



NEC3 Engineering & Construction Contract

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

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

for **Boiler & Turbine LV Boards Upgrade (Withdrawable
to fixed pattern switchgear)**

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CONTRACT No. [Insert at award stage]

Part C1: Agreements & Contract Data

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[to be inserted from Returnable Documents at award stage]	

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:

BOILER & TURBINE LV UPGRADE (WITHDRAWABLE TO FIXED PATTERN)

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

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

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

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number (if applicable)

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

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

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

Note:

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

No.	Subject	Details
1		
2		
3		
4		
5		
6		
7		

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

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

For the tenderer:

For the Employer

Signature

Name

Capacity

On behalf
of

(Insert name and address of organisation)

(Insert name and address of organisation)

Name &
signature
of witness

Date

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

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

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
		A: Priced contract with activity schedule
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X1: Price adjustment for inflation
		X3: Multiple currencies
		X5: Sectional Completion
		X15: Limitation of <i>Contractor's</i> liability for design to reasonable skill and care
		X16: Retention
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
10.1	The <i>Project Manager</i> is: (Name)	Makwena Mathobela
	Address	Arnot Power Station
	Tel	013 262 7045
	Fax	N/A
	e-mail	mathobmi@eskom.co.za
10.1	The <i>Supervisor</i> is: (Name)	To be confirmed on award

	Address	Arnot Power Station		
	Tel No.	To be confirmed on award		
	Fax No.	To be confirmed on award		
	e-mail	To be confirmed on award		
11.2(13)	The <i>works</i> are	Design, manufacture, factory inspection, delivery site, offloading, removal of existing tiers into position, busbar & cable connections, commissioning and signing of the completion certificates		
11.2(14)	The following matters will be included in the Risk Register	Outage movements Interface and change during outages Working at Heights, Noisy and Dusty areas Confined spaces Work stoppages Community Unrest and Labour strike		
11.2(15)	The <i>boundaries of the site</i> are	Areas associated with the scope of work to be performed. Work to be executed in an area covered in the works information.		
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 <i>law of the contract</i> is the law of	the Republic of South Africa		
13.1	The <i>language of this contract</i> is	English		
13.3	The <i>period for reply</i> is	One week		
2	The <i>Contractor's</i> main responsibilities	Data required by this section of the core clauses is provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.		
3	Time			
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	29 August 2025		
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met		key date
		1	Safety file submission and approval	2 weeks after contract award
		2	Delivery to site for U1	10 November 2022
		3	Delivery to site for U2	22 April 2024
		4	Delivery to site for U3	19 August 2024
		5	Delivery to site for U4	01 July 2025

		6	Delivery to site for U5	26 April 2023
		7	Delivery to site for U6	30 September 2023
30.1	The <i>access dates</i> are:	Part of the Site		Date
		1	Unit 1	16 December 2022
		2	Unit 2	22 May 2024
		3	Unit 3	19 August 2024
		4	Unit 4	01 August 2025
		5	Unit 5	26 June 2023
		6	Unit 6	30 October 2023
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	2 weeks of the Contract Date.		
31.2	The <i>starting date</i> is	15 September 2022		
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	One week		
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.			
4	Testing and Defects			
42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the <i>works</i> .		
43.2	The <i>defect correction period</i> is	2 weeks		
5	Payment			
50.1	The <i>assessment interval</i> is	between the 25 th day of each successive month.		
51.1	The <i>currency of this contract</i> is the	South African Rand.		
51.2	The period within which payments are made is	4 weeks.		
51.4	The <i>interest rate</i> is	<p>the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and</p> <p>(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters</p>		

		Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted <i>mutatis mutandis</i> every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.
6	Compensation events	
60.1(13)	The place where weather is to be recorded is:	Areas surrounding Rietkuil Town; these include Arnot Power Station, adjacent farm areas, etc.
	The <i>weather measurements</i> 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 <i>weather measurements</i> are supplied by	South African Weather Bureau
	The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at:	Arnot Power Station
	and which are available from:	the South African Weather Bureau and included in Annexure A to this Contract Data provided by the <i>Employer</i>
60.1(13)	Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	As stated in Annexure A to this Contract Data provided by the <i>Employer</i> . Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.
7	Title	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	None
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	

A	Priced contract with activity schedule	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
11	Data for Option W1			
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).		
	Address	N/A		
	Tel No.	N/A		
	Fax No.	N/A		
	e-mail	N/A		
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.		
W1.4(2)	The <i>tribunal</i> is:	arbitration.		
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.		
	The place where arbitration is to be held is	Johannesburg, South Africa		
	The person or organisation who will choose an arbitrator - 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 <i>base date</i> for indices is	One month prior to tender submission		
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	proportion	linked to index for	Index prepared by
		0.		
		0.		
		0.		
		0.		

		0.		
			non-adjustable	
	Total	1.00		
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
X3	Multiple currencies			
X3.1	The <i>Employer</i> will pay for these items or activities in the currencies stated	Items & activities	Other currency	Maximum payment in other currency
		N/a		
		N/a		
		N/a		
		N/a		
X3.1	The <i>exchange rates</i> are those published in	N/a		
		<p>The items & activities will be paid in the other currency</p> <ul style="list-style-type: none"> - to a foreign Bank account nominated by the <i>Contractor</i> - to a valid SARB approved CFC account in South Africa - in accordance with an alternative payment method agreed with the <i>Employer</i> before the Contract Date. <p>(select one of the three methods as agreed with successful tenderer and delete the others and this note)</p>		
X5	Sectional Completion			
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>works</i> is:	Section	Description	Completion date
		1	Manufacturing	3 Months
		2	Delivery	1 week
		3	Installation	8 weeks
X15	Limitation of the <i>Contractor's</i> liability for his design to reasonable skill & care	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
X16	Retention (not used with Option F)			
X16.1	The <i>retention free amount</i> is	N/A		
	The <i>retention percentage</i> is	10%		
X18	Limitation of liability			
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited	R0.0 (zero Rand)		

	to:	
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	<p>The greater of</p> <ul style="list-style-type: none"> the total of the Prices at the Contract Date and the amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p>the total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> Defects due to his design which arise before the Defects Certificate is issued, Defects due to manufacture and fabrication outside the Site, loss of or damage to property (other than the <i>works</i>, Plant and Materials), death of or injury to a person and infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	<p>(i) 3 years per board after the <i>defects date</i> for latent Defects and</p> <p>(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.</p> <p>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</p>
Z	The <i>Additional conditions of contract</i> are	Z1 to Z15 always apply.

Z1	Cession delegation and assignment
Z1.1	The <i>Contractor</i> does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the <i>Employer</i> .
Z1.2	Notwithstanding the above, the <i>Employer</i> may on written notice to the <i>Contractor</i> 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 <i>Contractor</i> 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 <i>Employer</i> for the performance of this contract.
Z2.2	Unless already notified to the <i>Employer</i> , the persons or organisations notify the <i>Project Manager</i> within two weeks of the Contract Date of the key person who has the authority to bind the <i>Contractor</i> on their behalf.
Z2.3	The <i>Contractor</i> does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the <i>Employer</i> having been given to the <i>Contractor</i> in writing.
Z3	Change of Broad Based Black Economic Empowerment (B-BBEE) status
Z3.1	Where a change in the <i>Contractor's</i> legal status, ownership or any other change to his business composition or business dealings results in a change to the <i>Contractor's</i> B-BBEE status, the <i>Contractor</i> notifies the <i>Employer</i> within seven days of the change.
Z3.2	The <i>Contractor</i> is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the <i>Project Manager</i> within thirty days of the notification or as otherwise instructed by the <i>Project Manager</i> .
Z3.3	Where, as a result, the <i>Contractor's</i> B-BBEE status has decreased since the Contract Date the <i>Employer</i> may either re-negotiate this contract or alternatively, terminate the <i>Contractor's</i> obligation to Provide the Works.
Z3.4	Failure by the <i>Contractor</i> to notify the <i>Employer</i> of a change in its B-BBEE status may constitute a reason for termination. If the <i>Employer</i> 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 <i>Contractor</i> 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 <i>Contractor</i> , enters the public domain or to information which was already in the possession of the <i>Contractor</i> at the time of disclosure (evidenced by written records in existence at that time). Should the <i>Contractor</i> disclose information to Others in terms of clause 25.1, the <i>Contractor</i> ensures that the provisions of this clause are complied with by the recipient.
Z4.2	If the <i>Contractor</i> is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the <i>Project Manager</i> .

