DCS and HMI interface (To be outsourced to ABB)	Each	6		
9	**Personal Protective Equipment**				
9.1	Safety Goggles	Each	52		
9.2	Hard Hat with chin strap	Each	52		
9.3	Hearing protection – muffs	Each	52		
9.4	Dust masks	Daily	6474		
9.5	Overalls – two piece (fire and chemical resistant)	Each	52		
9.6	Safety Shoes	Each	52		
9.7	Safety Gloves	Each	52		
9.8	Pig Skin Gloves	Each	52		

L.V.Koba

The total of the Prices excluding VAT **R**

NB: The quantities on the contract are based on an “Estimate”, they may be less or more. Therefore, the contract value is not binding, only the rates apply

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	This cover page	1
C3.1	*Employer*'s Works Information	
C3.2	*Contractor*'s Works Information	
	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* **4**

1.1 Executive overview 4

1.1.1 HIGH LEVEL DESCRIPTION OF WORKS 4

1.2 *Employer*'s objectives and purpose of the *works* 5

1.3 Interpretation and terminology 5

2 Management and start up. **7**

2.1 Management meetings 7

2.2 Documentation control 7

2.3 Health and safety risk management 8

2.4 Environmental constraints and management 9

2.5 Quality assurance requirements 10

2.6 Programming constraints 11

2.7 *Contractor*'s management, supervision and key people 11

2.8 Invoicing and payment 11

2.9 Insurance provided by the *Employer* 11

2.10 Contract change management 11

2.11 Provision of bonds and guarantees 12

2.12 Records of Defined Cost, payments & assessments of compensation events to be kept by the *Contractor* 12

2.13 Training workshops and technology transfer 12

3 Engineering and the *Contractor*'s design **12**

3.1 *Employer*'s design 12

3.2 Parts of the *works* which the *Contractor* is to design 13

3.3 Procedure for submission and acceptance of *Contractor*'s design 13

3.4 Other requirements of the *Contractor*'s design 13

3.5 Use of *Contractor*'s design 13

3.6 Design of Equipment 13

3.7 Equipment required to be included in the *works* 13

3.8 As-built drawings, operating manuals and maintenance schedules 13

4 Procurement **13**

4.1 People 13

4.1.1 Minimum requirements of people employed on the Site 13
4.1.2 BBBEE and preferencing scheme 14
4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA) 14
4.2 Subcontracting 14
4.2.1 Preferred subcontractors 14
4.2.2 Subcontract documentation, and assessment of subcontract tenders 14
4.2.3 Limitations on subcontracting 14
4.2.4 Attendance on subcontractors 14
4.3 Plant and Materials 14
4.3.1 Quality 14
4.3.2 Plant & Materials provided “free issue” by the *Employer* 15
4.3.3 *Contractor*’s procurement of Plant and Materials 15
4.3.4 Spares and consumables 15
4.4 Tests and inspections before delivery 15
4.5 Marking Plant and Materials outside the Working Areas 15
4.6 *Contractor*’s Equipment (including temporary works) 15
4.7 Cataloguing requirements by the *Contractor* 15
5 List of drawings 16
5.1 Drawings issued by the *Employer* 16
C3.2 *Contractor*’s Works Information 16

1 Description of the *works*

1.1 Executive overview

Arnot Power Station is a coal-fired power station in Mpumalanga Province with six turbine-generator units, each rated at approximately 375 MW. Units 1 to 3 operate with ABB Procontrol P14 systems. Units 4 to 6 operate with ABB Procontrol P14 systems.

The current Boiler Tube Leak Detection (TLD) system at Arnot Power Station lacks sufficient capability to detect leaks in the economizer tubes of all six (6) units effectively. The existing acoustic-based system cannot reliably detect economizer tube leaks, posing a risk of undetected failures, which can lead to costly unplanned outages, secondary damage, and potential safety incidents.

To address this critical gap, the project will implement a standalone system of high-temperature, in-situ flue gas humidity monitors on both the Left-Hand (LH) and Right-Hand (RH) sides after the Economizers of all six units.

The system is designed to detect water leaks with a sensitivity sufficient to identify leaks before they escalate, enhancing detection reliability, enabling proactive maintenance, and improving station safety.

The Works include the engineering design, supply, installation, integration, and commissioning of the integrated solution directly into the ABB P14 DCS. The Works include full integration of the humidity analyzers into the existing ABB P14 DCS.
All DCS configuration, logic modifications, HMI mimic
development, alarming, diagnostics, and historian logging are carried out by ABB or an authorised ABB sales channel partner contracted directly by the *Contractor*.

