



## NEC3 Term Service Contract (TSC3)

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

and [Insert at award stage]  
(Reg No. \_\_\_\_\_)

for **Provision of Control and Instrumentation Resources during Outages at Tutuka Power Station for a Period of 60 months.**

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<b>Contents:</b>	<b>No of pages</b>
<b>Part C1 Agreements &amp; Contract Data</b>	
<b>Part C2 Pricing Data</b>	
<b>Part C3 Scope of Work</b>	

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

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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

## **PART C1: AGREEMENTS & CONTRACT DATA**

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# 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:

**Provision of Control and Instrumentation Resources during Outages at Tutuka Power Station for a Period of 60 months.**

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

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

Options A	The offered total of the Prices 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 <sup>1</sup>	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:

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

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**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: Service 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 and signed original copy of this document, including the Schedule of Deviations (if any).

Signature(s)

Name(s)

Capacity

**for the  
Employer**

*Eskom Holdings SOC Ltd  
Megawatt Park, Maxwell Drive, Sandton, Johannesburg*

Name &  
signature of  
witness

Date

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

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

No.	Subject	Details
1		
2		

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

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

**For the tenderer:**

**For the *Employer***

Signature \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

\_\_\_\_\_

Capacity \_\_\_\_\_

\_\_\_\_\_

On behalf of *(Insert name and address of organisation)* \_\_\_\_\_

*Eskom Holdings SOC Ltd  
Megawatt Park, Maxwell Drive, Sandton,  
Johannesburg*

Name & signature of witness \_\_\_\_\_

\_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_

# C1.2a TSC3 Contract Data

## Part one - Data provided by the *Employer*.

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

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option:	
	dispute resolution Option and secondary Options	<b>A: Priced contract with price list</b> <b>W1: Dispute resolution procedure</b>  <b>X1: Price adjustment for inflation</b> <b>X2 Changes in the law</b> <b>X17: Low service damages</b> <b>X18: Limitation of liability</b> <b>X19: Task Order</b>  <b>Z: Additional conditions of contract</b>
	of the NEC3 Term Service Contract April 2013 <sup>2</sup> (TSC3)	
10.1	The <i>Employer</i> is (name):	<b>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</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
	Tel No.	<b>[•]</b>
	Fax No.	<b>[•]</b>
10.1	The <i>Service Manager</i> is (name):	
	Address	<b>[•]</b>
	Tel	<b>[•]</b>
	Fax	<b>[•]</b>

<sup>2</sup> Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 539 1902 [www.ecs.co.za](http://www.ecs.co.za)

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e-mail	[•]
11.2(2)	The Affected Property is <b>Tutuka Power Station</b>
11.2(13)	The <i>service</i> is <b>Provision of Control and Instrumentation Resources during Outages at Tutuka Power Station for a Period of 60 months.</b>
11.2(14)	The following matters will be included in the Risk Register <ul style="list-style-type: none"> <li>• Labour strikes</li> <li>• Power supply interruptions or failures</li> <li>• Community Unrest</li> </ul>
11.2(15)	The Service Information is in <b>Part 3: Scope of Work and all documents and drawings to which it makes reference.</b>
12.2	The <i>law of the contract</i> is the law of <b>the Republic of South Africa</b>
13.1	The <i>language of this contract</i> is <b>English</b>
13.3	The <i>period for reply</i> is <b>Two days</b>
<b>2</b>	<b>The Contractor's main responsibilities</b> Data required by this section of the core clauses is also provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data
21.1	The <i>Contractor</i> submits a first plan for acceptance within <b>Within One Week of Receiving a Task Order.</b>
<b>3</b>	<b>Time</b>
30.1	The <i>starting date</i> is. <b>TBC</b>
30.1	The <i>service period</i> is <b>60 Months</b>
<b>4</b>	<b>Testing and defects</b> 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
<b>5</b>	<b>Payment</b>
50.1	The <i>assessment interval</i> is <b>After each Task Order completion</b>
51.1	The <i>currency of this contract</i> is the <b>South African Rand</b>
51.2	The period within which payments are made is <b>30 days</b>
51.4	The <i>interest rate</i> is <b>the publicly quoted prime rate of interest (calculated on a 365-day year) charged by 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</b>  <b>(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</b>

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no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter (and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.

6	<b>Compensation events</b>	Works/Tasks that are not included in the Service Information (scope), Appendix or Annexures after the contract date.
7	<b>Use of Equipment Plant and Materials</b>	<p>The <i>Contractor</i> has the right to use equipment, Plant and Materials provided by the <i>Employer</i> only to Provide the Service.</p> <p>At the end of the service period the <i>Contractor</i></p> <ul style="list-style-type: none"> <li>• returns to the <i>Employer</i>, equipment and surplus Plant and Materials provided by the <i>Employer</i>,</li> <li>• provides items of Equipment for the Employer's use as stated in the Service Information and</li> <li>• provides information and other things as stated in the Service Information</li> </ul>
8	<b>Risks and insurance</b>	<b>NEC3 TSC core clauses for risk and insurances shall be applied</b>
80.1	These are additional <i>Employer's</i> risks	<b>As per NEC3 TSC Core Clause 8 Risks and Insurance</b>
83.1	The <i>Employer</i> provides these insurances from the Insurance Table	<b>in accordance with clause Z12.2. The Contractor will be liable for the applicable deductible, if any</b>
83.1	The <i>Employer</i> provides these insurances from the Insurance Table	<b>in accordance with clause Z12.1</b>
9	<b>Termination</b>	<b>Termination will be dealt with as per NEC3 TSC termination core clauses. Z10 is also applicable</b>
10	<b>1.1 Data for main Option clause</b>	
A	<b>Priced contract with price list</b>	
20.5	The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the <i>service</i> at intervals no longer than	<b>Four Weeks</b>
W1.1	The <i>Adjudicator</i>	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 <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).

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Address	[•]
Tel No.	[•]
Fax No.	[•]
e-mail	[•]

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 Institution of Civil Engineers (London) (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) 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	Mpumalanga Province, South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.

**12 Data for secondary Option clauses**

<b>X1</b>	<b>Price adjustment for inflation</b>																						
X1.1	The <i>base date</i> for indices is	The month prior to the enquiry closing date																					
	The proportions used to calculate the Price Adjustment Factor are:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">proportion</th> <th style="width: 35%;">linked to index for</th> <th style="width: 50%;">Index prepared by</th> </tr> </thead> <tbody> <tr> <td>[•]</td> <td>[•]</td> <td>[•]</td> </tr> <tr> <td>[•]</td> <td>[•]</td> <td>[•]</td> </tr> <tr> <td>[•]</td> <td>[•]</td> <td>[•]</td> </tr> <tr> <td>[•]</td> <td>[•]</td> <td>[•]</td> </tr> <tr> <td>15%</td> <td>non-adjustable</td> <td></td> </tr> <tr> <td>100%</td> <td></td> <td></td> </tr> </tbody> </table>	proportion	linked to index for	Index prepared by	[•]	[•]	[•]	[•]	[•]	[•]	[•]	[•]	[•]	[•]	[•]	[•]	15%	non-adjustable		100%		
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15%	non-adjustable																						
100%																							
<b>X2</b>	<b>Changes in the law</b>	Of the Republic of South Africa is a compensation event if it occurs after contract award																					
<b>X17</b>	<b>Low service damages</b>																						
X17.1	The <i>service level table</i> is in	Appendix A																					
<b>X18</b>	<b>Limitation of liability</b>																						
X18.1	The <i>Contractor's liability</i> to the <i>Employer</i>																						

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	for indirect or consequential loss is limited to	<b>R0.0 (zero Rand)</b>
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	<b>the amount of the deductibles relevant to the event</b>
X18.3	The <i>Contractor's</i> liability for Defects due to his design of an item of Equipment is limited to	<b>The greater of</b> <ul style="list-style-type: none"> <li>• <b>the total of the Prices at the Contract Date and</b></li> <li>• <b>the amounts excluded and unrecoverable from the <i>Employer's</i> insurance (other than the resulting physical damage to the <i>Employer's</i> property which is not excluded) plus the applicable deductibles</b></li> </ul>
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 the excluded matters, is limited to	<b>the total of the Prices other than for the additional excluded matters.</b> <b>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</b> <b>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</b> <ul style="list-style-type: none"> <li>• <b>Defects due to his design, plan and specification,</b></li> <li>• <b>Defects due to manufacture and fabrication outside the Affected Property,</b></li> <li>• <b>loss of or damage to property (other than the <i>Employer's</i> property, Plant and Materials),</b></li> <li>• <b>death of or injury to a person and</b></li> <li>• <b>infringement of an intellectual property right.</b></li> </ul>
X18.5	The <i>end of liability date</i> is	<b>3 months after the end of the <i>service period</i>.</b>
<b>X19</b>	<b>Task Order</b>	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	<b>The same day after receiving the Purchase Order, Task Order or Formal Letter.</b>
<b>Z</b>	<b>The <i>additional conditions of contract</i> are</b>	<b>Z1 to Z14 always apply.</b>

**Z1 Cession delegation and assignment**

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

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## **Z2 Joint ventures**

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

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

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Service Manager* within thirty days of the notification or as otherwise instructed by the *Service Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Service.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P4 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

## **Z4 Confidentiality**

- Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Service Manager*.
- Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z4.4 The taking of images (whether photographs, video footage or otherwise) of the Affected Property or any portion thereof, in the course of Providing the Service and after the end of the *service period*, requires the prior written consent of the *Service Manager*. All rights in and to all

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such images vests exclusively in the *Employer*.

Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

**Z5 Waiver and estoppel: Add to core clause 12.3:**

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

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

Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *service*. Without limitation the *Contractor*:

- accepts that the *Employer* may appoint him as the “Principal Contractor” (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) (“the Construction Regulations”) for the Affected Property;
- 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 the *service*; and
- undertakes, in and about the execution of the *service*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor’s* direction and control, likewise observe and comply with the foregoing.

Z6.2 The *Contractor*, in and about the execution of the *service*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor’s* direction and control, likewise observe and comply with the foregoing.

**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 *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer’s* procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.

Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

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

**Z8 Notifying compensation events**

Z8.1 Delete the last paragraph of core clause 61.3 and replace with:

If the *Contractor* does not notify a compensation event within eight weeks of becoming aware of

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the event, he is not entitled to a change in the Prices.

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## **Z9 Employer's limitation of liability**

- Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor's* entitlement under the indemnity in 82.1 is provided for in 60.1(12) and the *Employer's* liability under the indemnity is limited to compensation as provided for in core clause 63 and X19.11 if Option X19 Task Order applies to this contract.

## **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 Ethics**

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

**Affected Party** means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,

**Coercive Action** means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,

**Collusive Action** means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,

**Committing Party** means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractors 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.

Z11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z11.2 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.

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Z11.3 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.

Z11.4 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.

**Z12 Insurance**

**Z 12 .1 Replace core clause 83 with the following:**

**Insurance cover 83**

- 83.1 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.
  
- 83.2 The *Contractor* provides the insurances stated in the Insurance Table A 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 caused by the <i>Contractor</i> to the <i>Employer's</i> property	The replacement cost where not covered by the <i>Employer's</i> insurance.  The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance.
Loss of or damage to Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance.  The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance.
Loss of or damage to Equipment	The replacement cost where not covered by the <i>Employer's</i> insurance.  The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance.
The <i>Contractor's</i> liability for loss of or damage to property (except the <i>Employer's</i> property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) arising from or in connection with the <i>Contractor's</i> Providing the Service	<b><u>Loss of or damage to property</u></b> The replacement cost  <b><u>Bodily injury to or death of a person</u></b> The amount required by the applicable law.
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in	The amount required by the applicable law

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

the course of their employment in connection with this contract	
-----------------------------------------------------------------	--

**Z 12.2 Replace core clause 86 with the following:**

**Insurance by the Employer**

86

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

**INSURANCE TABLE B**

<b>Insurance against or name of policy</b>	<b>Minimum amount of cover or minimum limit of indemnity</b>
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

**Z13 Nuclear Liability**

Z13.1 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.

Z13.2 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*.

Z13.3 Subject to clause Z13.4 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

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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*.

Z13.4 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.

Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

## Z14 Asbestos

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

<b>AAIA</b>	means approved asbestos inspection authority.
<b>ACM</b>	means asbestos containing materials.
<b>AL</b>	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.
<b>Ambient Air</b>	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.
<b>Compliance Monitoring</b>	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.
<b>OEL</b>	means occupational exposure limit.
<b>Parallel Measurements</b>	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
<b>Safe Levels</b>	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.
<b>Standard</b>	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.
<b>SANAS</b>	means the South African National Accreditation System.
<b>TWA</b>	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.

Z14.1 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.

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- Z14.2 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 Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z14.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z14.4 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.
- Z14.5 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.
- Z14.6 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.
- Z14.7 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.

# C1.2b 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(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the <i>Contractor's</i> plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key people are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications: Experience:	
		CV's (and further key person's data including CVs) are in .
<b>A</b>	<b>Priced contract with price list</b>	
11.2(12)	The <i>price list</i> is in	<b>C2.2</b>
11.2(19)	The tendered total of the Prices is	<b>R</b>

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## **PART 2: PRICING DATA**

### **TSC3 Option A**

<b>Document reference</b>	<b>Title</b>
C2.1	Pricing assumptions: Option A
C2.2	<i>The price list</i>

## • C2.1 Pricing assumptions: Option A

### How work is priced and assessed for payment

Clause 11 in NEC3 Term Service Contract (TSC3) core clauses and Option A states:

<b>Identified and defined terms</b>	11 11.2	(12) The Price List is the <i>price list</i> unless later changed in accordance with this contract.
		(17) The Price for Services Provided to Date is the total of  the Price for each lump sum item in the Price List which the <i>Contractor</i> has completed and where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the <i>Contractor</i> has completed by the rate.
		(19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

This confirms that Option A is a priced contract where the Prices are derived from a list of items of service which can be priced as lump sums or as expected quantities of service multiplied by a rate or a mix of both.

### Function of the Price List

Clause 54.1 in Option A states: "Information in the Price List is not Service Information". This confirms that instructions to do work or how it is to be done are not included in the Price List but in the Service Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Service in accordance with the Service Information". Hence the *Contractor* does **not** Provide the Service in accordance with the Price List. The Price List is only a pricing document.

### Link to the *Contractor's* plan

Clause 21.4 states "The *Contractor* provides information which shows how each item description on the Price List relates to the operations on each plan which he submits for acceptance". Hence when compiling the *price list*, the tendering contractor needs to develop his first clause 21.1 plan in such a way that operations shown on it can be priced in the *price list* and result in a satisfactory cash flow in terms of clause 11.2(17).

### Preparing the *price list*

Before preparing the *price list*, both the *Employer* and tendering contractors should read the TSC3 Guidance Notes pages 14 and 15. In an Option A contract, either Party may have entered items into the *price list* either as a process of offer and acceptance (tendering) or by negotiation depending on the nature of the *service* to be provided. Alternatively, 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 the *price list* to be prepared and priced by him.

It is assumed that in preparing or finalising the *price list* the *Contractor*:

- Has taken account of the guidance given in the TSC3 Guidance Notes relevant to Option A;

## PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

- Understands the function of the Price List and how work is priced and paid for;
- Is aware of the need to link operations shown in his plan to items shown in the Price List;
- Has listed and priced items in the *price list* which are inclusive of everything necessary and incidental to Providing the Service in accordance with the Service 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 item within the Prices or rates of other listed items in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.
- Understands there is no adjustment to items priced as lump sums if the amount, or quantity, of work within that item later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the (lump sum) Prices is as a result of a compensation event.

**Format of the *price list***

(From the example given in an Appendix within the TSC3 Guidance Notes)

Entries in the first four columns in the *price list* in section C2.2 are made either by the *Employer* or the tendering contractor.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tendering contractor enters the amount in the Price column only, the Unit, Expected Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for an item of work which is the rate for the work multiplied by the quantity completed, the tendering contractor enters the rate which is then multiplied by the Expected Quantity to produce the Price, which is also entered.

If the *Contractor* is to be paid a Price for an item proportional to the length of time for which a service is provided, a unit of time is stated in the Unit column and the expected length of time (as a quantity of the stated units of time) is stated in the Expected Quantity column.

• C2.2 the *price list*

Item	Description	No. of ppl	Unit	Quantity	Rate	Amount
<b>1.0</b>	<b>PRELIMINARIES &amp; GENERAL</b>					
<b>1.1</b>	<b>Fixed Charge Prelims</b>					
1,1,1	Site-establishment	1	Sum	1		
1,1,2	PPE	17	Per Outage	7		
1,1,3	Safety Files	1	Per Outage	7		
1,1,4	Medicals	17	Per Outage	7		
1,1,5	Site de-establishment	1	Sum	1		
<b>1.2</b>	<b>Time Related Prelims</b>					
1,2,1	Accommodation	17	Days	560		
1,2,2	Travelling H-W-H	1	Month	21		
1,2,3	Machinery, Equipment and Tools	1	Month	19		
Item	Description	No. of ppl	Unit	Hours/Per Outage	Rate	Amount
<b>2.0</b>	<b>LABOUR - CORE CREW</b>					
<b>2.1</b>	<b>Normal Time</b>					
2,1,1	Senior Supervisor - Overseeing all activities on all plants	1	Hrs	3040		
2,1,2	Senior Technician - Boiler, Turbine Plants and Outside Plant (Auxiliaries, Coal incline and CCP)	3	Hrs	3040		
2,1,3	Technicians - Auxiliaries, Boiler and Turbine Plants	2	Hrs	3040		
2,1,4	Mechanicians - Turbine Plant	4	Hrs	3040		
2,1,5	Mechanicians - Boiler Plant	4	Hrs	3040		
2,1,6	Mechanicians - Auxiliaries, Coal Incline and CCP Plants	2	Hrs	3040		
2,1,7	Safety Officer	1	Hrs	3040		
<b>2.2</b>	<b>Overtime @ 1.5 - Normal / Saturday</b>					
2,2,1	Senior Supervisor - Overseeing all activities on all plants	1	Hrs	1976		
2,2,2	Senior Technician - Boiler, Turbine Plants and Outside Plant (Auxiliaries, Coal incline and CCP)	3	Hrs	1976		
2,2,3	Technicians - Auxiliaries, Boiler and Turbine Plants	2	Hrs	1976		
2,2,4	Mechanicians - Turbine Plant	4	Hrs	1976		
2,2,5	Mechanicians - Boiler Plant	4	Hrs	1976		

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2,2,6	Mechanicians - Auxiliaries, Coal Incline and CCP Plants	2	Hrs	1976		
2,2,7	Safety Officer	1	Hrs	1976		
<b>2.3</b>	<b><i>Overtime @ 2,0 - Sunday / Public Holiday</i></b>					
2,3,1	Senior Supervisor - Overseeing all activities on all plants	1	Hrs	836		
2,3,2	Senior Technician - Boiler, Turbine Plants and Outside Plant (Auxiliaries, Coal incline and CCP)	3	Hrs	836		
2,3,3	Technicians - Auxiliaries, Boiler and Turbine Plants	2	Hrs	836		
2,3,4	Mechanicians - Turbine Plant	4	Hrs	836		
2,3,5	Mechanicians - Boiler Plant	4	Hrs	836		
2,3,6	Mechanicians - Auxiliaries, Coal Incline and CCP Plants	2	Hrs	836		
2,3,7	Safety Officer	1	Hrs	836		
<b>TOTAL (EXCL. VAT)</b>						<b>R</b>
						-

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## PART 3: SCOPE OF WORK

<b>Document reference</b>	<b>Title</b>
	This cover page
C3.1	<i>Employer's Service Information</i>
C3.2	<i>Contractor's Service Information</i>

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# 1 Description of the service

## 1.1 Executive overview

The scope covers inspection, removal, repairs, installation, function checking and commissioning of control and instrumentation systems during outages on the unit’s boiler plant, turbine plants and outside plant from the coal incline to the mill bunkers.

All scope executed shall be accompanied by a quality control document full accepted by Eskom personnel. This document clearly defines the expectations, contractual requirements, roles, and responsibilities required for the effective control and instrumentation outage scope of work.

The contract for C&I outage resources will remain effective for a duration of five years.



Figure 1: Tutuka Outage Philosophy Cycle.

## 1.2 Employer’s requirements for the service

### 1.2.1 SCOPE OF WORK

#### 1.2.1.1 General and mini overhaul (Duration: 90 days and 60 days)

##### Normal C&I Maintenance Scope

- Clean Junction Boxes and repair damaged seals and doors.
- Clean all C&I cubicles (blow out) in the equipment room
- Fill damaged fire seals in equipment room cubicles and all cable voids
- Backup all data, application programs, system images on DCS, HMI, and PLCs.
- Attend to any AU defects
- Resolve active simulations and discrepancies on control system
- Correction of identified setting discrepancies
- Pre outage checks to be done to identify faulty signals. All faulty signals to be corrected accordingly
- Resolution of nuisance alarms

##### Boiler Scope

- Stroke check all dampers.
- Function check oil burners
- FD fans protection checks
- ID fans protection checks
- PA fans protection checks
- AH protection checks
- Function check SSC controls
- Send furnace flame protection equipment (pyrometers) for calibration. Reinstall if still within operating range or replace with new equipment.
- Inspect and replace damaged thermal index thermocouples
- Inspect and replace damaged metal temperature thermocouples
- Inspect AH fire detection thermocouples and pockets. Replace damaged

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- Internal and external inspection on all mills level probes which have been run empty
- Calibrate boiler O2 analyser and probes
- Remove, clean and reinstall all Mill venturi
- Implementation of modifications and projects
- Perform unit performance and capability testing after unit RTS

### **Main Turbine and Turbine auxiliaries Scope**

#### **Turbine Centreline**

- HP&IP valves hot or cold hysteresis on request from Turbine Engineering
- HP&IP Governor valves instrumentation removal
- BRG 1-12 vibration probe removal
- BRG 1-12 thermocouples removal
- Replace and set up speed probes with new probes
- Centreline internal instruments removal (Thermocouples, speed, eccentricity thrust and surge wear, differential expansion probes)
- LP bypass valves instrumentation inspection and removal on request from Turbine Engineering
- HP & IP casing thermocouples and replacement with new thermocouples
- Generator H2 seal thermocouples removal
- Generator H2 thermocouples replacement with new thermocouples
- LP bypasses stroke and protection checks if any mechanical work
- HP&IP ESV and governor valves setup and verification
- HP&IP ESV and governor valves Stroke check
- Centreline instrumentation reassembly
- Main Turbine Protection checks

#### **Feed Pumps**

- EFP A & B instrumentation removal and replacement
- BFPT instrumentation removal and replacement as per GEC manual
- Protection instrumentation recalibration
- Replace all protection thermocouples with new thermocouples
- Transmitter calibration checks
- EFP A & B protection checks
- BFPT system protection checks
- Woodward governor I to P function check

#### **Turbine auxiliaries**

- List of valves disconnecting, reconnecting and stroking
- Vacuum transmitters remove and send for calibration
- Removal of pneumatic valve positioners
- Stroking of condensate system valves
- Condensate Extraction Pumps instrumentation to be removed and replaced
- Remove and send for service of Generator H2 purity analyser
- Remove and send for service of Stator water conductivity analysers
- Calibration check of Generator H2 purity analyser with rinsed probe
- Calibration check of Stator water conductivity analysers with rinsed probes
- Blow through DST level transmitter impulse line
- Function check DST pressure controller
- Inspect HP and LP heater instrumentation. Remove and repair all damaged instruments.
- Condensate extraction pumps protection checks
- Function check lube oil temperature controller.

#### **Outside Plant Scope**

- CPP valves function check. Correct any deviating/malfunctioning actuators

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- CPP PLC cubicles cleaning. (Cubicle blowouts)
- Clean Sample room analysers' probes and check calibration
- G/Lowe Panel instruments calibration and protection check.
- Verify CW pumps instruments calibration and protections
- Ash plant PLC cubicle cleaning.
- Bucket elevator conveyors protection checks.
- Replace fuel oil integrators on the fuel oil plant with Endress Hauser equipment.
- Ash conditioner conveyor protection checks.
- Ash Plant junction boxes cleaning and checks on enclosure sealing.
- Ash Plant protection checks.
- Coal Plant DCS cubicle cleaning.
- Coal Plant conveyors protection checks (reclaim, incline, shuttle, cross, bunker- feed).
- LCS function check, cleaning and verify sealing of panel.
- Review simulations on PLC/DCS and correct active simulations.
- Review and address TOIs.
- Compare PLC & DCS software backups with the running software, and action any identified differences.
- Attend to AU defects

### 1.2.1.2 General Description of work to be done

**Field Device Removal:** Control and instrumentation (C&I) field devices must be removed from the plant when mechanical work is carried out nearby, to prevent damage. The C&I outage contractor is responsible for assessing and documenting the status of the removed field devices (operational, faulty, or damaged). All removed field devices must be handed over to the C&I Senior Technician, who shall ensure their safekeeping and maintain records based on the contractor's report.