Z4.3	In the event that the <i>Contractor</i> is, at any time, required by law to disclose any such information which is required to be kept confidential, the <i>Contractor</i> , to the extent permitted by law prior to disclosure, notifies the <i>Employer</i> 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 <i>Contractor</i> 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 <i>works</i> or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the <i>Project Manager</i> . All rights in and to all such images vests exclusively in the <i>Employer</i> .
Z4.5	The <i>Contractor</i> 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 <i>Project Manager</i> , the <i>Supervisor</i> , or the <i>Adjudicator</i> 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	<p>The <i>Contractor</i> undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the <i>works</i>. Without limitation the <i>Contractor</i>:</p> <ul style="list-style-type: none"> • accepts that the <i>Employer</i> 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 <i>works</i>; and • undertakes, in and about the execution of the <i>works</i>, 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 <i>Contractor's</i> direction and control, likewise observe and comply with the foregoing.
Z6.2	The <i>Contractor</i> , in and about the execution of the <i>works</i> , 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 <i>Contractor's</i> 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 <i>Project Manager</i> in terms of core clause 51.1, the <i>Contractor</i> provides the <i>Employer</i> with a tax invoice in accordance with the <i>Employer's</i> procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.
Z7.2	If the <i>Contractor</i> does not provide a tax invoice in the form and by the time required by this contract, the time by when the <i>Employer</i> 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 <i>Employer</i> in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z7.3	The <i>Contractor</i> (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 <i>Employer's</i> 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 <i>Project Manager</i> should have notified the event to the <i>Contractor</i> but did not".
Z9	<i>Employer's</i> limitation of liability
Z9.1	The <i>Employer's</i> liability to the <i>Contractor</i> for the <i>Contractor's</i> indirect or consequential loss is limited to R0.00 (zero Rand)
Z9.2	The <i>Contractor's</i> entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the <i>Employer's</i> 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 <i>Contractor's</i> payment of delay damages reaches the limits stated in this Contract Data for Option X7 or Options X5 and X7 used together, the <i>Employer</i> may terminate the <i>Contractor's</i> 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 <i>Contractor</i> 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 <i>Contractor</i> , or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractor or the Subcontractor's employees,
Corrupt Action	means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
Fraudulent Action	means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an

obligation or incurring an obligation,

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

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

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

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover 84

- 84.1** When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.
- 84.2** The *Contractor* provides the insurances stated in the Insurance Table A.
- 84.3** The insurances provide cover for events which are at the *Contractor's* risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

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

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

Z 13.2

Replace core clause 87 with the following:

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

INSURANCE TABLE B

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

Z14 Nuclear Liability

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

Z14.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person

acting on behalf of the *Employer*.

- Z14.3 Subject to clause Z14.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z14.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.
- Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

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

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

	<i>Weather measurement</i>				
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	247	3.2	0	0	20.2
February	236	2.1	0	0	20.1
March	193	2.2	0	0	18.8
April	104	0.7	0.4	0	15.6
May	50	0.2	5.9	0	11.7
June	41	0.2	19.7	0	8.2
July	29	0.1	20.7	0	19.2
August	88	0.2	9.1	0	18.8
September	143	0.8	1.2	0	17.6
October	185	2.7	0.1	0	15.1
November	220	3.2	0	0	13.8
December	185	3.2	0	0	13.3

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*

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications: Experience:	CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	
31.1	The programme identified in the Contract Data is	
A	Priced contract with activity schedule	

11.2(20)	The <i>activity schedule</i> is in			
11.2(30)	The tendered total of the Prices is	(in figures) (in words), excluding VAT		
A	Priced contract with activity schedule	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 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	Category of employee		Hourly rate
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:			

PART 2: PRICING DATA

ECC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	1
C2.2	The <i>activity schedule</i>	2-3

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 <i>activity schedule</i> unless later changed in accordance with this contract.
		<p>(27) The Price for Work Done to Date is the total of the Prices for</p> <ul style="list-style-type: none"> each group of completed activities and each completed activity which is not in a group. <p>A completed activity is one which is without Defects which would either delay or be covered by immediately following work.</p>
		(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:

C2.2 the *activity schedule*

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

Item No.	Activity description	Unit	Quantity	Rate	Price
1	P&G'S				
1.1	Site Establishment	Sum	1		
1.2	Travel & Accommodation	Sum	1		
1.3	Health and Safety Requirements	Sum	1		
2	Boiler & Turbine LV Boards Upgrade (Withdrawable to fixed pattern switchgear) Manufacture, Supply, Installation and Commissioning				
2.1	Design and Manufacture				
	Design and manufacturing of LV switchgear panels/tiers to be retrofitted in the existing LV switchgear assemblies rated 400V 50kA fault rating	Sum	1		
2.2	Supply				
	Turbine Non-essential Board 1, 2 & 3				
	Tier for Turbine Non-essential Board 1		1		
	Tier for Turbine Non-essential Board 2		1		
	Tier for Turbine Non-essential Board 3		1		
	Unit 4				
	Tiers for Boiler Board A		2		
	Tiers for Boiler Board B		1		
	Tiers for Turbine Essential Board		2		
	Tier for Turbine Non-essential Board		2		
	Unit 5				
	Tiers for Boiler Board A		1		
	Tiers for Boiler Board B		2		
	Tiers for Turbine Essential Board		2		
	Tier for Turbine Non-essential Board		2		
	Unit 6				
	Tiers for Boiler Board A		2		
	Tiers for Boiler Board B		2		
	Tiers for Turbine Essential Board		3		
	Tier for Turbine Non-essential Board		2		

2.3	Installation				
	The installation of the retrofitted tiers must be done in accordance to the OEM recommendations:				
	Existing withdrawable functional units (Units shall be retrofitted with fixed pattern functional units of the same rating)	Sum	1		
	Disconnect and dismantle the existing withdrawable tier/panel and remove from the existing Board	Sum	1		
	Retrofit the new fixed pattern tier/panel in the position vacated by the withdrawable tiers/panels on the board	Sum	1		
	As built drawings (Schematic diagrams of the new fixed pattern functional units shall be as per schematic diagrams provided)	Sum	1		
2.3	Cabling				
	Smaller functional units (as listed) that need not be replaced within the tier/panel to be retrofitted shall be migrated to another tier/panel by the successful Contractor including cable re-routing and jointing				
	Cables will be broken up into electrical/power and control/signal cables:				
	Disconnect power and control cables	Sum	1		
	Disconnect main and dropper busbars	Sum	1		
	Cable re-routing for identified circuits	Sum	1		
	re-routed scotch-cast joints on short electrical cables	Sum	1		
	Control/signal requiring re-routing may not be joined if short, but new replacement control/signal cables need to be pulled in				
2.4	Testing				
	Factory Acceptance Tests (FAT) as per specification which shall done at the contractor's premises	Sum	1		
	Site Acceptance Tests (SAT) carried out on site	Sum	1		
3	Documentation Requirements				
	Provide all documentation required by the Employer in Auto Cad/DGN				
4	Plant Labelling				
	Labelling (The plant shall be labelled in accordance with the Arnot Power Station labelling standard with the labels clearly visible and located as close as possible to the components.)	Sum	1		
	Instrument and cable number (The contractor is to provide instrument and cable numbers according to standard 240-	Sum	1		

	40643427 Coding and Labelling Standard.)				
	The total of the Prices (excluding VAT):				

PART 3: SCOPE OF WORK

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C3.2	<i>Contractor's Works Information</i>	1
	Total number of pages	29

C3.1: EMPLOYER'S WORKS INFORMATION

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1 Description of the works

1.1 Executive overview

Design, manufacture, factory inspection, delivery to site, offloading, removal of existing tiers/panels, moving new fixed pattern tiers/panels into position, site testing, cable joints and rerouting of the small functional units to alternate tiers/panels, cable & busbar connections, commissioning and completion of fixed pattern switchgear tiers/panels on units Boiler and Turbine Boards low voltage switchgear at Arnot power station (including all documentation required).