Integration to the ABB DCS includes signal termination, signal allocation, and provision of all technical data, loop terminations, and wiring from the analyzer converters to the ABB interface points. The *Contractor* provides on-site support to ABB during configuration, testing, and commissioning.

All plant, materials, and workmanship forming part of the Works comply with the latest editions of applicable *Employer*, national, and international standards, including the standards listed in Section 3.4 of this document.

On Completion of the Works, the *Contractor* provides the *Employer* with an operational, fully integrated Additional Boiler Tube Leak Detection System that enhances plant safety and reliability, supports proactive maintenance, and reduces the risk of unplanned outages.

1.1.1 HIGH LEVEL DESCRIPTION OF WORKS

The Works information includes the provision of a fully integrated Additional Boiler Tube Leak Detection System that meets the *Employer's* requirements:

- The *Contractor* ensures that the design, engineering, procurement, manufacturing, factory acceptance testing, offloading on site, storage, installation, commissioning, and integration are catered for.
- The *Contractor* ensures that high-temperature, in-situ flue gas humidity monitors are installed on both the Left-Hand (LH) and Right-Hand (RH) sides after the Economizers of all six (6) units.
- The *Contractor* ensures that the analyzer system is capable of continuous, direct measurement of water vapor (in vol% H_2O) in high-temperature flue gases.

- The *Contractor* ensures that the analyzer probes can withstand a maximum flue gas temperature of 380°C and are constructed of materials resistant to flue gas composition containing H_2O, CO_2, SO_2, and fly ash.

- The *Contractor* ensures that the analyzer system provides dual, isolated 4-20 mA analog outputs with HART protocol for connection to the ABB P14 DCS.

- The *Contractor* ensures that the analyzer system is integrated into the ABB P14 DCS with full functionality, including display of measured values, alarms, and diagnostics on operator HMIs.

- The *Contractor* ensures that the system includes automatic/semi-automatic calibration capability using instrument air as the span gas.

1.2 *Employer*'s objectives and purpose of the *works*

The *Contractor* provides the Works as described in this *Employer's* Works Information.
The detailed Scope of Work, including the technical requirements, activities, deliverables and associated requirements, is provided in– Detailed Scope of Work, which forms part of the *Employer's* Works Information and the contract.

Annexure: Detailed Scope of Work – Scope of Work for Arnot Power Station Additional Boiler Tube Leak Detector Project, Unique Identifier: AECI 0132 Rev. 1

1.3 Interpretation and terminology

Terminology	Interpretation
Converter	The unit that processes the signal from the detector probe and provides analog outputs, HMI display, and system configuration.
Detector Probe	The sensing element installed directly into the flue gas duct that measures water vapor concentration.
DCS	Distributed Control System – the ABB P14 system used for plant control and monitoring.
Economizer	A heat exchanger that preheats boiler feedwater using flue gas heat; the location where the humidity monitors are installed.
HMI	Human-Machine Interface – the graphical interface used for operation and monitoring.
In-situ	Measurement performed directly within the process stream (flue gas duct) without extractive sampling.
KKS	Identification system for power plant (Kraftwerk Kennzeichnen System) as per 240-93576498.
OEM	Original Equipment Manufacturer of the analyzer system.
Probe Protector	A mechanical shield or sleeve that protects the detector probe from fly ash erosion and mechanical damage.
SANS ISO 3834	Quality requirements for welding – applicable to the fabrication of probe adapter flanges.
TLD	Tube Leak Detection.

The following abbreviations are used in this Works Information:

Abbreviation	Description (Meaning given to the abbreviation)
ABB	Asea Brown Boveri

C&I	Control and Instrumentation
DCS	Distributed Control System
ECSA	Engineering Council of South Africa
EMC	Electromagnetic Compatibility
EPRI	Electric Power Research Institute
FAT	Factory Acceptance Test
HMI	Human Machine Interface
IEC	International Electrotechnical Commission
ITP	Inspection Test Plan
KKS	Kraftwerk Kennzeichnen System (Power Plant Coding System)
LH	Left-Hand
OEM	Original Equipment Manufacturer
P&ID	Piping and Instrumentation Diagram
QCP	Quality Control Plan
RH	Right-Hand
SANS	South African National Standard
SAT	Site Acceptance Test
SHEQ	Safety Health Environmental and Quality
SIT	Site Integration Test
SOW	Scope of Work
TLD	Tube Leak Detector
UPS	Uninterruptible Power Supply
VDSS	Vendor Document Submission Schedule
WPS	Weld Procedure Specification