**Defects:** Defective field devices shall be repaired. If repair is not feasible, the field devices must be replaced.

**Junction Boxes:** Inspect the condition of all junction boxes. Verify that the dust seals are correctly installed and functioning as intended. Ensure that all junction boxes can be securely locked using panel keys. Clean all junction boxes using a dust blower.

#### Equipment Room and DCS Cubicles:

##### Unit 1, 2, and 3:

Boiler controls remain on the legacy Siemens Teleperm C and Iskamatic B systems. While Turbine controls have been upgraded to the ABB P14 Procontrol DCS. The HMI and plant

##### Units 4, 5 and 6:

Cubicles marshalling and all cable entries to cubicles must be cleaned using Nano Cleaning Solution to eliminate dust accumulation and reduce the risk of premature failures. The Section Senior Supervisor is responsible for creating notifications for faulty field devices, which the C&I outage contractor must resolve. The C&I Senior Supervisor shall compile a list of standing alarms related to control system module failures and errors. These defects must be addressed during the outages by the Contractor. The availability of control and instrumentation spares shall be free issued to the Contractor by the Eskom representative, as outlined in the outage scope of work.

**Commissioning:** Field devices removed from the plant must undergo recommissioning. This process includes conducting loop checks, verifying measurement ranges, ensuring the accuracy of AKZs, and confirming all settings are correct.

**Quality Control Plan:** All executed scope shall be inspected by a contracted quality control officer. As a control measure, the Employer's Senior Technician overseeing the outages must sign the Quality Control Plans (QCPs). All QCPs and check sheets shall be retained by the C&I outage contractor as evidence of scope completion, ensuring compliance for future reference and audit purposes.

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

### 1.2.1.3 Boiler Plant High level Scope of Work to be executed by the C&I Outage Contractor: (Outage Department to issue signed scope of work)

#### **BOILER PROTECTION INSTRUMENTS**

##### **TEMPERATURE**

	<b>AKZ</b>	<b>DESCRIPTION</b>	<b>CAL. RANGE</b>	<b>Trip</b>
1	0*RA31T001	HP BYP. OUTL. 1 T1	0 - 600 deg. C	>400.2 deg
2	0*RA31T002	HP BYP. OUTL. 1 T2	0 - 600 deg. C	>400.2 deg
3	0*RA31T00*	HP BYP. OUTL. 1 T3	0 - 600 deg. C	>400.2 deg
4	0*RA32T001	HP BYP. OUTL. 2 T1	0 - 600 deg. C	>400.2 deg
5	0*RA32T002	HP BYP. OUTL. 2 T2	0 - 600 deg. C	>400.2 deg
6	0*RA32T00*	HP BYP. OUTL. 2 T3	0 - 600 deg. C	>400.2 deg
7	0*RA33T001	HP BYP. OUTL. 3 T1	0 - 600 deg. C	>400.2 deg
8	0*RA33T002	HP BYP. OUTL. 3 T2	0 - 600 deg. C	>400.2 deg
9	0*RA33T00*	HP BYP. OUTL. 3 T3	0 - 600 deg. C	>400.2 deg
10	0*RA34T001	HP BYP. OUTL. 4 T1	0 - 600 deg. C	>400.2 deg
11	0*RA34T002	HP BYP. OUTL. 4 T2	0 - 600 deg. C	>400.2 deg
12	0*RA34T00*	HP BYP. OUTL. 4 T3	0 - 600 deg. C	>400.2 deg
13	0*NA31T001	ATT. 1.1 STM INL. T1	0 - 600 deg. C	>475.2 deg
14	0*NA31T002	ATT. 1.1 STM INL. T2	0 - 600 deg. C	>475.2 deg
15	0*NA31T00* /4	ATT. 1.1 STM INL. T3	0 - 600 deg. C	>475.2 deg
16	0*NA32T001	ATT. 1.2 STM INL. T1	0 - 600 deg. C	>475.2 deg
17	0*NA32T002	ATT. 1.2 STM INL. T2	0 - 600 deg. C	>475.2 deg
18	0*NA32T00* /4	ATT. 1.2 STM INL. T3	0 - 600 deg. C	>475.2 deg
19	0*NL05T001	F/OIL DEL. PIPE TEMP	0 - 250 deg. C	<85 deg
20	0*NA10T004	ECON. OUTL. FW TEMP.	0 - 400 deg. C	306 deg
21	0*NA10T002	ECON. INL. FW TEMP.	0 - 400 deg. C	246 deg
22	0*NG11T001	LH FDF IN AIR TEMP.	0 - 100 deg. C	38 deg
23	0*NG21T001	RH FDF IN AIR TEMP.	0 - 100 deg. C	38 deg

##### **PRESSURE**

1	0*NA10F001	ECON. OUTL. FLOW 1	0 - 200 kPa	215.9 bar
2	0*NA10F002	ECON. OUTL. FLOW 2	0 - 200 kPa	215.9 bar
3	0*NA10F00*	ECON. OUTL. FLOW 3	0 - 200 kPa	215.9 bar
4	0*NA10F011	ECON. INL. FLOW 1	0 - 200 kPa	<208 kg/s
5	0*NA10F012	ECON. INL. FLOW 2	0 - 200 kPa	<208 kg/s
6	0*NA10F013	ECON. INL. FLOW 3	0 - 200 kPa	<208 kg/s
7	0*NG11F001	LH FDF IN AIR FLOW 1	0-625Pa	- 600 Pa
8	0*NG11F002	LH FDF IN AIR FLOW 2	0-625Pa	- 600 Pa
9	0*NG11F00*	LH FDF IN AIR FLOW 3		- 600 Pa
10	0*NG21F001	RH FDF IN AIR FLOW 1	0-625Pa	- 600 Pa
11	0*NG21F002	RH FDF IN AIR FLOW 2	0-625Pa	- 600 Pa
12	0*NG21F00*	RH FDF IN AIR FLOW 3		- 600 Pa
13	0*NR21P001	RH S/HTR INL. F/GAS P1	(-3) - (+3) kPa	>2.5/<-2.5
14	0*NR21P002	RH S/HTR INL. F/GAS P2	(-3) - (+3) kPa	>2.5/<-2.5
15	0*NR21P009	RH S/HTR INL. F/GAS P3	(-3) - (+3) kPa	>2.5/<-2.5
16	0*NX01P001	CONTR. AIR SUPPLY P	0 - 1000 kPa	<350 kPa
17	0*NL05P00*	F/OIL DEL. PIPE PRES.	0 - 6 Mpa	<3.5 Mpa
18	0*NK01P001	LP GAS SUPPLY VLV DISCH.	0 - 300 kPa	<70 kPa

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

19	0*NA10P001	ECON. INL. FW PRESS.	0 - 30 Mpa	<14Mpa
20	0*NA20P002	ECON. OUTL. FW PRESS.	0 - 30 Mpa	215.9 bar
21	0*NG11P001	LH FDF IN AIR PRESS.	0 - 1000 pa	-657 Pa
22	0*NG21P001	RH FDF IN AIR PRESS.	0 - 1000 pa	-657 Pa

#### PYROMETERS

23	0*NR11T001	LH FLAME TEMP 1	500 - 1200 Deg C	600 Deg C
24	0*NR11T009	LH FLAME TEMP 4	500 - 1200 Deg C	600 Deg C
25	0*NR11T002	LH FLAME TEMP 2	500 - 1200 Deg C	600 Deg C
26	0*NR11T010	LH FLAME TEMP 5	500 - 1200 Deg C	600 Deg C
27	0*NR11T00*	LH FLAME TEMP 3	500 - 1200 Deg C	600 Deg C
28	0*NR11T011	LH FLAME TEMP 6	500 - 1200 Deg C	600 Deg C
29	0*NR21T001	RH FLAME TEMP 1	500 - 1200 Deg C	600 Deg C
30	0*NR21T009	RH FLAME TEMP 4	500 - 1200 Deg C	600 Deg C
31	0*NR21T002	RH FLAME TEMP 2	500 - 1200 Deg C	600 Deg C
32	0*NR21T010	RH FLAME TEMP 5	500 - 1200 Deg C	600 Deg C
33	0*NR21T00*	RH FLAME TEMP 3	500 - 1200 Deg C	600 Deg C
34	0*NR21T011	RH FLAME TEMP 6	500 - 1200 Deg C	600 Deg C

- Perform in-house calibration of pressure switches and temperature switches using properly calibrated equipment. All calibration equipment will have valid calibration certificates.

#### Field Devices:

- Remove all field devices from the plant as outlined in the outage scope of work issued by C&I Engineering.

#### Functional Checks:

- Verify the operation of SSC controls and short and long coarse ash protection conveyors.
- Perform function checks on HP Bypass and RH Safety valves control systems.
- Perform function checks and protection checks on the milling plant.

#### Inspection, Repair, and Replacement:

- Inspect, repair, and replace damaged instruments in the milling plant. Conduct Mills protection checks prior to and during the unit's return to service.
- Inspect, repair, and replace damaged thermal index thermocouples, compensating leads, and converter modules.
- Inspect, repair, and replace damaged metal temperature thermocouples, compensating leads, and converter modules.
- Inspect and repair Air Heater (AH) Fire Detection thermocouples, compensating leads, and converter modules.
- Inspect and replace damaged Tube Leak Detectors and cabling as needed.

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

**List of instruments scheduled for outage execution:**

<b>AKZ Number</b>	<b>Component Description</b>	<b>Work specifications</b>
<b>HP HEATER OUTL FW</b> 09-0*NA10T001	<b>Boiler Thermocouple</b>	The contractor must remove and store the thermocouples once the unit is shut down. After all other outage work on the boiler is completed, those in working condition should be reinstalled, while damaged thermocouples identified during inspection must be replaced.
<b>ECONOMIZER INL FW</b> 09-0*NA10T00*		
<b>EVAP DIV WALL WATER</b> 09-0*NA20T001		
<b>SCREW WALL METAL</b> 09-0*NA30T002		
<b>SUPER STRUCTURE METAL</b> 09-0*NA30T00*		
<b>COMB CHAMBER DIFF</b> 09-0*NA30T105 09-0*NA30T107 09-0*NA30T109		
<b>STRAIN GAUGE TEMP</b> 09-0*NA30T004 - 09-0*NA30T006		
<b>ATT 1.1 STEAM INL</b> 09-0*NA30T011 - 09-0*NA31T004		
<b>ATT 1.1 STEAM OUTL</b> 09-0*NA31T007		
<b>ATT 1.2 STEAM INL</b> 09-0*NA30T013- 09-0*NA32T004		