The scope executable at Arnot power station on Units 1 - 6 comprise of the following Tiers/Panels:

Turbine Non-essential Board 1, 2 & 3

- 1x Tier for Turbine Non-essential Board 1
- 1x Tier for Turbine Non-essential Board 2
- 1x Tier for Turbine Non-essential Board 3

Unit 4

- 2x Tiers for Boiler Board A
- 1x Tiers for Boiler Board B
- 2x Tiers for Turbine Essential Board
- 2x Tier for Turbine Non-essential Board

Unit 5

- 1x Tiers for Boiler Board A
- 2x Tiers for Boiler Board B
- 2x Tiers for Turbine Essential Board
- 2x Tier for Turbine Non-essential Board

Unit 6

- 2x Tiers for Boiler Board A
- 2x Tiers for Boiler Board B
- 3x Tiers for Turbine Essential Board
- 2x Tier for Turbine Non-essential Board

1.2 Employer's objectives and purpose of the works

The purpose of the works is to retrofit the identified withdrawable tiers/panels with fixed pattern type switchgear of similar make on the Boiler, Turbine Essential & Non-essential Boards in Arnot power station.

1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for construction
OBL	Outside battery limits
kW	Kilowatt
LV	Low Voltage
QCP	Quality Control Plan

2 Management and start up.

2.1 Management meetings

After contract award, Project Manager schedules a kick-off meeting to discuss the execution requirements.

Kick off meeting specifies how the Contractor will meet the project objectives and confirm Contractor understands the required works, and programme to execute the scope of work

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:
Overall contract progress and feedback	Every second week on a day and time agreed upon by Parties. This is subject to change depending on the requirement.	To be confirmed by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others</i>
Risk register and compensation events	As and when required	To be confirmed by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others</i>
Interfacing meetings	As and when required	To be confirmed by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others</i>
Outage meetings	Daily when there is an outage	To be confirmed by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others</i>
Toolbox sessions	Every-day before commencing with work	Site	<i>Contractor</i>

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

All meetings shall be recorded using Microsoft Teams or 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 documentation to be sent to the employer's representative who will then distribute to all stakeholders involved in the project. Drawings shall be in the approved Eskom format, electronic (soft copy) and editable for furnishing the title block with Eskom detail.

2.3 Health and safety risk management

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

- The Contractor shall comply with the Occupational Health and Safety Act Number 85 of 1993 and its regulations, and Eskom SHEQ Policy, Standards, Procedures, Guidelines, Specifications and Regulations.
- The Contractor always ensures safety awareness through continuous training.
- The Contractor shall always be responsible for the supervision of his employees, agents and sub-Contractors, and shall take full responsibility and accountability in ensuring that they are competent, compliant and aware of the legal requirements and other applicable requirements and shall execute the works accordingly.
- The Contractor shall ensure that all statutory appointments, and appointments required by any Eskom Policy, standard and Procedure, are recorded in writing and that all its appointees and/or agents fully understand their responsibilities and are trained and competent to execute their duties.

The Employer, or any person appointed by the Employer, may, at any stage during the term of the contract:

- Conduct health and safety audits by a competent person regarding all aspects of compliance with the SHEQ requirements, at any off-Site place of work, or the Site establishment of the Contractor.
- Refuse any employee, sub-Contractor or agent of the Contractor access to the premises if such person has been found to commit an unsafe act or if any work is found not to be compliant or authorized.
- Issue the Contractor with a STOP WORK ORDER should the Employer become aware of any unsafe working procedure or condition, or any non-compliance.
- The Contractor shall immediately report all incidents as well as any threat to safety and health of which he becomes aware at the Site, to the Project Manager.
- The Contractor agrees that the Employer is relieved of all of its responsibilities and liabilities in terms of the Occupational Health and Safety Act no 85 of 1993 in respect of any acts or omissions of the Contractor, and the Contractor's employees, agents or sub-Contractors, to the extent permitted by the Occupational Health and Safety Act no 85 of 1993.
- The Contractor shall provide a health and safety plan based on the Employer's Safety, Health and Environmental Specification,
- All persons entering the Site shall undergo the Employer's safety induction course.
- The *Contractor* takes every precaution to ensure safety and to protect the *works* and temporary *works*. The *Contractor* is responsible for the safety and security of his personnel, materials on site and the *works* at all times. The *Contractor* adheres to the safety regulations pertaining to the power station and Sub-Contractors.
- The *Contractor* provides all the required safety and personal protective Equipment to his staff for the duration of the contract. Safety barriers and access scaffolding is deemed as Equipment and is the responsibility of the *Contractor*.

The *Contractor* complies with the requirements of the Construction Regulation, 2014. R1010 of the Act and forwards proof of Notification of Construction Works to the Department of Labour as required in the Construction Regulations.

Without prejudice to any other requirements of this Works Information or the Conditions of Contract, the *Contractor* complies with the following:

- a. Eskom Plant Safety Regulations 36-681
- b. Eskom Operating Regulations for High Voltage Systems, 32-846
- c. The Occupational Health and Safety Act No. 85 of 1993 and Regulations
- d. The Compensation for Occupational Injuries and Diseases Act No.130 of 1993, amended by government notices to 30 April 2004 or Equivalent
- e. Eskom Life-saving Rules

The Eskom Life-saving Rules complement our existing safety best practices and address safety procedures are followed at all locations. Five Life-saving rules developed apply to all Eskom employees, agents, consultants, and *Contractors*.

Life-saving rules are safety rules that describe such extreme behaviour that all reasonable employees agree that anyone knowingly and wilfully violating one of them are putting his/her life and any other lives in jeopardy and are dealt with seriously. The Life-saving rules are: Standard 240-62196227.

2.4 Environmental constraints and management

- The Contractor's attention is drawn to the fact that the Employer's Power Stations are situated in highly sensitive areas with respect to the environment.
- The Contractor acquaints himself with all statutory and local environment regulations and adheres to these without exception.
- The Contractor complies with the Hazardous Chemical Regulations, GNR. 1179 of 25 August 1995 as amended by GNR.930 of 25 June 2003 and GNR.683 of June 2008 when using any hazardous chemicals, as well as complying with the requirements of the National Environmental Management Act of 1988.
- The contractor and his employees are required to conduct themselves at all times in a proper and orderly manner while on the Employer's premises. The contractor and his/her employees will, in particular, be required to smoke in designated areas while on the Employer's premises. It must be noted that the Employer will take immediate steps to institute criminal investigation in the event of any suspected criminal acts e.g. theft, vandalism etc. Criminal acts by contractor staff will be grounds for the termination of this agreement.
- The Project Manager has the right to stop the contractor work activities, which, does not meet the requirements of the project plan. The contractor may only continue with work activities when all deficiencies has been corrected to the Project Manager's satisfaction. The contractor shall have no claim against the Employer in respect of delay due to the above.

2.5 Quality assurance requirements

The Contractor responsibilities include but are not limited to the following:

- The Contractor must supply an ISO 9001: 2008 compliant quality assurance plan.
- The quality assurance requirements must also be imposed on sub-Contractors and suppliers of material.