2 Management and start up.

2.1 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Weekly or as and when required	TBA	*Employer's Project Manager* the *Contractor's Project Manager*, and any other personnel relevant
Regular Progress Meetings • Review progress against the accepted program	Monthly	TBA	*Employer's Project Manager* the *Contractor's Project Manager*, and any other personnel relevant
Occupational Health, Safety, and Environmental (OHSE) Meetings: • Review HSE performance, discuss incidents (if any), review and update HSE plans, and ensure compliance with all relevant regulations	Monthly or as and when required	TBA	*Employer's Project Manager* the *Contractor's Project Manager*, and any other personnel relevant.
Close-out Meeting: • Review overall performance, discuss lessons learned, and confirm the satisfactory completion of all contractual obligations	Once Off- On Completion	TBA	*Employer's Project Manager* the *Contractor's Project Manager*, and any other personnel relevant

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

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

2.2 Documentation control

All formal Contractual communications shall be on a letterhead and bear as a minimum the date, subject, reference number, Identities of sender and receiver and signature of sender and shall be delivered as attachments in the case of emails and not as a message in the email itself.

All formal communications to the *Employer* shall be addressed to the *Employer's* Agent.

Correspondence on a day-to-day basis may be directed to other parties within the *Employer's* organisation but care must be taken not to violate Contract conditions and other provisions of the Contract.

The *Employer* requires the *Contractor* to implement and maintain a robust documentation control system to ensure that all project-related documents are managed effectively throughout the service period. This system shall facilitate the accurate creation, review, approval, distribution, revision, and archiving of all relevant documentation.

2.3 Health and safety risk management

The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the service. Without limitation the *Contractor:* accepts that the *Employer* may appoint him as the "*Contractor*" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993 (OHSAct)) ("the Construction Regulations") for the Affected Property; warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Occupational Health and Safety Act 85 of 1993;its regulation and Safety, Health and Environmental (SHE Spec) requirements for this contract.

All applicable health & safety laws; regulations; SHE Spec; health and safety standards, guidelines and Safety management systems(OHSAS 18001/ISO 45001) provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of the service; and undertakes, in and about the execution of the service, to comply with the Construction Regulations, occupational Health and Safety Act ; Project specific SHE spec ; applicable regulations, best practices & guidelines, Guidelines in terms of safety management systems(OHSAS 18001/ISO45001) and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

The *Contractor*, in and about the execution of the service, 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.

In addition to the requirements of laws governing health and safety, Eskom have some additional requirements particular to the service and affected property for this contract.

Consideration must be given to following Eskom Life Saving Rules: 240-62196227:

1. **Open, Isolate, Test, Earth, Bond, and/or insulate before touch**.
   No person may work on any electrical network unless:
   He/she is trained and authorised as competent for the task to be done.

2. **Hook up at height**
   Working at height s defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.

3. **Buckle up**
   No person may drive any vehicle on Eskom business and/or on Eskom premises:
   - Unless the driver and all passengers are wearing seat belts.

4. **Be sober**
   No person is allowed to work under the influence of drugs and alcohol.
   "Under the influence" means the use of alcohol, drugs, and/or a controlled substance to the extent that:
   This includes any level of an illegal substance in the body, irrespective of when the substance was used.

5. **Permit to Work**
   Where an authorisation limitation exists, no person shall work without the required Permit to Work (PTW), which is governed by the Plant Safety Regulations, Operating Regulations for High Voltage Systems (ORHVS) etc.

NB: in the case of live work, a "live work declaration form" is to be completed by the authorised person who is the person responsible for the safe execution of work according to relevant standards and procedures. Please ensure that these rules are understood and communicated with the urgency that they deserve. If any of these rules are unclear or the consequences not understood, please do not hesitate to discuss it with Eskom.

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

2.4 Environmental constraints and management

All service providers appointed to render any services within Eskom Arnot Power Station are required to comply with the station's Environmental Management System requirements.

NB: Before commencing with any work, the service providers are required to visit the station's environmental section for evaluation. The station's environmental practitioner will evaluate the services to be rendered by the service provider and therefore allocate relevant legal and other requirements documents, which the *Contractor* shall comply with during the works.