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>ATT 1.2 OUTL STEAM</b> 09-0*NA32T007</p> <p><b>ATT 2.1/2.2 AST</b> 09-0*NA61T002</p> <p><b>ATT 2.3/2.4 AST</b> 09-0*NA61T001</p> <p><b>ATT 3.1/3.2 AST</b> 09-0*NA71T001</p> <p><b>ATT 3.3/3.4 AST</b> 09-0*NA71T002</p> <p><b>ATT 2.3 STEAM INL</b> 09-0*NA63T002</p> <p><b>ATT 2.3 STEAM OUTL</b> 09-0*NA63T004</p> <p><b>ATT 2.4 STEAM INL</b> 09-0*NA64T002</p> <p><b>ATT 2.4 STEAM OUTL</b> 09-0*NA64T004</p> <p><b>ATT 3.1 STEAM INL</b> 09-0*NA71T002</p> <p><b>ATT 3.1 STEAM OUTL</b> 09-0*NA71T004</p> <p><b>ATT 3.2 STEAM INL</b> 09-0*NA72T002</p> <p><b>ATT 3.2 STEAM OUTL</b></p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*NA72T004</p> <p><b>ATT 3.3 STEAM INL</b></p> <p>09-0*NA73T002</p> <p><b>ATT 3.3 STEAM OUTL</b></p> <p>09-0*NA73T004</p> <p><b>ATT 3.4 STEAM INL</b></p> <p>09-0*NA74T002</p> <p><b>ATT 3.4 STEAM OUTL</b></p> <p>09-0*NA74T004</p> <p><b>COMBUSTION DIFF TEMP</b></p> <p>09-0*NA30T105</p> <p><b>SEPARATING VESSEL 1</b></p> <p>09-0*NA41T001</p> <p><b>SEPARATING VESSEL 2</b></p> <p>09-0*NA42T001</p> <p><b>SEPARATING VESSEL 3</b></p> <p>09-0*NA43T001</p> <p><b>SEPARATING VESSEL 4</b></p> <p>09-0*NA44T001</p> <p><b>S/HEATER 2.1</b></p> <p>09-0*NA61T011 - 09-0*NA61T013</p> <p><b>S/HEATER 2.2</b></p> <p>09-0*NA62T011 - 09-0*NA62T013</p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>S/HEATER 2.3</b>                  09-0*NA63T011 -                  09-0*NA63T013  <b>S/HEATER 2.4</b>                  09-0*NA64T011 -                  09-0*NA64T013   <b>S/HEATER 3.1</b>                  09-0*NA71T011 -                  09-0*NA71T013   <b>S/HEATER 3.2</b>                  09-0*NA72T011 -                  09-0*NA72T013   <b>S/HEATER 3.3</b>                  09-0*NA73T011 -                  09-0*NA73T013   <b>S/HEATER 3.4</b>                  09-0*NA74T011 -                  09-0*NA74T013   <b>S/HEATER 4.1</b>                  09-0*NA81T011 -                  09-0*NA81T013   <b>S/HEATER 4.2</b>                  09-0*NA82T011 -                  09-0*NA82T013   <b>S/HEATER 4.3</b>                  09-0*NA83T011 -                  09-0*NA83T013   <b>S/HEATER 4.4</b>                  09-0*NA84T011 -                  09-0*NA84T013</p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>CIRC PUMP</b>                  09-0*NB11T001                  09-0*NB21T001</p> <p><b>BLOW DOWN VESS</b>                  09-0*NB13T001</p> <p><b>COM DUCT SEC AIR</b>                  09-0*NS01T001 -                  09-0*NS01T006</p> <p><b>RE-HEATER 1.1</b>                  09-0*NE11T011 -                  09-0*NE11T013</p> <p><b>RE-HTR ATT 2</b>                  09-0*NE12T001 -                  09-0*NE12T00*</p> <p><b>RE-HEATER 1.2</b>                  09-0*NE12T011 -                  09-0*NE12T013</p> <p><b>RE-HTR ATT 3</b>                  09-0*NE13T001 -                  09-0*NE13T00*</p> <p><b>RE-HEATER 1.3</b>                  09-0*NE13T011 -                  09-0*NE13T013</p> <p><b>RE-HTR ATT 4</b>                  09-0*NE14T001 -                  09-0*NE14T003</p> <p><b>RE-HEATER 1.4</b></p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*NE14T011 - 09-0*NE14T013</p> <p><b>RE-HEATER 2.1</b> 09-0*NE21T011 - 09-0*NE21T013</p> <p><b>RE-HEATER 2.2</b> 09-0*NE22T011 - 09-0*NE22T013</p> <p><b>RE-HEATER 2.3</b> 09-0*NE23T011 - 09-0*NE23T013</p> <p><b>RE-HEATER 2.4</b> 09-0*NE24T011 - 09-0*NE24T013</p>		
<p><b>Not Applicable</b></p>	<p><b>Boiler thermocouple pockets</b></p>	<p>The contractor must inspect all boiler thermocouple pockets. If any are found to be damaged, the outage coordinator must notify the responsible boiler system engineer to issue cut-and-weld instructions for new pockets.</p>
<p><b>AIR HEATER FIRE DETECTION (L/H)</b> 09-0*NH10T001 09-0*NH10T002</p> <p><b>AIR HEATER FIRE DETECTION (R/H)</b> 09-0*NH20T001 09-0*NH20T002</p> <p><b>AIR HEATER GUIDE BEARING</b> 09-0*NH32T001 09-0*NH31T001</p> <p><b>L/H AIR HTR</b> 09-0*NG32T001 -</p>	<p><b>Air Heater Thermocouples</b></p>	<p>The contractor must inspect and test all thermocouples prior to their removal from the plant. The contractor must remove and store the thermocouples once the unit is shut down. After all other outage work on the boiler is completed, those in working condition should be reinstalled, while damaged thermocouples identified during inspection must be replaced.</p> <p>Work Instruction for Testing of Air Heater Fire Alarm System – 15MNT GEN-220* and 15ENG BLR-941</p>

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*NG12T001                  09-0*NR12T001 -                  09-0*NR13T001</p> <p><b>R/H AIR HTR</b></p> <p>09-0*NG42T001 -                  09-0*NG23T001                  09-0*NR22T001 -                  09-0*NR23T001</p>		
<p><b>L/H FD FAN</b></p> <p>09-0*NG10T001                  09-0*NG10T002                  09-0*NG19T001                  09-0*NG19T002</p> <p><b>R/H FD FAN</b></p> <p>09-0*NG20T001                  09-0*NG20T002                  09-0*NG29T001                  09-0*NG29T001                  09-0*NG29T002</p> <p><b>L/H PA FAN</b></p> <p>09-0*NG30T001                  09-0*NG30T002                  09-0*NG39T001                  09-0*NG39T002</p> <p><b>R/H PA FAN</b></p> <p>09-0*NG40T001                  09-0*NG40T002                  09-0*NG49T001                  09-0*NG49T002</p> <p><b>L/H ID FAN</b></p> <p>09-0*NR10T001                  09-0*NR10T002                  09-0*NR19T001</p>	<p><b>Fan thermocouples</b></p>	<p>The contractor must inspect and test all thermocouples prior to their removal from the plant. The contractor must remove and store the thermocouples once the unit is shut down. After all other outage work on the boiler is completed, those in working condition should be reinstalled, while damaged thermocouples identified during inspection must be replaced.</p>

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*NR19T002</p> <p><b>R/H ID FAN</b></p> <p>09-0*NR20T001</p> <p>09-0*NR20T002</p> <p>09-0*NR29T001</p> <p>09-0*NR29T002</p> <p><b>FLUE GAS DUCT</b></p> <p><b>L/H AIR HTR</b></p> <p>09-0*NR12T001 -</p> <p>09-0*NR12T005</p> <p>09-0*NR13T001</p> <p>09-0*NR14T001</p> <p><b>R/H AIR HTR</b></p> <p>09-0*NR22T001 -</p> <p>09-0*NR22T005</p> <p>09-0*NR23T001</p> <p>09-0*NR24T001</p> <p><b>L/H S/HTR 2 OUTL</b></p> <p>09-0*NR11T006</p> <p>09-0*NR11T007</p> <p><b>L/H RE-HTR 1</b></p> <p><b>OUTL</b></p> <p>09-0*NR11T007</p> <p><b>L/H ECON OUTL</b></p> <p>09-0*NR11T008</p> <p><b>R/H S/HTR 2 OUTL</b></p> <p>09-0*NR21T006</p> <p><b>R/H RE-HTR 1</b></p> <p><b>OUTL</b></p> <p>09-0*NR21T007</p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>L/H ECON OUTL</b> 09-0*NR21T008</p>		
<p><b>A MILL to F Mill</b> 09-0*NM10T001 - 09-0*NM10T003 09-0*NM12T001 09-0*NM12T002 09-0*NM14T001 09-0*NM14T002 09-0*NM15T001 09-0*NM15T004 09-0*NM16T001 09-0*NM16T004</p>	<p><b>Mill thermocouple</b></p>	<p>The contractor must inspect all thermocouple pockets. If any are found to be damaged, the outage coordinator must notify the responsible boiler system engineer to issue cut-and-weld instructions for new pockets.</p> <p>The contractor must inspect and test all thermocouples prior to their removal from the plant. The contractor must remove and store the thermocouples once the unit is shut down. After all other outage work on the boiler is completed, those in working condition should be reinstalled, while damaged thermocouples identified during inspection must be replaced.</p>
<p>09-0RA11T001 – 09-0*RA11T003  09-0RA12T001 – 09-0*RA12T003  09-0*RA13T001 – 09-0*RA13T003  09-0*RA14T001 – 09-0*RA14T003  09-0*RA31T001 – 09-0*RA31T003</p>	<p><b>BLR OUTLET SH Thermocouples</b></p>	<p>The contractor must inspect and test all thermocouples prior to their removal from the plant. The contractor must remove and store the thermocouples once the unit is shut down. After all other outage work on the boiler is completed, those in working condition should be reinstalled, while damaged thermocouples identified during inspection must be replaced.</p>
<p>09-0*RA32T001 – 09-0*RA32T003  09-0*RA33T001 – 09-0*RA33T003  09-0*RA44T001 – 09-0*RA44T003</p>	<p><b>HP BYPASS VLV MSB OUTLET Thermocouples</b></p>	
<p>09-0*RB11T001 – 09-0*RB11T003  09-0*RB12T001 – 09-0*RB12T003  09-0*RB13T001 – 09-0*RB13T003</p>	<p><b>RH Thermocouples</b></p>	

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

09-0*RB14T001 – 09-0*RB14T003		
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**Junction Boxes:**

- Clean and blow out all C&I junction boxes. Confirm terminal wiring accuracy against drawings, repair damaged seals, and ensure all junction boxes are securely closed.

**Valve and Actuator Setup:**

- Set up and stroke pneumatic valves and controllers, including Siemens SIPART, ABB TZID, Fisher FESTO, METSO, and any additional brands that may be installed at Tutuka in the future.
- Configure and stroke actuators such as Rotork (A-Range and IQ range), Siemens, Hopkinson, Auma, Drehmo, Lewa and other actuator brands potentially installed at Tutuka.

**Defects and Discrepancies:**

- Address all AU defects reported by the C&I Senior Supervisors.
- Resolve discrepancies in the control system and verify JB and JL cubicles settings.
- Resolve all active simulations within the control system.
- Address and rectify discrepancies to ensure system functionality and accuracy.

**1.2.1.4 Turbine Plant High level Scope of Work to be executed by the C&I Outage Contractor: (Outage Department to issue signed scope of work)**

**TURBINE PROTECTION INSTRUMENTS**

	TEMPERATURE		Calibration Range	Trip Setting
1	0*SA13T001	LP 1 RH FRONT EXH STM TEMP1	0-200 Degree	153 C
2	0*SA13T021	LP 1 RH FRONT EXH STM TEMP2	0-200 Degree	153 C
3	0*SA13T0*1	LP 1 RH FRONT EXH STM TEMP3	0-200 Degree	153 C
4	0*SA13T002	LP 1 LH FRONT EXH STM TEMP1	0-200 Degree	153 C
5	0*SA13T022	LP 1 LH FRONT EXH STM TEMP2	0-200 Degree	153 C
6	0*SA13T0*2	LP 1 LH FRONT EXH STM TEMP3	0-200 Degree	153 C
7	0*SA13T00*	LP 1 RH REAR EXH STM TEMP1	0-200 Degree	153 C
8	0*SA13T023	LP 1 RH REAR EXH STM TEMP2	0-200 Degree	153 C
9	0*SA13T0*3	LP 1 RH REAR EXH STM TEMP3	0-200 Degree	153 C
10	0*SA13T004	LP 1 LH REAR EXH STM TEMP1	0-200 Degree	153 C
11	0*SA13T024	LP 1 LH REAR EXH STM TEMP2	0-200 Degree	153 C
12	0*SA13T0*4	LP 1 LH REAR EXH STM TEMP3	0-200 Degree	153 C
13	0*SA14T005	LP 2 RH FRONT EXH STM TEMP1	0-200 Degree	153 C
14	0*SA14T025	LP 2 RH FRONT EXH STM TEMP2	0-200 Degree	153 C
15	0*SA14T0*5	LP 2 RH FRONT EXH STM TEMP3	0-200 Degree	153 C
16	0*SA14T006	LP 2 LH FRONT EXH STM TEMP1	0-200 Degree	153 C
17	0*SA14T026	LP 2 LH FRONT EXH STM TEMP2	0-200 Degree	153 C
18	0*SA14T0*6	LP 2 LH FRONT EXH STM TEMP3	0-200 Degree	153 C
19	0*SA14T007	LP 2 RH REAR EXH STM TEMP1	0-200 Degree	153 C
20	0*SA14T027	LP 2 RH REAR EXH STM TEMP2	0-200 Degree	153 C
21	0*SA14T0*7	LP 2 RH REAR EXH STM TEMP3	0-200 Degree	153 C
22	0*SA13T008	LP 1 LH REAR EXH STM TEMP1	0-200 Degree	153 C
23	0*SA13T028	LP 1 LH REAR EXH STM TEMP2	0-200 Degree	153 C