- Within four weeks of the Contract Date (date of contract award), the Contractor submits a fully detailed Quality Assurance Plan aligned to Eskom standard 39-59 and ISO 10005:2005 to the Project Manager for acceptance.
- No Site work is allowed unless the Employer accepts the Quality Management System.
- The Contractor utilizes their own quality documentation forms for requesting access, erection checks, etc. These request forms must be submitted to the Employers Quality department at least one week prior to the requested activity, or as agreed to by the Project Manager.
- Apart from any statutory data packages required, the Contractor also compiles a data package of the relevant drawings, test certificates, etc., should conform to what is specified in the works information.
- The Contractor will fully comply with the requirement of the Supplier Contract Quality Requirement Specification.
- The Contractor shall submit a first detailed quality plan to the Project Manager for acceptance (includes insertion of various hold, witness, and other points) within the period stated in the Contract Data.
- The Project Manager shall influence the Quality Plan with respect to the addition of hold and witness points.
- On agreement between the Contractor and the Project Manager, the Quality Plan shall be signed for acceptance.

2.6 Programming constraints

The *Contractor* provides a programme and resource schedule in MS Project within 2 weeks of the Contract Date for acceptance by the *Project Manager* which will provide details of the list of activities and the duration of each activity.

- A list of activities and duration of each shall be made available after an instruction to commence work is supplied to the Contractor by the Employer's Representative.
- The program shall be updated weekly and will be used to manage all installation activities.
- The Contractor submits a bar chart program one week after award of the contract showing the following:
 - The early start and early completion date of each activity.
 - The late start and late completion of each activity.
 - Planned completion.
- The order and planning of operations which the Contractor plans to do in order to provide the works.
- The Contractor prepares and submits an update, seven days after the start date, showing actual progress and the effect upon the remainder of the activities to be completed.

Progress reporting:

- The Contractor submits, together with the progress reports, a written report which contains the following:
 - Statement and report on those sections of the works where delay against programme has occurred (if any), together with the reasons why delay has occurred and a plan denoting the action to be taken and the period of time necessary to recover such delay.
 - Statement and report on those sections of the works that are currently ahead of programme (If any).
- The impact of any programming changes arising is reflected in revised forecast rate of invoicing schedules and resource schedules.

2.7 Contractor's management, supervision and key people

- Contractor submits an organogram to the Project Manager with key personnel. Contractor appoints qualified and competent site manager, technician/s, safety officer and foremen. Resource allocation abides to their respective function. These resources are present for the duration of the works. Daily site register to be signed with all the resources specified.

- *Contractor* complies with provision of key people required to successfully execute the *works*. Resource allocation is clearly reflected on the activity programme they are required to execute, and duration stipulated. During the execution of the *works*, registers or time sheets of the *Contractor's* employees is kept for contract records.
- Management indicated on the *Contractor's* organogram avail themselves immediately when required to resolve matters that may impact on the accomplishment of the *works*.

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 Eskom Holdings SOC Ltd and include on each invoice the following information:

- Name and address of the Contractor and the Project Manager.
- The contract number and title.
- Contractor's VAT registration number.
- The Employer's VAT registration number 4740101508.
- Description of service provided for each item invoiced based on the Price List.
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- Contractor's company registration number if applicable
- Contractor's banking details
- Name and address of recipient
- Tax invoice number and date of issue,
- Description of goods/service provided,
- Relevant Goods Receipt/ Service Entry number,
- Quantity or volume of goods/services
- Period time for which the Tax Invoice is being rendered,
- Relevant Task Order Number (commencing with a 45 prefix),
- Relevant line-item number,
- Statement whether value added tax is included or excluded.

Electronic Invoices in PDF format are submitted to Invoiceseskomlocal@eskom.co.za

The Project Manager to be copied in on all electronic invoices emailed.

Failure to submit the invoice to the correct address could result in delays in payment.

It is recommended that a copy of the assessment certificate is submitted with the invoice

The Contractor's Tax Invoices comply with the requirements as stated in clause Z7 of the Contract Data

Any CPA applicable is reflected as a separate line item or invoiced separately with breakdown of CPA formula attached

2.9 Insurance provided by the *Employer*

No additional insurances provided by the *Employer*

2.10 Contract change management

Contract change management is managed in accordance with section 6 of the core clauses in ECC3. In summary, in the event that the Employer/Contractor notices a change, an event register is issued. If the event/change has cost implications, then a quotation is submitted with the event register. The Project Manager assesses the quotation and gives an instruction in writing to the Contractor.

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

The *Contractor* maintains all records of Defined Costs on site stored in a file and accessible to the *Employer* for the purpose of determining the defined cost. The contractor allows the employer full access to the information and provides explanations where required

2.13 Training workshops and technology transfer

Not required on this contract.

3 Engineering and the *Contractor's* design

Design, manufacture, factory inspection, delivery to site, offloading, removal of existing tiers/panels, moving new fixed pattern tiers/panels into position, site testing, cable & busbar connections, commissioning and completion of fixed pattern switchgear tiers/panels on units Boiler and Turbine Boards low voltage switchgear at Arnot power station (including all documentation required).

3.1 *Employer's* design

The contractor shall submit general arrangement drawings to reflect the upgraded tiers/panels if required.

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

- Design and manufacturing of LV switchgear panels/tiers to be retrofitted in the existing LV switchgear assemblies rated 400V, 50kA fault rating
- Existing withdrawable functional units shall be retrofitted with fixed pattern functional units of the same rating
- Dismantle the identified existing tiers/panels, remove and store them in a safe place for future use
- The position vacated by the withdrawable tiers/panels is then used for the new fixed pattern ones
- Schematic diagrams of the new fixed pattern functional units shall be as per schematic diagrams provided
- Smaller functional units (as listed) that need not be replaced of the tier/panel to be retrofitted shall be migrated to another tier/panel by the successful *Contractor* including cable re-routing and jointing
- Completed tiers/panels shall be tested at the factory for acceptance prior to shipping to site

The scope executable at Arnot power station on Units 1 - 6 comprise of the following Tiers/Panels:

Turbine Non-essential Board 1, 2 & 3

- 1x Tier for Turbine Non-essential Board 1
- 1x Tier for Turbine Non-essential Board 2
- 1x Tier for Turbine Non-essential Board 3

Unit 4

- 2x Tiers for Boiler Board A
- 1x Tier for Boiler Board B
- 2x Tiers for Turbine Essential Board
- 2x Tier for Turbine Non-essential Board

Unit 5

- 1x Tier for Boiler Board A
- 2x Tiers for Boiler Board B
- 2x Tiers for Turbine Essential Board
- 2x Tier for Turbine Non-essential Board

Unit 6

- 2x Tiers for Boiler Board A
- 2x Tiers for Boiler Board B
- 3x Tiers for Turbine Essential Board
- 2x Tier for Turbine Non-essential Board

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

- a) The bidder shall provide evidence in a form of type test report for AEG/GE SA plus LV Switchgear and proof of evidence for similar work done by means of referrals.
- b) The retrofitting of new tiers/panels shall not compromise the integrity of type test particularly temperature test limits and short time withstand.
- c) Switchgear and controlgear shall comply with the relevant parts of SANS 60947. All components and electric conductors fitted to the ASSEMBLY shall be certified as safe by means of a valid Regulatory Certificate of Compliance (RCC) in accordance with SANS 10142-1 Table 4.2.
- d) The assembly (tier/panel) shall be of front operation with rear cable-access, and cable entry from below.
- e) ASSEMBLIES's main circuit shall have a minimum rated insulation voltage of 1 000 V except for MCB's, MCCB's and Fuses.
- f) Power-frequency withstand voltage for main circuits as well as auxiliary and control circuits that are connected to the main circuit shall be subjected to the test voltage of 2.2kV (a.c) or 3.3kV (d.c) in accordance with Table 8 of SANS 61439-1.
- g) Power-frequency withstand voltage for auxiliary and control circuits (a.c. or d.c.) that are not connected to the main circuit shall be subjected to the test voltage in accordance with Table 9 of SANS 61439-1.
- h) Rated impulse withstand voltage shall be 8 kV for main circuits and the verification shall be made by test or by assessment.
- i) Minimum creepage distances shall be for Pollution Degree 3, material group IIIa with the specified insulation voltage in accordance with Table 2 of SANS 61439-1 (latest edition).
- j) Minimum clearance shall be 8mm, which corresponds to 8kV impulse, withstand voltage.
- k) The ASSEMBLY's metal enclosure shall have a minimum external degree of protection of IP3X in accordance with SANS 60529 or same as the existing Assembly.
- l) The ASSEMBLY's internal barriers or distances shall have degree of protection of at least IP XXB in terms of SANS 60529 and shall be provided to prevent accidental contact with live conducting parts of the circuit.
- m) Forms of separation for all outgoing functional units shall have a minimum of Form 3b.
- n) The finished external colour of the AC ASSEMBLIES shall be G29: LIGHT GREY to SANS 1091 except for mounting plates and other support structures, which can be galvanized, or alloy cold rolled zinc steel.
- o) Door latches shall be of robust construction. At least the centre square key latch shall be pad-lockable.
- p) Conductors installed in the "fault-free" zone (non-protected live conductors) to reduce the possibility of shorts circuits:
 - Conductors installed in the 'fault-free-zone' shall be braced at intervals not exceeding 300 mm.
 - The conductors used in the "fault-free" zones for outgoing functional units shall be double insulated.
 - The conductor size selection and installation shall be in accordance with Table 4 of SANS 61439-1 latest edition