The service provider shall then commence with the works but paying inordinate attention towards implementing the relevant legal and other requirements measures as agreed in the register. Failure to comply with this agreement may ultimately lead to the termination of this contract. This requirement shall also be clearly stipulated in the NEC3 Engineering and Construction Contract contracts between Eskom Arnot Power Station and any service.

It should always be noted that Arnot Power Station is ISO14001 certified and therefore promotes Integrated Environmental Management (IEM) philosophy, which aims to achieve a desirable balance between conservation and development. All activities taking place within Arnot Power Station 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 consult with Arnot Environmental section on a regular basis for on-going assistance and advice.

The EMS shall clearly cover the following areas as per ISO 14001:

- Environmental policy
- Environmental legal and other requirements
- Risk Assessments/Aspects & Impacts Register
- Provision of necessary resources (e.g. computers, adequate human resource) and allocation of roles and responsibility (through clear appointments) to achieve effective implementation of the EMS. Continuous commitment towards complying with operational controls such as work instructions, operational procedures, etc. (provided either by the *Contractor* or by *Project Manager*) as well as emergency preparedness and response procedures/plans.
- The *Contractor* shall continually evaluate the compliance to legal requirements (e.g. sewage treatment plant permits and other applicable legislation); this should also be documented within the monthly environmental site inspections reports.
- Arnot Power Station's procedure for non-conformity, corrective action and preventive actions shall be followed in case of the environmental incidents.
- Contingency plans - Environmental Management Programmes shall be established and maintained to ensure that objectives and targets are achieved.

Audits

Audits covering various Environmental aspects, Occupational health and safety, Operational, IBI and Maintenance Management at the plant shall be carried out within an acceptable interval to ensure compliance with statutory requirements and Eskom's policies, Directives, procedures etc.

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

Removal of waste

The *Contractor* must provide for the removal of all waste produced from his activities. Eskom shall make provision of a designated area or waste skip within Arnot site for the generated waste.

2.5 Quality assurance requirements

The *Contractor* is also expected to be ISO 9001 certified and compliant.

The *Contractor* shall be required to demonstrate by means of a Contract Quality Plan (CQP) that this organisation is so structured that all the requirements of the specification will be properly monitored and controlled. The Contract Quality Plan (CQP), which must include the Quality Control Plan (QCP), is to be drafted in accordance with QM-58 and the Supplier Contract Quality Requirement Specification (QM58).

The Quality documents are to be submitted for approval to the *Project Manager* within thirty (30) days after a contract has been awarded to the *Contractor*.

No work may commence unless the Contract Quality Plan and Quality Control Plan documents have been approved in writing and a copy submitted to the *Project Manager*. The *Contractor*, in conjunction with the *Project Manager* must sign off all Quality Control documents after completing all work as per the agreed scope. The *Contractor* to submit a copy of the final signed off documents/data packages to the *Project Manager* within one (1) week after completion of work.

The *Contractor* shall be required to read and fully understand the contents of the Supplier Contract Quality Requirement Specification (QM58) and a copy is to be kept in possession or on premises.

Contract Quality Management Plan Requirement

The *Contractor* prepares a contract quality management plan that, where appropriate, indicates the following:

- Indicates the interface with the *Contractors* quality system and applicable documents such as procedures and work instructions
- Establishes communication channels between the *Contractor* and the *Project Manager* in respect of quality and the integration of such with the prescribed contract communication channels
- Indicates how specific subcontractors will be monitored
- Identifies items or activities for which quality control plans will be prepared
- Identifies the specifications, drawings and acceptance criteria for material for which quality control plans are not required
- Identifies the areas or processes requiring special controls
- Identifies the *Contractor*'s Management Representative and personnel responsible for the control of quality activities and their relationship to the *Contractor*'s management structure
- Indicates the *Contractor*'s quality monitoring programme

Quality Control Plan

- The *Contractor* complies with the quality procedures and codes relevant for each Task Order. The *Contractor* also advises on the appropriate use of other applicable standard and codes of practice.
- The *Contractor* ensures that QCPs are ready a week prior to execution of the task. The QCP will have all the activities to ensure quality of the work to be undertaken.
- The *Contractor* ensures that the work is carried out in accordance with the quality control plans or any other specifications through written instructions from the *Project Manager*
- The *Contractor* submits the complete QCP to *Employer* and QC to review the specific requirements and insertion of Intervention Points, e.g. Hold and Witness Points.