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

24	0*SA13T0*8	LP 1 LH REAR EXH STM TEMP3	0-200 Degree	153 C
25	0*SC11T100	TURBINE BRG 1 METAL TEMP	0-200 Degree	> 82 C
26	0*SC11T072	TURBINE BRG 1 OIL DRAIN TEMP	0-100 Degree	> 82 C
27	0*SC11T101	TURBINE BRG 2 METAL TEMP	0-200 Degree	> 82 C
28	0*SC11T073	TURBINE BRG 2 OIL DRAIN TEMP	0-100 Degree	> 82 C
29	0*SC11T102	TURBINE BRG 3 METAL TEMP	0-200 Degree	> 82 C
30	0*SC11T074	TURBINE BRG 3 OIL DRAIN TEMP	0-100 Degree	> 82 C
31	0*SC11T10*	TURBINE BRG 4 METAL TEMP	0-200 Degree	> 82 C
32	0*SC11T075	TURBINE BRG 4 OIL DRAIN TEMP	0-100 Degree	> 82 C
33	0*SC11T104	TURBINE BRG 5 METAL TEMP	0-200 Degree	> 82 C
34	0*SC11T076	TURBINE BRG 5 OIL DRAIN TEMP	0-100 Degree	> 82 C
35	0*SC11T105	TURBINE BRG 6 METAL TEMP	0-200 Degree	> 82 C
36	0*SC11T077	TURBINE BRG 6 OIL DRAIN TEMP	0-100 Degree	> 82 C
37	0*SC11T106	TURBINE BRG 7 METAL TEMP	0-200 Degree	> 82 C
38	0*SC11T078	TURBINE BRG 7 OIL DRAIN TEMP	0-100 Degree	> 82 C
39	0*SC11T107	TURBINE BRG 8 METAL TEMP	0-200 Degree	> 82 C
40	0*SC11T079	TURBINE BRG 8 OIL DRAIN TEMP	0-100 Degree	> 82 C
41	0*SC11T108	TURBINE BRG 9 METAL TEMP	0-200 Degree	> 82 C
42	0*SC11T080	TURBINE BRG 9 OIL DRAIN TEMP	0-100 Degree	> 82 C
43	0*SC11T109	TURBINE BRG 10 METAL TEMP	0-200 Degree	> 82 C
44	0*SC11T081	TURBINE BRG 10 OIL DRAIN TEMP	0-100 Degree	> 82 C
45	0*SC11T110	TURBINE BRG 11 METAL TEMP	0-200 Degree	> 82 C
46	0*SC11T082	TURBINE BRG 11 OIL DRAIN TEMP	0-100 Degree	> 82 C
47	0*SC11T115	TURBINE BRG 12 METAL TEMP	0-200 Degree	> 82 C
48	0*SC11T083	TURBINE BRG 12 OIL DRAIN TEMP	0-100 Degree	> 82 C
49	0*ST11T041	GEN CASING GAS E.E ALARM TEMP	0-150 Degree	> 90 C
50	0*ST11T042	GEN CASING GAS T.E ALARM TEMP	0-150 Degree	> 90 C
51	0*ST11T043	GEN CASING GAS E.E ALARM TEMP	0-150 Degree	> 90 C
52	0*ST11T044	GEN CASING GAS T.E ALARM TEMP	0-150 Degree	> 90 C
53	0*RA11T001	BOILER OUTLET STM TEMP	0-600 Degree	diff
54	0*RA11T002	BOILER OUTLET STM TEMP	0-600 Degree	diff
55	0*RA11T00*	BOILER OUTLET STM TEMP	0-600 Degree	diff
56	0*RA12T001	BOILER OUTLET STM TEMP	0-600 Degree	diff
57	0*RA12T002	BOILER OUTLET STM TEMP	0-600 Degree	diff
58	0*RA12T00*	BOILER OUTLET STM TEMP	0-600 Degree	diff
59	0*RA13T001	BOILER OUTLET STM TEMP	0-600 Degree	diff
60	0*RA13T002	BOILER OUTLET STM TEMP	0-600 Degree	diff
61	0*RA13T00*	BOILER OUTLET STM TEMP	0-600 Degree	diff
62	0*RA14T001	BOILER OUTLET STM TEMP	0-600 Degree	diff
63	0*RA14T002	BOILER OUTLET STM TEMP	0-600 Degree	diff
64	0*RA14T00*	BOILER OUTLET STM TEMP	0-600 Degree	diff

**PRESSURE**

1	0*SA11P114	HP INLET PRESSURE	0-9 Mpa	diff
2	0*SA11P124	HP INLET PRESSURE	0-9 Mpa	diff
3	0*SA11P134	HP INLET PRESSURE	0-9 Mpa	diff
4	0*RC12P00*	HP OUTLET PRESSURE	0-6 Mpa	<200kPa
5	0*RC12P004	HP OUTLET PRESSURE	0-6 Mpa	<200kPa

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

6	0*RC12P005	HP OUTLET PRESSURE	0-6 Mpa	<200kPa
7	0*RA99P001	STEAM PRESS BEFORE S.V.	0-25 Mpa	<12,5Mpa
8	0*RA99P002	STEAM PRESS BEFORE S.V.	0-25 Mpa	<12,5Mpa
9	0*RA99P00*	STEAM PRESS BEFORE S.V.	0-25 Mpa	<12,5Mpa
10	0*SC11P901	HP LUB OIL PROT PRES	0-600 Kpa	<93kPa
11	0*SC11P902	HP LUB OIL PROT PRES	0-600 Kpa	<93kPa
12	0*SC11P90*	HP LUB OIL PROT PRES	0-600 Kpa	<93kPa
13	0*SJ0*P201	FRF HYDRAULIC PROT PRESS	0-20MPa	<5.36MPa
14	0*SJ0*P202	FRF HYDRAULIC PROT PRESS	0-20MPa	<5.36MPa
15	0*SJ0*P20*	FRF HYDRAULIC PROT PRESS	0-20MPa	<5.36MPa
16	0*SP11F006	GEN STATOR WATER FLOW	0-25 KPa	<15 l/s
17	0*SP11F106	GEN STATOR WATER FLOW	0-25 KPa	<15 l/s
18	0*SP11F206	GEN STATOR WATER FLOW	0-25 KPa	<15 l/s

**ABS PRESSURE**

1	0*SD01P022	COLD CONDENSOR VACUUM	0-100 Kpa ABS	>22 kPa ab
2	0*SD01P023	COLD CONDENSOR VACUUM	0-100 Kpa ABS	>22 kPa ab
3	0*SD01P024	COLD CONDENSOR VACUUM	0-100 Kpa ABS	>22 kPa ab
4	0*SD02P811	HOT CONDENSOR VACUUM	0-100 Kpa ABS	>22 kPa ab
5	0*SD02P812	HOT CONDENSOR VACUUM	0-100 Kpa ABS	>22 kPa ab
6	0*SD02P813	HOT CONDENSOR VACUUM	0-100 Kpa ABS	>22 kPa ab
7	0*SD81P502	BFPT vac	0-100 Kpa ABS	>34 kPa Abs
8	0*DS81P502	BFPT vac	0-100 Kpa ABS	>34 kPa Abs
9	0*SD81P511	BFPT vac	0-100 Kpa ABS	>34 kPa Abs

Perform in-house calibration of pressure switches and temperature switches using properly calibrated equipment.

**Field Devices:**

- Remove all field devices from the plant as outlined in the outage scope of work issued by C&I Engineering. Ensure the approved scope is provided by the outage department. The C&I outage contractor is not required to execute any scope on the turbine centre line. Field devices on the turbine centre line and generator will be removed and reinstalled by Tutuka PS C&I Maintenance department.

**Feed Pumps:**

- Remove and replace instrumentation for EFP A & B.
- Remove and replace BFPT instrumentation.
- Replace all protection thermocouples with new ones.

**Turbine Auxiliaries:**

- Disconnect, reconnect, and stroke the specified valves.
- Remove vacuum transmitters.
- Remove pneumatic valve positioners.
- Remove field devices on the Water Air Ejectors (WEA) and Steam Air Ejectors (SAE). Inspect, repair or replace if damaged.
- Stroke condensate system valves.
- Remove and reinstall Secondary Cooling Water pumps instrumentation.
- Remove and replace Condensate Extraction Pumps instrumentation.
- Perform calibration checks on the Generator H2 purity analyser.
- Conduct calibration checks on Stator water conductivity analysers.

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

- Blow through the DST level transmitter impulse line.
- Perform a function check on the DST pressure controller.
- Inspect HP and LP heater instrumentation, removing and repairing any damaged instruments.

**List of instruments scheduled for outage execution:**

AKZ Number	Component Description	Work specifications
<p><b><i>Eccentricity probe</i></b> 09-0*SB82Z504I</p> <p><b><i>Bearing vibrations probe</i></b> 09-0*SB82Z50*I 09-0*SB81Z502I 09-0*RL13Z522I 09-0*RL13Z523I</p> <p><b><i>Diff expansion probe</i></b> 09-0*SB82Z505I</p> <p><b><i>Thrust wear probe</i></b> 09-0*SB81Z506I</p> <p><b><i>Speed probes</i></b> 09-0*SO81Y001I 09-0*SB81Y501I</p>	<p><b>BOILER FEED PUMP TURBINE</b></p>	<p>The contractor must remove and store the thermocouples once the unit is shut down. After all other outage work on the boiler feed pump is completed, those in working condition should be reinstalled, while damaged thermocouples identified during inspection must be replaced. <b>15MNT C&amp;I-042</b></p>
<p><b><i>Pressure Transmitters</i></b> 09-0*RL13P504 09-0*RL13P505 09-0*RL13P506 09-0*SE71P518 09-0*SJ71P504 09-0*RL13P509 09-0*RL13P510 09-0*RL23P501 09-0*RL23P502 09-0*RW11P501 09-0*RW12P502 09-0*VG01P530 09-0*SD81P501 09-0*SD81P502</p>		<p>All BFPT protection transmitters and thermocouples must be calibrated by a SANAS-certified supplier. Any transmitters identified as damaged or faulty shall be replaced with new transmitters. BFPT protections and capabilities trip testing procedures must be followed accordingly.</p>