- Conductors installed within a “fault-free” zone where they could come in contact with conducting parts shall be protected by supplementary insulation.
- q) Multi-strand cable with conductors of 1.5 mm² cross sectional area shall be used for control circuits.
- r) Control conductor sheath shall be coloured as follows: BLACK for AC circuits and GREY for DC circuits.
- s) Conductors of up to and including 6 mm² cross sectional area shall be terminated with pre-insulated compression type lugs and when used with stud type terminals; shall be terminated with compression type lugs.

3.4 Other requirements of the *Contractor's* design

- a) Plant labelling to be done in accordance to the KKS Codification Label Layout Specification for Electrical Panel Labels
- b) All circuits moved to alternate tiers/panels shall bear the destination panel KKS
- c) All new tiers supplied shall bear circuit descriptions & KKS labelling as per the supplied list

3.5 Use of *Contractor's* design

3.6 Design of Equipment

On some complex projects requiring sophisticated temporary works, it could be in the Parties best interests that some details of the *Contractor's* design or proposed design of Equipment are shared with the *Project Manager*, not necessarily for his acceptance but as an assurance that the Equipment will be able to allow the *Contractor* to Provides the Works efficiently and without delay. For example a tunnel boring machine, or specialised shuttering for a bridge or caisson. Draft in such a way that there is no doubt that the liability for such design and use of the Equipment remains with the *Contractor*. Clause 23.1 is always available to the *Project Manager* if this section is not used.

3.7 Equipment required to be included in the works

Turbine Non-Essential Board 1

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable size	Comments
12.5kW	Gland Steam Vent Fan	+11BFB08AA001	H1-SC7-SC48	16 mm ²	Change to fix type
10.1kW	Make-up Water Pump A	+11BFB08BA001	H1-SC7-SC48	25 mm ²	Change to fix type
10.1kW	Make-up Water Pump B	+11BFB08CA001	H1-SC7-SC48	25 mm ²	Change to fix type
2.2kW	Extraction Pump A Suction Valve	+11BFB08DA001	H1-SC8-SC48	2.5 mm ²	Change to fix type
2.2kW	Extraction Pump A Discharge Valve	+11BFB08EA001	H1-SC8-SC48	2.5 mm ²	Change to fix type

Turbine Non-Essential Board 2

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable size	Comments
12.5kW	Gland Steam Vent Fan	+21BFB08AA001	H1-SC7-SC48	16 mm ²	Change to fix type
10.1kW	Make-up Water Pump A	+21BFB08BA001	H1-SC7-SC48	25 mm ²	Change to fix type
10.1kW	Make-up Water Pump B	+21BFB08CA001	H1-SC7-SC48	25 mm ²	Change to fix type
2.2kW	Extraction Pump A Suction Valve	+21BFB08DA001	H1-SC8-SC48	2.5 mm ²	Change to fix type
2.2kW	Extraction Pump A Discharge Valve	+21BFB08EA001	H1-SC8-SC48	2.5 mm ²	Change to fix type

Turbine Non-Essential Board 3

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable Size	Comments
12.5kW	Gland Steam Vent Fan	+31BFB08AA001	H1-SC7-SC48	16 mm ²	Change to fix type
10.1kW	Make-up Water Pump A	+31BFB08BA001	H1-SC7-SC48	25 mm ²	Change to fix type
10.1kW	Make-up Water Pump B	+31BFB08CA001	H1-SC7-SC48	25 mm ²	Change to fix type
2.2kW	Extraction Pump A Suction Valve	+31BFB08DA001	H1-SC8-SC48	2.5 mm ²	Change to fix type
2.2kW	Extraction Pump A Discharge Valve	+31BFB08EA001	H1-SC8-SC48	2.5 mm ²	Change to fix type

Boiler Board 4A

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable Size	Comments
2.2kW	Equipped Spare	+41BFA07AA001	H1-SC7-SC48		New Equipped Spare Circuit
7.5kW	Air Heater LH	+41BFA07BA001	H1-SC8-SC48	16 mm ²	Change to fix type
30kW	Auxiliary Seal Air Fan A	+41BFA07CA001	H1-SC7-SC16A	70 mm ²	Change to fix type
30kW	Auxiliary Seal Air Fan B	+41BFA07DA001	H1-SC7-SC16A	70 mm ²	Change to fix type
30kW	Auxiliary Seal Air Fan C	+41BFA07EA001	H1-SC7-SC16A	70 mm ²	Change to fix type
2.2kW	Mill Gearbox Oil Pump A	+41BFA08AA001	H1-SC7-SC48	4 mm ²	Change to fix type
18.5kW	Seal Air Fan A	+41BFA08BA001	H1-SC7-SC48	16 mm ²	Change to fix type
18.5kW	Seal Air Fan B	+41BFA08CA001	H1-SC7-SC48	16 mm ²	Change to fix type
18.5kW	Seal Air Fan C	+41BFA08DA001	H1-SC7-SC48	16 mm ²	Change to fix type
55kW	HP Fuel Oil Pump A	+41BFA08EA001	H1-SC7-SC14	70 mm ²	Change to fix type

Boiler Board 4B

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable Size	Comments
18.5kW	Seal Air Fan D	+42BFA05AA001	H1-SC7-SC48	16 mm ²	Change to fix type
18.5kW	Seal Air Fan E	+42BFA05BA001	H1-SC7-SC48	16 mm ²	Change to fix type
18.5kW	Seal Air Fan F	+42BFA05CA001	H1-SC7-SC48	16 mm ²	Change to fix type
12.5kW	Air Heater RH	+42BFA05DA001	H1-SC8-SC48	16 mm ²	Change to fix type
70kW	Unit Compressor	+42BFA05EA001	H1-SC8-SC14	240 mm ²	Change to fix type