The approved temporary erection design and drawings to be submitted to the *Employer* for review and acceptance by Engineering.

All documentation has a clearly stated revision number, and previously similar documentation is revoked. The *Contractor* submits data package to *Employer* not later than 7 days after the completion of the work.

2.6 Programming constraints

The *Contractor* programmes the works in accordance with Clause 31 of the NEC3 Engineering and Construction Contract.
The *Contractor* submits a first programme within the period stated in the Contract Data and thereafter submits revised programmes at intervals instructed by the *Project Manager*.

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

The *Contractor* is to ensure that all staff are closely supervised by an experienced supervisor whilst working at Arnot Power Station.

The *Contractor* appoints employees with sufficient knowledge in their area of expertise.

The *Contractor's* employees on site should be able to conduct pre-job brief and RA. The *Employer* will conduct the RA and pre-job briefs with *Contractor's* Safety Officer. It will be required that the pre-job brief and RA be conducted daily.
The *Employer* can refuse any employee, Sub-*Contractor* or agent of the *Contractor* access to the Site if such person is found to commit any unlawful act or any unsafe working practice or is found to be not authorised or qualified in terms of the Act.

The *Employer* can Issue the *Contractor* with a work stop order should he become aware of any unsafe working procedure or conditions of non-compliance with the Act, Regulations and Procedures by the *Contractor*.

2.8 Invoicing and payment

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

The *Contractor* shall address the tax invoice to Finance Shared Service (FSS) Fss@eskom.co.za and include on each invoice the following information:

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

2.9 Insurance provided by the *Employer*

Insurance issues will be dealt with as per contract conditions, Refer to Insurance Section on point Z12 of Contract.

2.10 Contract change management

The management of changes to the Scope, Prices, Completion Date or any other aspect of the contract shall be in accordance with the compensation event procedures of the NEC3 Engineering and Construction Contract.
The *Contractor* and the *Project Manager* shall notify each other of matters which may constitute compensation events in accordance with Clause 61 of the NEC3 ECC.

2.11 Provision of bonds and guarantees

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

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Project Manager* to receive and accept such bond or guarantee.

Such withholding of payment due to the *Contractor* does not affect the *Employer*'s right to termination stated in this contract.

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

To substantiate the Defined Cost of Compensation Events, the *Employer* may require the *Contractor* to keep records of amounts paid by him for people employed by the *Contractor*, Plant and Materials, work subcontracted by the *Contractor* and Equipment.

The *Contractor's* Site Manager will complete the site daily log, and this will be submitted to the *Project Manager* for his signature before 16H00 of the following morning barring weekends.

The Friday and weekend logs will be submitted before 16H00 Mondays. The log will include but not be limited to the following:

- Date and day
- Weather
- Site Conditions
- Work Done
- People who are employed by the *Contractor*
- Work sub-contracted by the *Contractor* and
- Any incidents during that period

.

2.13 Training workshops and technology transfer

Not applicable.

3 Engineering and the *Contractor*'s design

The *Contractor's* design for the Works complies with the *Employer's* performance specifications and standards.

The *Contractor* establishes a document tracking system to record the dates for the supply and receipt of all design drawings, calculations, and design documentation.

The *Contractor's* design and engineering is carried out in accordance with the Eskom Engineering Policy (240-4332798) and the Design Review Procedure (240-53113685).

3.1 *Employer*'s design

The *Contractor* shall execute the works in accordance with the *Employer's* design, drawings, specifications and Works Information.

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

As per Annexure: Detailed Scope of Work – Scope of Work for Arnot Power Station Additional Boiler Tube Leak Detector Project, Unique Identifier: AECI 0132 Rev. 1.

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

As per Annexure: Detailed Scope of Work – Scope of Work for Arnot Power Station Additional Boiler Tube Leak Detector Project, Unique Identifier: AECI 0132 Rev. 1.

3.4 Other requirements of the *Contractor*'s design

The *Contractor*'s design shall comply with:

- Applicable South African National Standards (SANS).
- Occupational Health and Safety Act and Construction Regulations.
- Relevant Eskom standards, specifications and procedures.
- Good engineering practice.
- Requirements contained in the Works Information

3.5 Use of *Contractor*'s design

No additional requirements apply. Core Clause 22.1 applies.