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*SD81P511</p> <p>09-0*SA81P521</p> <p>09-0*SA81P522</p> <p>09-0*SA81P523</p> <p>09-0*SA81P524</p> <p>09-0*SA81P518</p> <p>09-0*SA81P519</p> <p>09-0*SE71P506</p> <p>09-0*SE71P507</p> <p>09-0*RF41P517</p> <p>09-0*RF41P549</p> <p>09-0*RF41P049</p> <p>09-0*RF51P515</p> <p>09-0*RF51P549</p> <p>09-0*SC71P520</p> <p>09-0*SC71P513</p> <p>09-0*SC71P514</p> <p>09-0*SC71P515</p> <p>09-0*SC71P507</p> <p>09-0*SC71P526</p> <p>09-0*SC71P527</p> <p>09-0*SC71P528</p> <p>09-0*SC71P509</p> <p>09-0*SG71P519</p> <p>09-0*SE71P506</p> <p>09-0*SE71P507</p> <p>09-0*SE71P518</p> <p>09-0*SK71P970</p> <p><b>Flow Transmitters</b></p> <p>09-0*RW11F516</p> <p>09-0*RL23F513</p> <p>09-0*RL23F514</p> <p>09-0*RL23F515</p> <p>09-0*RL23F511</p> <p>09-0*RL23F001</p> <p>09-0*RL23F003</p> <p>09-0*RL23F003</p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>Thermocouples</b></p> <p>09-0*SD11T003</p> <p>09-0*SD81T510</p> <p>09-0*VG01T510</p> <p>09-0*RF41T532</p> <p>09-0*RF42T533</p> <p>09-0*RF51T531</p> <p>09-0*SC71T502</p> <p>09-0*SC71T504</p> <p>09-0*SC71T510</p> <p>09-0*SC71T511</p> <p>09-0*SC71T512</p> <p>09-0*SC71T521</p> <p>09-0*SC71T504</p> <p>09-0*RW14T515</p> <p>09-0*SH71T511</p> <p>09-0*SH71T513</p> <p>09-0*SH71T514</p> <p>09-0*SH71T515</p> <p>09-0*RF51T509</p> <p>09-0*RF51T510</p> <p>09-0*RL13T533</p> <p>09-0*RL13T534</p> <p>09-0*RL13T535</p> <p>09-0*RL13T536</p> <p>09-0*SM81T528</p> <p>09-0*SM81T529</p> <p>09-0*SM81T530</p> <p>09-0*SM81T531</p> <p>09-0*SA81T540</p> <p>09-0*RL13T524</p> <p>09-0*RL13T525</p> <p>09-0*RL13T526</p> <p>09-0*RL13T527</p> <p>09-0*RL13T560</p> <p>09-0*RL13T561</p> <p>09-0*RL23T545</p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>Positioners</b></p> <p>09-0*SE71S518</p> <p>09-0*RW11S007</p>		<p>Remove the positioner before work on the Woodward governor begins. Inspect the positioner plug for any damage.</p> <p>If the positioner mounting or positioner shaft is found to be damaged, replace it with a new positioner.</p> <p>The pneumatic positioner (TZID) must be removed and inspected for any signs of damage. During stroking, the positioner must undergo a functional check. If its functionality is in question, replace it with a new unit.</p>
<p><b>Level transmitters</b></p> <p>09-0*RW15L517</p> <p>09-0*RW15L519</p> <p>09-0*RW15L520</p>		<p>Transmitters must be inspected, and any damaged or malfunctioning display screens replaced accordingly. Calibration checks must be performed in accordance with the specified maintenance procedures</p>
<p><b><i>Bearing vibrations probes</i></b></p> <p>09-0*RL11Z623</p> <p>09-0*RL11Z624</p> <p>09-0*RL12Z823</p> <p>09-0*RL12Z824</p> <p><b><i>Pressure Transmitters</i></b></p> <p>09-0*SC77P612</p> <p>09-0*SC76P618</p> <p>09-0*SC76P615</p> <p>09-0*SC76P616</p> <p>09-0*SC76P622</p> <p>09-0*SC79P812</p> <p>09-0*SC78P818</p> <p>09-0*SC78P815</p> <p>09-0*SC78P816</p> <p>09-0*SC78P822</p> <p><b><i>Flow transmitters</i></b></p> <p>09-0*RL21F693</p> <p>09-0*RL21F001</p>	<p><b>ELECTRIC FEED PUMP A &amp; B</b></p>	<p>All EFPs protection transmitters and thermocouples must be calibrated by a SANAS-certified supplier. Any transmitters identified as damaged or faulty shall be replaced with new transmitters. BFPT protections and capabilities trip testing procedures must be followed accordingly.</p> <p>Transmitters must be inspected, and any damaged or malfunctioning display screens replaced accordingly. Calibration checks must be performed in accordance with the specified maintenance procedures</p>

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*RL22F893 09-0*RL22F001</p> <p><b>Level transmitters</b></p> <p>09-0*SC76L619 09-0*SC78L819</p> <p><b>Speed probes</b></p> <p>09-0*SM71Y665 09-0*SM72Y865</p>		
<p><b>Thermocouples</b></p> <p>09-0*SJ01T004 09-0*SJ21T010 09-0*SJ01T028 09-0*SJ01T009</p> <p><b>Pressure transmitters</b></p> <p>09-0*SJ21P025 09-0*SJ21P021 09-0*SJ21P023 09-0*SJ01P003 09-0*SJ01P022 09-0*SJ01P020 09-0*SJ01P024</p> <p><b>Level Transmitters</b></p> <p>09-0*SJ01L015 09-0*SJ01L016</p>	<p><b>FRF SYSTEM</b></p>	<p>Before mechanical work begins, all thermocouples must be removed for inspection. Any damaged thermocouples should be replaced. Compensating leads must also be checked, and any visible damage should be corrected by removing faulty leads and replacing them with new leads of the appropriate thermocouple type. Once replacements are completed, a loop check must be performed. Additionally, all thermocouple pockets should be removed and inspected, with any visibly damaged pockets being replaced.</p>

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>Pressure transmitters</b></p> <p>09-0*VG13P051                  09-0*VG14P052                  09-0*SD23P008                  09-0*SD24P010                  09-0*VG11P045                  09-0*VG12P046                  09-0*VG11P043                  09-0*VG12P044                  09-0*SD21P009                  09-0*SD22P007                  09-0*RQ52P002                  09-0*RQ52P005                  09-0*RQ80P003                  09-0*RM15P002                  09-0*RM14P001</p> <p><b>Level Transmitters</b></p> <p>09-0*VG21L062</p> <p><b>Thermocouples</b></p> <p>09-0*RQ80T002                  09-0*RM13T456                  09-0*RM13T457                  09-0*RM13T458                  09-0*RM13T459                  09-0*RM13T460                  09-0*RM12T450                  09-0*RM12T451                  09-0*RM12T452                  09-0*RM12T453                  09-0*RM12T454</p>	<p><b>Sec CW, WAE's &amp; CEP</b></p>	
<p><b>Thermocouples</b></p> <p>09-0*SD01T016                  09-0*SD01T020                  09-0*SD02T017                  09-0*SD02T021</p>	<p><b>CONDENSATE SYSTEM</b></p>	

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*SD81T510                  09-0*SD81T511                  09-0*SD11T001                  09-0*SD11T00*                  09-0*SD11T005                  09-0*SD12T002                  09-0*SD12T004                  09-0*SD12T006</p> <p><b>Transmitters</b></p> <p>09-0*SD02P811                  09-0*SD02P812                  09-0*SD02P813                  09-0*SD01P022                  09-0*SD01P023                  09-0*SD01P024                  09-0*RM16F001                  09-0*RM42F001</p> <p><b>Level Transmitter</b></p> <p>09-0*RM32L071                  09-0*RM32L072                  09-0*RM32L073</p> <p>09-0*RM16S143                  09-0*RM42S047                  09-0*RM51S218                  09-0*RM54S010</p>		
<p><b>Thermocouple</b></p> <p>09-0*RQ80T001                  09-0*RQ80T002                  09-0*RQ81T001                  09-0*RQ82T001</p> <p><b>Transmitters</b></p> <p>09-0*RQ52P002                  09-0*RQ52P005</p>	<p><b>AUXILLARY STEAM RANGE</b></p>	

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

09-0*RQ54P020 09-0*RQ80P001 09-0*RQ80P003		
<p><b>Thermocouples</b></p> 09-0*RF11T024 09-0*RF12T025 09-0*RF21T026 09-0*RF31T027 09-0*RF41T532 09-0*RF42T533 09-0*RF51T509 09-0*RF51T510 09-0*RF51T531 09-0*RM16T021 09-0*RM16T022 09-0*RM16T023 09-0*RM16T024 09-0*RM16T025 09-0*RM16T026 09-0*RM16T043 09-0*RM19T023 09-0*RM31T023  <p><b>Transmitters</b></p> 09-0*RF11P008 09-0*RF12P009 09-0*RF21P010 09-0*RF31P011 09-0*RF41P517 09-0*RH11P001 09-0*RH21P002 09-0*RH31P003 09-0*RH41P004 09-0*RH51P005 09-0*RH52P006 09-0*RH61P007 09-0*RH62P0*0	<p><b>FEEDWATER HEATING SYSTEMS</b></p>	

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>09-0*RN52P001 09-0*RN53P002</p> <p><b>Level Transmitter</b></p> <p>09-0*RN54L071 09-0*RN54L081 09-0*RN54L083 09-0*RP15L057 09-0*RP15L057 09-0*RP15L087 09-0*RP15L091 09-0*RP16L089 09-0*RP16L093 09-0*RP16L095 09-0*RP25L058 09-0*RP25L088 09-0*RP25L092 09-0*RP26L082 09-0*RP26L090 09-0*RP26L094</p> <p><b>Positioners</b></p> <p>09-0*RN51S021 09-0*RN52S028 09-0*RP11S003 09-0*RP12S093 09-0*RP13S007 09-0*RP14S013 09-0*RP21S004 09-0*RP22S094 09-0*RP23S008 09-0*RP24S018</p>		
<p><b>Transmitters</b></p> <p>09-0*SC31P028 09-0*SC31P027 09-0*SC11P911 09-0*SC11P903</p>	<p><b>Main Turbine Oil System</b></p>	

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

09-0*SC11P902 09-0*SC11P901 09-0*SC11P035 09-0*SC11P026 09-0*SC11P011 09-0*SC11P010 09-0*SC11P009 09-0*SC11P008 09-0*SC11P006 09-0*SC11P005 09-0*SC11P004 09-0*SC11P003  <b>Flow Transmitter</b> 09-0*SC11F130  <b>Level Transmitter</b> 09-0*SC11L153 09-0*SC71L531 09-0*SC76L619 09-0*SC78L819		
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**Functional Checks:**

- Perform loop checks on all reinstalled field devices to ensure functionality.
- Verify the proper operation of the DST pressure controller.
- Confirm the performance of the Secondary CW pump, including the Secondary CW sump level control.
- Ensure the operation of the condensate extraction pumps.
- Validate the functionality of the HP and LP bypass control system.

**Junction Boxes:**

- Clean and blow out all C&I junction boxes. Confirm terminal wiring accuracy against drawings, repair damaged seals, and ensure all junction boxes are securely closed.

**Valve and Actuator Setup:**

- Set up and stroke pneumatic valves and controllers, including Siemens SIPART, ABB TZID, Fisher FESTO, METSO, and any additional brands that may be installed at Tutuka in the future.
- Configure and stroke actuators such as Rotork (old and new models), Siemens, Hopkinson, Auma, Drehmo, and other actuator brands potentially installed at Tutuka.

**Defects and Discrepancies:**

- Address all AU defects reported by the C&I Senior Supervisors.

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

- Resolve discrepancies in the control system and verify JB and JL settings.
- Resolve all active simulations within the control system.
- Address and rectify discrepancies to ensure system functionality and accuracy.

**1.2.1.5 Outside Plant High level Scope of Work to be executed by the C&I Outage Contractor:  
(Outage Department to issue signed scope of work)**

**Outside Plant Scope:**

- Conduct function checks on CPP valves and correct any deviating or malfunctioning actuators.
- Clean CPP cubicles in the equipment room using Nano Technology cleaning.
- Verify calibration and protection settings of CW pump instruments.
- Inspect coal incline field devices, repairing any damage or replacing them with new ones as necessary.
- Perform protection checks on coal incline elevator conveyors.
- Conduct protection checks for Coal Plant conveyors, including reclaim, incline, shuttle, cross, and bunker-feed conveyors.
- Function check the LCS, clean the system, and verify the sealing of the panel.