Turbine Essential Board 4

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable Size	Comments
2.2kW	KSB Oil Pump A	+42BFB04AA001	H1-SC8-SC48	2.5 mm ²	Move circuit to +42BFB06BA001
2.2kW	KSB Oil Pump B	+42BFB04BA001	H1-SC8-SC48	2.5 mm ²	Move circuit to +42BFB06CA001
3kW	SFPT Turning Gear	+42BFB04CA001	H1-SC8-SC48	25 mm ²	Change to fix type
2.2kW	Vacuum Pump A	+42BFB04DA001	H1-SC8-SC48	2.5 mm ²	Move circuit to +42BFB06JA001
2.2kW	Vacuum Pump B	+42BFB04EA001	H1-SC8-SC48	2.5 mm ²	Move circuit to +42BFB06KA001
15kW	SFPT Auxiliary Oil Pump A	+42BFB04FA001	H1-SC8-SC48	70 mm ²	Change to fix type
18.5kW	IPB Cooling Fan A	+42BFB04GA001	H1-SC8-SC48	70 mm ²	Change to fix type
42.5kW	Bearing Oil Pump A	+42BFB04HA001	H1-SC8-SC14	70 mm ²	Change to fix type
5.5kW	Seal Oil Pump A	+42BFB05AA001	H1-SC8-SC48	16 mm ²	Move circuit to +42BFB08KA001
5.5kW	Seal Oil Pump B	+42BFB05BA001	H1-SC8-SC48	16 mm ²	Move circuit to +42BFB08LA001
5.5kW	Jacking Oil Pump 1	+42BFB05CA001	H1-SC8-SC48	2.5 mm ²	Move circuit to +42BFB09AA001
5.5kW	Jacking Oil Pump 2	+42BFB05DA001	H1-SC8-SC48	2.5 mm ²	Move circuit to +42BFB09BA001
5.5kW	Jacking Oil Pump 3	+42BFB05EA001	H1-SC8-SC48	2.5 mm ²	Move circuit to +42BFB09CA001
15kW	SFPT Auxiliary Oil Pump B	+42BFB05FA001	H1-SC8-SC48	70 mm ²	Change to fix type
18.5kW	IPB Cooling Fan B	+42BFB05GA001	H1-SC8-SC48	70 mm ²	Change to fix type
42.5kW	Bearing Oil Pump B	+42BFB05HA001	H1-SC8-SC14	70 mm ²	Change to fix type
5.5kW	Equipped Spare	+42BFB05**001	H1-SC8-SC48		New Equipped Spare Circuit
5.5kW	Equipped Spare	+42BFB05**001	H1-SC8-SC48		New Equipped Spare Circuit

Turbine Non-Essential Board 4

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable Size	Comments
27 kW	CO ₂ Heater	+41BFB07AA001	H7-SC7	70 mm ²	Change to fix type
30kW	CW Pump A	+41BFB07BA001	H1-SC7-SC48	95 mm ²	Change to fix type
30 kW	CW Pump B	+41BFB07CA001	H1-SC7-SC48	95 mm ²	Change to fix type
18.5 kW	Equipped Spare	+41BFB07DA001	H1-SC7-SC48		New Equipped Spare Circuit
10.1 kW	Make-up Water Pump A	+41BFB08AA001	H1-SC7-SC48	70 mm ²	Change to fix type
10.1 kW	Make-up Water Pump B	+41BFB08BA001	H1-SC7-SC48	70 mm ²	Change to fix type
15 kW	Gland Steam Vent Fan	+41BFB08CA001	H1-SC7-SC48	16 mm ²	Change to fix type
15 kW	Equipped Spare	+41BFB04DA001	H1-SC7-SC48		New Equipped Spare Circuit
18.5 kW	Equipped Spare	+41BFB04EA001	H1-SC8-SC48		New Equipped Spare Circuit

Boiler Board 5A

Cct Rating	Circuit Description	Tier No	Circuit Type	Load Cable Size	Comments
2.2kW	Mill Gearbox Oil Pump A	+51BFA08BA001	H1-SC7-SC48	4 mm ²	Change to fix type
18.5kW	Seal Air Fan A	+51BFA08CA001	H1-SC7-SC48	16 mm ²	Change to fix type
18.5kW	Seal Air Fan B	+51BFA08DA001	H1-SC7-SC48	16 mm ²	Change to fix type
18.5kW	Seal Air Fan C	+51BFA08EA001	H1-SC7-SC48	16 mm ²	Change to fix type
55kW	HP Fuel Oil Pump A	+51BFA08FA001	H1B-SC7-SC14	70 mm ²	Change to fix type

3.8 As-built drawings, operating manuals and maintenance schedules

All the *Contractor's* designs and drawings are to be reviewed and approved by the Employer's respective departments before the commencement of any construction/installation work on site. Documentation shall be submitted to the *Project Manager*.

Drawings are to be provided in Auto Cad DGN Format software used by the Employer.

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed on the Site

General workers or assistants shall be employed from the local community, there are local structures that can be contacted through the security office to access the database of the locals.

The people who are executing the work onsite need to be reflected in the safety file. New people to be approved by the safety officer and safety file to be revised.

4.1.2 BBBEE and preferencing scheme

Refer to conditions of tendering

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 stated below

[Insert the agreed ASGI-SA Compliance Schedule here]

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

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

4.2 Subcontracting

4.2.1 Preferred subcontractors

The *Contractor* will be required to provide the *Employer* with all information regarding his *Subcontractors*. The *Employer* will need to approve all *Subcontractors* to be used by the *Contractor*. The *Contractor* shall be responsible for all the *activities* performed by the *Subcontractors*.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

The *Contractor* shall be responsible for all documentation and work performed by *Subcontractors*. The *Contractor* ensures that all work performed by the *Subcontractor* is in accordance to the *Employer's* Works Information and meet all quality requirements. The *Employer* makes use of his quality control officers to conduct audits on work performed by the *Subcontractor*.

4.2.3 Limitations on subcontracting

Appointment and managing the sub-contractor is the full responsibility of the Principal contractor.

4.2.4 Attendance on subcontractors

Not applicable to this contract document

4.3 Plant and Materials

4.3.1 Quality

An activities schedule QCP must be provided with hold points to be signed off by the Employers' representatives.

The Contractor complies with the Employer Quality Requirements and ISO 9001

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

No Plant and Materials will be free issued by the Employer.

4.3.3 *Contractor's* procurement of Plant and Materials

The Employer requires warranties from suppliers to be in favour of the Employer. Also include requirements for vendor data which the Employer may need after Completion of the whole of the works.

4.3.4 Spares and consumables

Not Applicable

4.4 Tests and inspections before delivery

FAT for tier panels shall be done before delivery.

4.5 Marking Plant and Materials outside the Working Areas

Mark as per drawing supplied to the *Employer*.

Contractor marks Plant and Materials, which are stored outside the designated Working Area(s). Such storage spaces is clearly demarcated and include project/contract information and contract details of the *Project Manager*. *Project Manager* approves of such storage areas.

Contractor provides their own resources to secure security of machinery and equipment that may be stored on site. *Employer* is not liable to account for any costs related to damages or thief of machinery and equipment.

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

Not Applicable

4.7 Cataloguing requirements by the *Contractor*

Recommended spares list with pricing

5 Construction

5.1 Temporary works, Site services & construction constraints

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

All Site access is controlled through the designated access gate.

The *Contractor* is informed of the access procedures through Site regulations and that such procedures may change depending on the prevailing security situation.

The *Contractor* is to comply with all Site regulations and instructions. The onus is on the *Contractor* to ensure his familiarity with the Employer's Site regulations and inspections.

No person will be issued with an access permit without proof that the person did attend the Arnot Power Station induction course.

A one-day access permit will be issued for persons attending the induction course. It is the *Contractor's* responsibility to arrange with the Project Manager one week in advance for a course booking.

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

All vehicles must be driven with due consideration for personnel and property. A maximum speed limit of 40 kilometres per hour will be always adhered to on the premises. No personnel at the back of any vehicle.

The Contractor shall provide and install fixed barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas.

The Contract must adhere to Eskom Life Saving Rules

All personnel on Site must sign a Worker's register and Limited Access Register daily to comply with Plant Safety Regulations of Permit to Work. The *Contractor* shall have a daily Toolbox talk, periodic site inspections, job observations, risk assessments, safety equipment checks and safety talks with all the employees.

All welding, flame cutting and grinding work shall be properly screened to protect persons from arc flashes or eye injuries.

All grating shall be covered with an adequate protective screening when welding or flame cutting.

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

The Contractor keeps records of his people and Subcontractors on Site. The *Project Manager* or *Supervisor* must have access to those records at any time. These records may be needed when assessing compensation events

5.1.4 Health and safety facilities on Site

A SHEQ policy is a statement of intent and a commitment by the organisation's CE and senior management in relation to the relevant SHE roles and responsibilities, the achievement of their strategic objectives, values of integrity, customer satisfaction, excellence, and innovation.

Eskom COVID-19 Health and Safety Policy Statement, strive to ensure a COVID-19- free and safe working environment for all. As per the requirement of Section 8 of Occupational Health and Safety Act and based on

a COVID-19 specific risk assessment, Eskom has identified and implemented control measures to prevent the spread of the Coronavirus.