3.6 Design of Equipment

The requirements stated under as per Annexure: Detailed Scope of Work – Scope of Work for Arnot Power Station Additional Boiler Tube Leak Detector Project, Unique Identifier: AECI 0132 Rev. 1.

3.7 Equipment required to be included in the *works*

The *Contractor* shall provide, maintain all equipment necessary for the execution and completion of the works.
The equipment shall be suitable for the intended purpose, maintained in a safe operating condition and comply with applicable statutory requirements.

3.8 As-built drawings, operating manuals and maintenance schedules

The *Contractor* shall compile and submit a Completion File containing all records, certificates and documents required by the *Project Manager* before Completion is certified.

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed on the Site

The *Contractor* appoints employees with sufficient knowledge in their area of expertise.

- Permits for Foreigners: The *Contractor* is solely responsible for obtaining and maintaining all necessary work permits, visas, and any other legal documentation for any foreign personnel employed to provide the service. All such personnel must comply with South African immigration laws and regulations. Copies of valid permits and documentation shall be provided to the *Project Manager* upon request.

- Use of Labour from Designated Areas: The *Employer* encourages and, where specified in the Contract Data or relevant legislation, requires the *Contractor* to prioritize the recruitment of labour from designated local areas or communities surrounding the site. The *Contractor* shall provide a plan outlining their approach to local labour engagement and report on the number of local individuals employed

4.1.2 BBBEE and preferencing scheme

The *Employer* requires the *Contractor* to comply with all applicable Broad-Based Black Economic Empowerment (BBBEE) legislation and Eskom's specific Preferencing Scheme requirements throughout the duration of the service.

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

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

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

4.2 Subcontracting

4.2.1 Preferred subcontractors

Not Applicable.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

Not Applicable.

4.2.3 Limitations on subcontracting

Not Applicable.

4.2.4 Attendance on subcontractors

Not Applicable

4.3 Plant and Materials

4.3.1 Quality

All plant and materials incorporated into the works shall be free from defects, fit for purpose and suitable for the operating conditions at Arnot Power Station.

The *Contractor* shall ensure that all materials comply with the requirements of the Works Information, applicable specifications, drawings and relevant South African National Standards (SANS).

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

Where the *Employer* provides Plant and/or Materials to the *Contractor* as "free issue," the *Contractor* shall be responsible for the safe receipt, storage, handling, protection, and incorporation of such Plant and Materials into the Service.
The *Contractor* shall inspect free issue items upon receipt and notify the *Project Manager* of any defects or discrepancies without delay.

The *Employer* does not guarantee continuity of supply of such items.

All other Plant and Materials are to be provided by the *Contractor*.

4.3.3 *Contractor*'s procurement of Plant and Materials

The *Contractor* is solely responsible for the procurement, delivery, and proper storage of all Plant and Materials required for the provision of the Service.

This includes ensuring that all procured items comply with relevant South African standards, specifications, and environmental regulations.

The *Employer* may require warranties from suppliers to be in favour of the *Employer* and not just to the *Contractor* during the life of the contract.

4.3.4 Spares and consumables

The *Contractor* shall provide all consumables necessary for the execution, testing, completion and handover of the works.
All consumables shall be new, fit for purpose and suitable for the intended application.

4.4 Tests and inspections before delivery

The *Contractor* shall carry out all inspections and tests necessary to demonstrate that the works comply with the Works Information, applicable specifications, approved drawings and quality requirements before Completion.
An activities schedule in the form of a Quality Control Plan (QCP) must be provided with hold points to be approved and signed off by Eskom Engineer during execution of the works.

4.5 Marking Plant and Materials outside the Working Areas

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

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

All equipment shall be properly maintained, certified where required, and removed from Site upon Completion.

4.7 Cataloguing requirements by the *Contractor*

The *Contractor* shall maintain full traceability and cataloguing of all materials, certificates, inspection records, test results, design documents and as-built information.

These records shall be indexed and submitted as part of the Completion report at Completion.

5 List of drawings

5.1 Drawings issued by the *Employer*

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

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

Drawing number	Revision	Title

C3.2 *CONTRACTOR*'S WORKS INFORMATION

The *Contractor* shall provide all labour, supervision, materials, equipment, tools, temporary works, lifting equipment, scaffolding, transport and incidentals necessary to execute the repair works at Arnot Power Station.

The *Contractor* provides the detailed methodology, procedures, resources, quality controls, testing requirements, commissioning activities, and documentation necessary to complete the Works in accordance with the *Employer's* Works Information and the Contract.