**Coal incline and bunker feeders List of instruments scheduled for outage execution:**

<p><b>BELT SLIP SW</b> 01PC01Y001 01PC01Y002</p> <p><b>BELT ALIGNMENT SW</b> 01PC01K401 01PC01K402 0*PC02K401 0*PC02K402 0*PC03K401 0*PC03K402 0*PC21K401 0*PC21K401 0*PC22K401 0*PC22K402 0*PC23K401 0*PC23K402 0*PC24K401 0*PC24K402 0*PC12K401 0*PC12K402 0*PC13K401 0*PC13K402 0*PC14K401 0*PC14K402</p> <p><b>BLOCK CHUTE DETECTOR SW</b> 0*PK01L001 0*PK02L001 0*PK02L002 0*PK11L001 0*PK22L001 0*PK22L002 0*PK22L003 0*PK22L004 0*PK12L001</p>	<p><b>Unitised Coal Plant</b></p>	<p>Verify the instrument's operation and carry out any necessary cleaning, repairs, or replacements during the outage.</p> <p>Perform protection checks on all unit conveyors before returning the unit to service, following the procedure outlined in 15ENG GEN-3003: Conveyor Belt Protection Checks.</p>
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p>0*PK12L002                  0*PK12L003                  0*PK12L004</p> <p><b>SCOOP COUP TEMP TX</b>                  0*PC02T001                  0*PC02T002</p> <p><b>BELT SPEED SW</b>                  0*PC02Y001                  0*PC02Y002                  0*PC03Y001                  0*PC21Y001                  0*PC22Y001                  0*PC23Y001                  0*PC24Y001                  0*PC12Y001                  0*PC13Y001                  0*PC14Y001</p> <p><b>BELT RIP SW</b>                  0*PC02K301                  0*PC21K301</p> <p><b>BELT WEIGHER TX</b>                  0*PC02F001</p> <p><b>FLUID COUPLING TEMP SW</b>                  0*PC22T001                  0*PC12T001</p> <p><b>LEVEL MAX TILT SW</b>                  0*PH01L101                  0*PH02L101                  0*PH03L101                  0*PH04L101                  0*PH05L101                  0*PH06L101</p> <p><b>BUNKER LEVEL TX</b>                  0*PH01L201                  0*PH02L201                  0*PH03L201                  0*PH04L201                  0*PH05L201                  0*PH06L201</p> <p><b>EMERG. TRIP DEVICE</b>                  0*PC01K101                  0*PC01K102                  0*PC02K101                  0*PC02K102                  0*PC02K103                  0*PC02K104                  0*PC02K105                  0*PC02K106                  0*PC02K107</p>		
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PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

0*PC21K101 0*PC21K102 0*PC21K103 0*PC12K101 0*PC12K102 0*PC12K103 0*PC13K101 0*PC13K200 0*PC14K101 0*PC14K200 0*PC22K101 0*PC22K102 0*PC22K103 0*PC23K101 0*PC23K200 0*PC24K101 0*PC24K200		
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**CPP List of instruments scheduled for outage execution:**

<p><b>Pressure Gauges and Transmitters</b></p> 0*UC10P001 0*UC10P002 0*UC10P003 0*UC10P004 0*UC10P005 0*UC10P006 0*UC10P008 0*UC10P011 0*UC10P012 0*UC10P013 0*UC10P016 0*UC11P001 0*UC11P003 0*UC11P004 0*UC11P005 0*UC11P006 0*UC12P001 0*UC12P003 0*UC12P004 0*UC12P005 0*UC12P006 0*UC13P001 0*UC13P003 0*UC13P004 0*UC13P005 0*UC13P006	CONDESATE POLISHING PLANT	The Instruments to be removed from the plant at the beginning of the outage and before mechanical work commences.  Check calibration, check condition of a transmitter wiring.  Check calibration and test operation of switches.  Check calibration and test operation of pressure indicator or gauge.  Clean, repair or replace where necessary.
<p><b>Temperature Tx</b></p> 0*UC10T001 0*UC10T010 0*UC10T012 0*UC10T101		

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

<p><b>Valve Position Switch</b></p> <p>0*UC11S202-B01          0*UC11S202-B02          0*UC11S203-B01          0*UC11S203-B02          0*UC11S204-B01          0*UC11S204-B02          05UC11S211-B01          05UC11S211-B02          0*UC12S202-B01          0*UC12S202-B02          0*UC12S203-B01          0*UC12S203-B02          0*UC12S204-B01          0*UC12S204-B02          0*UC12S211-B01          0*UC12S211-B02          0*UC13S202-B01          0*UC13S202-B02          0*UC13S203-B01          0*UC13S203-B02          0*UC13S204-B01          0*UC13S204-B02          0*UC13S211-B01          0*UC13S211-B02</p> <p><b>Flow Tx</b></p> <p>0*UC11F001QP02          0*UC12F001QP02          0*UC13F001QP02</p> <p><b>Flow Switch</b></p> <p>0*UC11F002QP02          0*UC12F002QP02          0*UC13F002QP02</p>		
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**Clean up**

- The Contractor must ensure the site is cleaned and free of rubble upon completion of the work. Once cleaning is finalized, the Senior C&I Technician shall be called to inspect and confirm that the site is in a presentable condition. Additionally, the Employer’s Environmental Section will conduct ad-hoc inspections of the work site and perform a final inspection at the dumping site.

**Personal Protective Equipment (PPE)**

- PPE to be provided by the contractor as per Eskom Regulations

**1.3 Interpretation and terminology**

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

The following abbreviations are used in this Service Information:

<b>Abbreviation</b>	<b>Meaning given to the abbreviation</b>
AH	Air Heater
AP	Accounts Payable
AU	Awaiting Unit
BDV	Blow Down Vessel
BFPT	Boiler Feed Pump Turbine
BRG	Bearing
CCTV	Closed Circuit Television
C&I	Control & Instrumentation
CPA	Cost Price Adjustment
CPP	Condensate Polishing Plant
CW	Cooling Water
DCS	Direct Control System
DST	Deminwater Storage Tank
DWD	Dirty Water Dam
ECSA	Engineering Council of South Africa
EFP	Electric Feed Pump
HMI	Human Machine Interface
HP	High Pressure
ISO	International Standard Organization
JB	Junction Box
JL	Junction Location
LCS	Local Control System
LP	Low Pressure
NCR	Non-Conformance Report
P&ID	Piping and Instrumentation Diagram
PLC	Program Logic Control
PPE	Personal Protective Equipment
QCP	Quality Control Plan
QIP	Quality Inspection Plan

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QM	Quality Management
QMS	Quality Management System
RH	Reheater
RTS	Return to Service
SANS	South African National Standard

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

## 2 Management strategy and start up.

### 2.1 The Contractor's plan for the service

The *Contractor* must detail below a plan which stipulates how he intends on performing the *service* throughout the *service* period, as required by clause 21.1.

### 2.2 Management meetings

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

Name	Frequency	Attendance by relevant <i>Employer's</i> personnel:	Attendance by relevant <i>Contractor's</i> personnel:
Contract kick-off	Once off	<i>Service Manager</i> , Plant supervisor / manager and/or other necessary representatives.	Site supervisor and/or other necessary representatives.
Early Warning and Defect Notification	As and when notified by either party	<i>Service Manager</i> and Plant supervisor / manager and other relevant personnel.	<i>Contractor</i> and Site supervisor / manager and other relevant personnel.
Technical and/or non- conformance	As and when notified by either party	<i>Service Manager</i> , Plant supervisor and technical representative.	<i>Contractor</i> , Site supervisor and technical representative.
Safety Incidents	For each occurrence	Safety Representative, <i>Service Manager</i> and Plant supervisor and others involved.	Site supervisor, <i>Contractor</i> and Site supervisor and others involved.
Section Meeting	Daily	Departmental Supervisor, artisans, technicians, labourers, and others involved.	Site supervisor
Planning and Prioritization meeting	weekly	Contract Supervisor, planning Supervisor	Site Supervisor
Outage meeting	Daily during outages	Contract Supervisor, planning Supervisor and others involved	Site Supervisor
Departmental Safety meeting	Monthly	Departmental line Manager	All <i>Contractor</i> personnel
<i>Contractor</i> Safety meeting	Monthly	Departmental line Manager	Site supervisor
Assessments	Monthly	<i>Service Manager</i> and supervisor,	<i>Contractor</i> , Site supervisor

- Meetings of a specialist nature may be convened as specified elsewhere in this Service Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the service. Records of these meetings shall be submitted to the Service Manager by the person convening the meeting within five days of the meeting.
- All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions

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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.

### **2.3 Contractor's management, supervision and key people**

The contractor must provide Outage department with the specified expertise, ensuring relevant experience aligns with the technical evaluation strategy.

The below resources are required:

- (a) 1 x Senior Supervisor – Overseeing all activities on all plants
- (b) 3 x Senior Technicians- Boiler, Turbine Plants and Outside Plant (auxiliaries, coal incline and CCP)
- (c) 2 x Technicians – Auxiliaries, Boiler and Turbine Plants
- (d) 4 x Mechanics – Turbine Plant
- (e) 4 x Mechanics - Boiler Plant
- (f) 2 x Mechanics – Auxiliaries, Coal incline and CCP Plants
- (g) 1 x Safety Officer

### **2.4 Provision of bonds and guarantees.**

Not Applicable

### **2.5 Documentation control**

- The Contractor to ensure that all documentation relating to this contract is filed and kept on site for viewing by the Service Manager at any time. The Contractor must ensure that all documents are also kept in soft copy and backed up on a hard drive which must be handed to the Service Manager at the end of the contract. Files are to be neatly labelled and indexed.
- Any required service will be communicated to the Contractor via a Task Order.
- The Employer will periodically request detailed reports from the Contractor regarding the gaps, problems and highlights. Possible solutions will be required with this detailed report.
- Each instruction, certificate, submission, proposal, record, acceptance, notification, reply, and other communication required by this contract shall be communicated in a form that can be read, copied, and recorded.
- All written communication shall be in the language of this contract.
- All communications must be printed and filed in the Service Manager's file.
- All correspondence shall be dated and sequentially numbered and distributed in accordance with a procedure as agreed and accepted by the Service Manager.
- Monthly and weekly reports shall be discussed, compiled, and submitted to the Eskom Supervisor and Service Manager (to be appointed by the Employer).
- The project plan shall be shared after contract award.
- Inspection and test documents shall be shared with the Employer for the completion of hold and witness points prior to the arrival of the rotor at the Workshop.
- Any defects, issues, or NCRs shall be notified to the Service Manager at the earliest opportunity, but no later than 3 days after the problem becomes known.
- Any non-conformance (NCR) action that involves changes to the original design dimensions affecting the fit or function of the rotor shall be reported before the Contractor undertakes

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corrective action. The Employer reserves the right to approve or disapprove any change that may impact the rotor's fit.

- Monthly and weekly reports to be discussed, compiled and handed in to the Employer's Supervisor and Service Manager (to be announced by the Employer).

## 2.6 Invoicing and payment

Within one week of receiving a payment certificate from the *Service 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 *Service Manager's* payment certificate.

The *Contractor* shall include on each invoice the following information:

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

### Procedures for invoice submission and payment (i.e. electronic payment instructions)

- A service/goods assessment must be completed and signed by both parties, preferably not later than the 10th of each month.
- Thereafter, an invoice reflecting the Contract number, Purchase Order (PO) number, preferably together with the GR/SE (Goods receipt/service entry) number, should be emailed (as above) to Eskom shared services by the 15th of each month. The detailed invoice breakdown should reflect the base values (at original contract rates) and a separate column reflecting CPA portion (where CPA arises).
- A signed CPA verification report must be attached with the invoice (where CPA applies).
- It would also suffice to invoice the CPA portion separately i.e., separate into 2 invoices (base contract amount, and CPA portion amount). The CPA invoice must also include the same PO & GR/SE number.

## 2.7 Contract change management.

- a) Where the Contractor undertakes Name Changes, Mergers, Acquisitions, or Cessions, the Employer's procedures must be followed (Eskom Procurement and Supply Management).
- b) If one Contractor takes over from another, the Site Service Manager must be notified in writing immediately.
- c) The Contractor shall not cede, delegate, or assign any of its rights or obligations to any third party without the prior written consent of the Employer.
- d) Changes to the Service Information shall be managed in accordance with the contractual procedures.
- e) The Employer shall provide provisions necessary for the Contractor to perform its scope of work, as specified in the contract.
- f) Work shall be stopped only with the prior approval of the Employer or in accordance with contractual provisions.
- g) The Contractor shall perform work in a manner that does not interfere with the work of the Employer or other contractors unless authorized.
- h) All communications must be responded to promptly and in accordance with the contractual requirements.
- i) Any decision made by the Employer or its representatives can be changed or revised only through formal communication in accordance with the contract.

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## 2.8 Records of Defined Cost to be kept by the Contractor.