The contractor is required to provide Eskom with a detailed plan on how to prevent the spread of the virus and what control measures will be put in place when entering Eskom Arnot Power station in compliance with Covid-19 regulations.

The following should be in place as a minimum:

- COVID19 safe work plan
- COVID19 Risk assessment
- Daily check lists
- Transport arrangements/plans and accommodation
- An emergency plan
- A plan to sanitise facilities in case of possible contamination

The principal contractor and all appointed contractors, if already not in place, will be required to compile an organisational SHE policy in line with their SHE responsibilities. The policy must be signed by the organisation's CE or the appointed assistant to the CE OHS Act Section 16(2). The policy must be displayed in a prominent place within the workplace. A copy of the policy must be filed in all the contract SHE files and as an annexure of the SHE Plans

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

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

5.1.6 Title to materials from demolition and excavation

The *Contractor* has no title to materials from excavation and demolition.
All reusable equipment will remain the property of the Employer.
All scrap daily to the scrap yard.

5.1.7 Cooperating with and obtaining acceptance of Others

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

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

5.1.8 Publicity and progress photographs

No photographs may be taken on Site without the written permission of the Employer.

5.1.9 *Contractor's* Equipment

Equipment entering Arnot premises will be registered on the tool register at the security access gate.

Records are to be kept of Equipment on Site including whether it is owned or hired. The *Contractor* is responsible to provide his own scaffolding, lifting equipment, mobile cranes and fork lifts where required.

5.1.10 Equipment provided by the *Employer*

No equipment for the works is provided by the Employer.

5.1.11 Site services and facilities

5.1.11.1 Contractor's Yard

A site for the Contractor's yard is provided by the Employer. A written request, indicating the Contractor's requirements in locality and area of storage, office and Workshop sites is submitted to the Project Manager as soon as possible after the Contract Date.

5.1.11.2 Potable water

Potable water for construction purposes is also available free of charge. Any installation is for the Contractor's account. A site for the Contractor's yard is provided by the Employer. A written request, indicating the Contractor's requirements in locality and area of storage, office and Workshop sites is submitted to the Project Manager as soon as possible after the Contract Date.

5.1.11.3 Sanitary Facilities

The *Contractor* to provide his own sanitary facilities or use the existing facilities that the *Employer* already have on site

5.1.11.4 Fire Protection

The Contractor is to comply with requirements of Eskom Standard NWS 1494 Revision 4 "Fire prevention and protection of Contractor's premises on Engineering Sites" and of Site Regulations pertaining fire protection. (NWS1494 Revision 4).

Any tampering with the Employer's fire equipment is strictly forbidden. All exit doors, fire escape routes, walkways, stairways and stair landings must be kept free of obstruction, and not to be used for work or storage at any time. Firefighting equipment must remain accessible at all times.

5.1.11.5 Conditions of Power supply for Erection

The Employer makes available to the Contractor a temporary 220/230/380 Volt AC electricity supply free of charge from the closest existing point of supply. The cost of cabling from point of supply to the Contractor's yard/offices is borne by the Contractor. The cost of additional connection or points is borne by the Contractor. The Contractor makes provision for the necessary extensions and plug points. Any changes made to existing supplies are for the Contractor's account.

In order to comply with the Electrical Installation Regulations under the Occupational Health and Safety Act, no 85 of 1993 the following requirements are met before electricity is supplied it is expected that the Contractor is in possession of a valid certificate of compliance. Your electrical installation is inspected and tested by an accredited person to ensure that it complies with the requirements of the Occupational Health and Safety Act, 1993 and the code of Practice for wiring of premises, SABS 0142. After you have obtained the certificate of compliance, the Employer is to inspect your electrical installation and if satisfied, it is connected and supplied from the construction power supply.

5.1.12 Facilities provided by the *Contractor*

The Contractor provides facilities within his own yard, office, storeroom, canteen, etc. Contractor connects electricity to points supplied by the Employer.

The *Contractor* is to dismantle and clear off site all such temporary structures and associated foundations and infrastructure.

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

Not Applicable

5.1.14 Survey control and setting out of the *works*

Not Applicable

5.1.15 Excavations and associated water control

Not Applicable

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

Describe known services making reference to drawings containing known services and state requirements for locating, marking and recording such services.

State requirements for the treatment of existing services i.e. their termination, diversion or continued use, either temporarily or permanently, and set out the procedures relating thereto.

State requirements, as necessary, for the use and availability of detection equipment for the location of underground services.

State responsibility for damage to services, known and unknown, and requirements for working in close proximity to services etc.

State requirements and reinstatement procedures for the notification and repair of damage to services and any penalties applicable to the damage of services.

5.1.17 Control of noise, dust, water and waste

- Employee to wear the required personal protective equipment when going to the plant where there is noise and dust
- Waste must be managed according to Eskom management standard 32-245

5.1.18 Sequences of construction or installation

The *Contractor* must supply the sequence of installation to the *project manager* with the execution plan. Agreement will have to be reached between the two parties after consultation with adjacent crews working around.

5.1.19 Giving notice of work to be covered up

Not Applicable

5.1.20 Hook ups to existing works

Working at height is 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.

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

- A pre-task risk assessment to identify all risks and hazards has been conducted prior to commencing any work at height.
- He/she is appropriately trained.
- He/she is appropriately secured during ascending and descending; and
- He/she is using an approved fall arrest system where applicable

5.2 Completion, testing, commissioning and correction of Defects

5.2.1 Work to be done by the Completion Date

On or before the Completion Date the *Contractor* shall have done everything required to Provide the Works Information.

5.2.2 Use of the *works* before Completion has been certified

The *Employer* takes over the *works* after successful commissioning of the *works*.

5.2.3 Materials facilities and samples for tests and inspections

- The installation inspection and testing of all supplied items forming part of the works shall be agreed between a *Contractor* and *Employer* on and the philosophy and guarantee test parameter which includes all electrical and mechanical field equipment.
- The *Contractor* gives at least seven days in advance notification to the Supervisor /Project Manager or the Authority for inspection/test and hold or witness points, which require their attendance. The *Contractor* confirms readiness for inspection at least 24 hours prior to the test.
- The *Contractor* ensures that all work has been fully inspected, accepted, and documented prior to requesting any inspection by the Supervisor.

5.2.4 Commissioning

- The Project Manager will make final arrangements with the Contractor 24 hours in advance, preliminary arrangements made at least a week in advance.
- Before equipment is placed in service the *Contractor* certifies that it is in a suitable and safe condition.
- Commissioning checks include verification of connections, configuration, integration, interfacing, and functionality.
- Prior to the time when commissioning checks are to commence, the System Engineer will co-ordinate the commissioning of all equipment forming an integral part of the plant being commissioned.
- In those cases where various components are connected to form an integrated system, the Contractors at the time of commissioning, carries the responsibility for the correct functioning, In the Event of incorrect functioning, the Contractor determines the cause and corrects the fault. If the trouble is within equipment supplied to the Contractor, The Project Manager is to rectify defects within the Employers equipment.
- Site Acceptance testing commences once the Project Manager has certified Installation and Commissioning as complete.

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

The *Contractor* will work with the Appointed Operator and engineering representative of the plant to put the Works into operation after it has been safety cleared.

5.2.6 Take over procedures

Takeover is after or at the same time as completion. The Employer organise with the Contractor the final date of the handover.

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

Clause 43.4 requires that the *Project manager* arranges for the *Employer* to allow the *Contractor* access to and use of a part of the works which has been taken over if needed to correct a Defect.

After the works have been put into operation, the *Contractor* will be required to follow the Plant Safety Regulation to work on the Works. He shall not work without a Work Permit to gain access to the plant.

5.2.8 Performance tests after Completion

The constructor shall compile a check sheet to measure the criteria for performance testing of the whole system.

The *Contractor* has to demonstrate after completion of the *works* that *his* design and installation is compliant to the reference standard used in this specification.

5.2.9 Training and technology transfer

Training for end users and support staff to be done as part of the contract where applicable

5.2.10 Operational maintenance after Completion

The *Employer* may require the *Contractor* before the *defects date* to perform certain duties after Completion and take over which relate to maintenance of the *works*

5.3 Permit to work

The Employer is responsible to take out all permits, and the Contractor will make available Authorised Supervisors for the duration of the works.

5.4 Scaffolding

The Employer has an existing contract with a recognised scaffolding company on site. This scaffolding company will provide a free service to the Contractor provided that he is given at least 5 days' notice before a scaffold is required.

The Contractor's site manager needs to be in possession of a valid scaffolding inspector's certificate to enable him to inspect the scaffolding. This will enable him to accept the scaffolding Contractor's handing over certificate.

6 Plant and Materials standards and workmanship

6.1 Investigation, survey and Site clearance

Supplier is entitled to visit site to check the lay out and plan how to approach the work and for the purpose of tendering e.g., checking the source of power, water etc. Supplier will be able to determine the length of cable and pipes.

6.2 Building works

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

This subsection would typically comprise

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

6.3 Civil engineering and structural works

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

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

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

This subsection would typically comprise

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

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

6.4 Electrical & mechanical engineering works

Not Applicable

6.5 Process control and IT works

Not Applicable

6.6 Other

Not Applicable

7 List of drawings

7.1 Drawings issued by the *Employer*

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

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

Drawing number	Revision	Title
0.41/24877 Sheet 50		Boiler Board 4A General Arrangement
0.41/24877 Sheet 70		Boiler Board 4A H1-SC7-SC48 Schematic
0.41/24877 Sheet 82		Boiler Board 4A H1-SC8-SC48 Schematic
0.41/24877 Sheet 80		Boiler Board 4A H1-SC7-SC16A Schematic
0.41/24877 Sheet 69		Boiler Board 4A H1-SC7-SC14 Schematic
0.41/24878 Sheet 50		Boiler Board 4B General Arrangement
0.41/24878 Sheet 63		Boiler Board 4B H1-SC7-SC48 Schematic
0.41/24878 Sheet 75		Boiler Board 4B H1-SC8-SC14 Schematic
0.41/24882 Sheet 50		Turbine Essential Board 4 General Arrangement
0.41/24882 Sheet 63		Turbine Essential Board 4 H1-SC8-SC48 Schematic
0.41/24882 Sheet 73		Turbine Essential Board 4 H1-SC8-SC14 Schematic
0.41/24883 Sheet 50		Turbine Non Essential Board 4 General Arrangement
0.41/24883 Sheet 64		Turbine Non-Essential Board 4 H7-SC7 Schematic
0.41/24883 Sheet 63		Turbine Non-Essential Board 4 H1-SC7-SC48 Schematic
0.41/24883 Sheet 79		Turbine Non-Essential Board 4 H1-SC8-SC48 Schematic
0.41/25475/Sheet 50		Boiler Board 5A General Arrangement
0.41/25475/Sheet 70		Boiler Board 5A H1-SC7-SC48 Schematic
0.41/25475/Sheet 70		Boiler Board 5A H1-SC7-SC48 Schematic
0.41/25475/Sheet 77		Boiler Board 5A H1B-SC7-SC14 Schematic
0.41/25476/Sheet 50		Boiler Board 5B General Arrangement
0.41/25476/Sheet 73		Boiler Board 5B H1-SC7-SC16A Schematic
0.41/25476/Sheet 62		Boiler Board 5B H1-SC7-SC14 Schematic
0.41/25476/Sheet 63		Boiler Board 5B H1-SC7-SC48 Schematic
0.41/25476/Sheet 77		Boiler Board 5B H1C-SC8-SC14 Schematic
0.41/25473 Sheet 50		Turbine Essential Board 5 General Arrangement
0.41/25473 Sheet 63		Turbine Essential Board 5 H1-SC8-SC48 Schematic

0.41/25473 Sheet 73		Turbine Essential Board 5 H1-SC8-SC14 Schematic
0.41/25474 Sheet 50		Turbine Non Essential Board 5 General Arrangement
0.41/25474 Sheet 64		Turbine Non-Essential Board 5 H7-SC7 Schematic
0.41/25474 Sheet 63		Turbine Non-Essential Board 5 H1-SC7-SC48 Schematic
0.41/25474 Sheet 71		Turbine Non-Essential Board 5 H1-SC8-SC48 Schematic
0.41/25550 Sheet 50		Boiler Board 6A General Arrangement
0.41/25550 Sheet 71		Boiler Board 6A H1-SC8-SC48 Schematic
0.41/25550 Sheet 80		Boiler Board 6A H1-SC7-SC16A Schematic
0.41/25550 Sheet 69		Boiler Board 6A H1B-SC7-SC14 Schematic
0.41/25551 Sheet 50		Boiler Board 6B General Arrangement
0.41/25551 Sheet 73		Boiler Board 6B H1-SC7-SC16A Schematic
0.41/25551 Sheet 76		Boiler Board 6B H1B-SC7-SC14 Schematic
0.41/25551 Sheet 63		Boiler Board 6B H1-SC7-SC48 Schematic
0.41/25551 Sheet 77		Boiler Board 6B H1C-SC8-SC14 Schematic
0.41/25549 Sheet 50		Turbine Essential Board 6 General Arrangement
0.41/25549 Sheet 63		Turbine Essential Board 6 H1-SC8-SC48 Schematic
0.41/25549 Sheet 73		Turbine Essential Board 6 H1-SC8-SC14 Schematic
0.41/25548 Sheet 50		Turbine Non Essential Board 6 General Arrangement
0.41/25548 Sheet 64		Turbine Non-Essential Board 6 H7-SC7 Schematic
0.41/25548 Sheet 63		Turbine Non-Essential Board 6 H1-SC7-SC48 Schematic
0.41/25548 Sheet 71		Turbine Non-Essential Board 6 H1-SC8-SC48 Schematic

C3.2 *CONTRACTOR'S* WORKS INFORMATION

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

Typical sub headings could be

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

This section could also be compiled as a separate file.

PART 4: SITE INFORMATION

Document reference	Title	No of pages
C4	This cover page	1
	Site Information	1
	Total number of pages	2

PART 4: SITE INFORMATION

1. General description

The location of Arnot Power Station is approximately 50 km east of Middelburg in Mpumalanga. Arnot Power Station consists of 6 x 350MW turbo generator units with an installed capacity of 2100MW at maximum continuous rating (MCR)

Access limitations

- Permit to work system is required for access to the area of work
- All workers to be logged in the worker's register of the Permit holder prior to commencement

The site is at 45ft level Boiler house (Boiler boards) and turbine house (Turbine essential & Non-essential boards)

2. Existing buildings, structures, and plant & machinery on the Site

The Contractor makes use of underground service detection before any excavations are done to detect underground services such as electric cables, water pipes, IT and telephone cables. The Contractor notifies the employer of presence of underground and the employer advice the employer within 2days in terms of how the contractor deals with the obstruction.

3. Subsoil information

Not Applicable

4. Hidden services

Not Applicable

5. Other reports and publicly available information

The following Employer standards, specifications and procedures shall be read in conjunction with the Site Information:

Title	Number	Revision
Occupational Health and Safety Requirements to be met by Contractors and subcontractors employed by Eskom	SCSPVABF3	2
Eskom Occupational Health and Safety Policy	ESKPBABNO	0
Eskom Procedure on Vehicle and Driver Safety Management	32-93	2
SHE Policy	32-94	0
Eskom Procedure on Effective Management of Safety, Health and Environmental related incidents	32-95	1
Eskom Procedure on Vehicle Safety Specifications	32-345	0
SHE tender requirement	32-726	0
Eskom Environmental Management Policy	ESKPBAAD6	7
Fire protection and protection of contractor's and Eskom premises on engineering sites	NWS 1494	4
Occupational Health and Safety Act 85 of 1993	85 of 1993	
General Environmental Specification		2004