- All records as required to back up any defined costs must be kept on file by the *Contractor* and be made available when requested by the *Service Manager*.
- As per the NEC ECC3 contract both parties have an obligation to keep contract records for a period of 5 years. The *Service Manager* shall be given access to the records where needs arise and shall be provided in hard copy or electronically

## 2.9 Insurance provided by the Employer.

Refer to Contract Data section 8

## 2.10 Training workshops and technology transfer

- a) The *Contractor* shall provide training for personnel at dates as agreed upon by the *Contractor* and the *Service Manager*.
- b) All SHEQ training to be risk based and in accordance with the Employer's Procedures and National Regulations
- c) The Contractor shall ensure that the employees are adequately to execute the services required in this contract.
- d) All Contractor personnel to do Induction Training before entering site and commencing with work
- e) Minimum safety requirements for access is HIRA training

## 2.11 Design and supply of Equipment

- a) The Contractor to provide all tools and equipment necessary to perform the required service
- b) The *Contractor* takes full liability for the use of all equipment in the execution of *Services* for this contract.
- c) All equipment and tools need to be marked and a list off all tools with the identification number to be provided to the *Service Manager* when entering site.
- d) All lost equipment and tools to be declared to the *Service Manager* and full details of incident.
- e) The Contractor to supply its own rigging equipment up to 5 Tons

## 2.12 Things provided at the end of the service period for the Employer's use

### 2.12.1 Equipment

None

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### 2.12.2 Information and other things

- a) All Reports / Documents to be compiled, filed, discussed and handed over to the *Employer* on a weekly basis (the day in the week to be announced by *Employer*) and at the end of the service.
- b) On Completion of contract the *Contractors* safety file will be hand over to the *Service Manager* and will be saved for 40 Years after completion / termination of the contract.
- c) *Contractor* is Responsible to ensure that his Letter of Good standing is valid at all times as stipulated in the construction regulations point 7 (C) (iv) and she specifications 2.5.2 (iv) and 3.10 *Contractor* will not be allowed on site if his letter of good standing is not valid.
- d) As per clause 70.2 to provides other things as stated in the Service Information.
- e) The *Contractors* Health and safety file is to be submitted for approval to the *Employer's* Safety Officer before contract commencement and must be kept up to date at all times.
- f) All PMs to be signed and handed back to the Service Manager on a daily

### 2.13 Management of work done by Task Order

- a) Task Orders / Purchase Orders serve as the official instructions to commence work.
- b) No work shall begin until a Task Order / Purchase Order has been issued, finalized, accepted, and signed by both the Employer and the Contractor.
- c) All work shall be issued and managed through a Task Order system.
- d) The Work Order, Purchase Requisition, Task Order, and Purchase Order will be generated and processed via the SAP PM system.
- e) A completion certificate shall be issued once the tasks outlined in the Task Order are completed. This completion certificate must be submitted together with the associated assessment documentation.

## 3 Health and safety, the environment and quality assurance

### 3.1 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements contained in the SHE Specification 14RISK SRM-084.

- a) All The *Employers* health and safety procedures and regulations to be adhered to by the *Contractor*.
- b) A SHEQ file to be handed in at the SHEQ department for approval prior to work commencement and kept up to date for the duration of the contract.

#### SHEQ Policy

##### Eskom SHEQ Policy

The *Employer* has made a commitment to conduct business with respect and care for people, the environment and assets and that no operating condition or urgency of service justifies exposing anyone to negative risks arising from the *Employer's* business.

Compliance with the *Employer's* SHEQ Policy and applicable regulations is the responsibility of every employee and *Contractor*.

##### Contractor SHEQ Policy

All Contractors shall have an OHS policy signed by the CEO of the Contractor and prominently displayed where employees normally report for duty.

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Signed copy of the OHS policy shall form part of the SHEQ file.

**SHE PLAN REQUIREMENTS: -**

- a) Principal *Contractors* shall develop a suitable and sufficiently documented site specific SHE plans, based on the scope of work and client SHEQ specification.
- b) The SHE plans must be pre-approved by the client for implementation. The principal *Contractor* / *Contractor* has a responsibility to send the SHE plans to the client for approval prior to commencement of work.
- c) The SHE plans must be applied from the commencement of and for the duration the construction work, which must be updated / reviewed as the work progresses / changes.

When a principal *Contractor* intends appointing *Contractor*, the principal *Contractor* shall ensure that the *Contractor* provides and demonstrate a suitable, sufficiently documented and coherent site-specific health and safety plan, based on the client's SHEQ specifications and scope of work

### 3.1.1 Health and Safety Arrangements

The *Contractor* ensures that all his personnel attend a Health and Safety Induction Course prior to contract starting date, and annual re- induction. The Induction Course is presented by the *Employer's* Safety Risk Department at Tutuka Power Station. Arrangements are made with Safety Risk Management, by the *Contractor*.

The *Employer's* Safety Risk Manager visits and inspects the *Contractor's* workplace or site yard and the working areas to ensure that tools; machinery and Equipment comply with the minimum safety requirements.

The *Service Manager* may instruct the *Contractor* to stop work, where the *Contractor's* personnel fail to conform to safety standards or contravene health and safety regulations. Such stop-work order is not a compensation event. The *Service Manager* may instruct the *Contractor* to discipline his employees and to submit a disciplinary action report to the *Service Manager*. The *Contractor* implements additional health and safety precautions where necessary.

#### Health and safety

The *Contractor* complies with the Occupational Health and Safety Act 85 of 1993, as well as per the *Employer's* procedure as stipulated below:

- a) SHEQ Policy 32-727
- b) *Contractor* Health and Safety Requirements 32-136
- c) Integrated SHE Organization, Roles and Responsibilities and Statutory Appointments 32- 296
- d) Live-saving Rules 240-62196227
- e) Working at Heights 32-418
- f) The *Employer's* Vehicle Safety Specifications 32-345
- g) Scope Specific *Contractor* SHEQ Specifications

#### Site Regulations and Procedures

The latest revision Tutuka Power Station Site Regulations form part of this contract.

Copies of these procedures are available on request.

(Any additional site regulations implemented will be applicable)

Safety risk management

"Standard for health and safety at Tutuka Power Station - requirements to be met by *Contractors*".

#### Vehicle and driver safety

## PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

All drivers, passengers and pedestrians must obey vehicle safety requirements in terms of the National Road Traffic Act, Act No 93 of 1996, as amended, including other relevant provincial or local requirements.

**Speed Limit**

All vehicles must be driven with due consideration for personnel and property. All speed limits will be adhered to on the premises at all times.

**Transportation of passengers: open LDV's:**

No *Employer* employee or *Contractor* would be allowed to transport passengers on the back of open light delivery vehicles (LDV's). It is a legal requirement to provide safe transportation of the *Employer* and *Contractor* employees – therefore the following will be enforced:

**The *Employer's* Life Saving Rules:**

Five Life Saving Rules have been developed that will apply to all the *Employer's* employees, agents, Consultants and *Contractors*.

- a) Rule 1: Open, Isolate, Test, Earth, Bond, And / Or insulate before touch - that is any plant operating above 1 000 V.
- b) Rule 2: Hook up at heights - no person may work at height where there is a risk of falling.
- c) Rule 3: Buckle up – no person may drive any vehicle for the *Employer's* business and/or on the *Employer's* premises: unless the driver and all passengers are wearing seat belts.

The *Employer* takes a "ZERO TOLERANCE" attitude to drivers and passengers who do not wear safety belts when driving in a vehicle for the *Employer's* Business and / or on the *Employer's* premises. The violation of this very important safety rule as well as any safety rule while performing work for or on behalf of the *Employer* may result in the *Employer* terminating your obligation to perform work in terms of your contract with the *Employer*.

All occupants must wear their safety belts properly and must never put the shoulder belt under their arm or behind their backs. Drivers and all passengers must buckle-up at all times for the sake of themselves and their families.

- d) Rule 4: Be sober (no person is allowed to work under the influence of drugs and Alcohol.
- e) Rule 5: Use a permit to work – where an authorization limitation exists, no person shall work without the required permit to work.

The *Contractor* acknowledges that it is fully aware of the requirements of all the above and undertakes to employ only people who have been duly authorised in terms thereof and who have received sufficient safety training to ensure that they can comply therewith.

The *Contractor* undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.

The *Contractor* shall appoint a person who will liaise with the *Employers* Safety Officer responsible for the premises relevant to this contract.

Do safety audits at the *Contractor's* premises, its workplaces and on its employees.

Refuse any employee, sub-Contractor or agent of the *Contractor* access to its premises if such person has been found to commit any unlawful act or any unsafe working practice or is found to be not authorised or qualifies in terms of the OHSACT.

Issue the *Contractor* with a work stop order or a compliance order should *Employer* become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures by the *Contractor* or any of its employees, sub-Contractors or agents.

PROVISION OF CONTROL AND INSTRUMENTATION RESOURCES DURING OUTAGES AT TUTUKA POWER STATION FOR A PERIOD OF 60 MONTHS.

The *Contractors* Health and safety file is to be submitted for approval to the *Employers* Safety Officer before contract commencement.

All work stoppages called by the *Employer* to be adhered to

*Contractor* is Responsible to ensure that his Letter of Good standing is valid at all times as stipulated in the construction regulations point 7 (C) (iv) and she specifications 2.5.2 (iv) and 3.10 *Contractor* will not be allowed on site if his letter of good standing is not valid.

### **3.1.2 First aid and fire fighting**

Adequate first aid and firefighting equipment to be provided by the *Employer*, But the *Contractor* is responsible to provide its own fire extinguisher for their own cabins.

All *Contractor* personnel must have First aid and firefighting training.

### **3.1.3 Fire Precautions**

Any tampering with the *Employer's* fire equipment is strictly forbidden.

All exit doors, fire escape routes, walkways, stairways, stair landings and access to electrical distribution boards is kept free of obstruction and are not used for work or storage at any time.

Firefighting equipment must remain accessible at all times.

The *Contractor* takes the necessary action to safeguard the area to prevent injury and the spreading of the fire.

### **3.1.4 Security, fire protection and safety**

The *Contractor* shall be responsible for ensuring the security of the works, and of his plant, equipment and materials. To that end he shall make adequate provision for access control, lighting and watchman to the works where required.

### **3.1.5 Fire protection**

Ensure that the contractor trains and appoints a fire warden.

The provision of the *Employer's* standard NWS 1494 "Fire Prevention and Protection of *Contractor's* premises at New Works sites" shall be applicable.

### **3.1.6 Safety and incident prevention**

The Contractor shall implement and maintain an active Site Safety and Accident Prevention Programme in accordance with the Tutuka SHEQ Specifications. The overriding regulations will however be the Occupational Health and Safety Act.

Incident Management Procedure to be adhered to – 32-95

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### 3.1.7 Reporting of accidents

The Employer follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents. The Contractor is expected to fully co-operate to achieve this objective. The Service Manager must be informed immediately of any incidents. A written report to be submitted to the Employer within 24 Hours of incidents and any damage to property or equipment. Please note: All incidents must be investigated and closed within 10 days.

**NOTE:** This report does not relieve the Contractor of his legal obligations to report certain incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act, and Compensation for Occupational Injuries and Diseases Act.

### 3.1.8 Occupational Health and Safety Act 85 Of 1993 – SECTION 37

In accordance with Section 37 (2) of the Act, the Contractor is appointed by the Employer as mandatory to assume Health and Safety duties and responsibilities. The Contractor ensures compliance with all requirements of the Act and any instruction or notification that enhances those requirements.

The Contractor acknowledges that he is fully aware of all the requirements of the Occupational Health and Safety Act and undertakes to employ only staff who have been duly authorised in terms thereof and who receive sufficient safety training to ensure that they can comply therewith.

The Contractor undertakes not to do, and not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.

### 3.1.9 The Contractor appoints a person who liaises with the Employer's Safety Officer, responsible for the premises relevant to the Contract. The person appointed shall on request:

- a) Supply the *Employer's* Safety Officer with copies of minutes of all Health and Safety Committee meetings, whenever required.
- b) Supply the *Employer's* Safety Officer with copies of all appointments in respect of employees employed on this contract, in terms of the Act and Regulations and shall notify the *Employer's* Safety Officer of any changes thereto.

The *Employer* may, at any stage during the duration of this contract:

- a) perform safety audits at the *Contractor's* premises, its workplace and its employees.
- b) refuse any employee, *Subcontractor* or agent of the *Contractor* access to its premises if such person is found to commit any unsafe act or any unsafe working practice or is found not to be duly authorised nor qualified in terms of the Act.
- c) Issue the *Contractor* with an instruction to stop work should the *Employer* become aware of any unsafe working procedure or condition or any non - compliance with the Act, Regulations and Procedures referred to in the Occupational Health and Safety Act - 85 of 1993 and all Regulations made hereunder as well as all the *Employer's* Safety and Operating Procedures. Any such instruction is not a compensation event. Furthermore, no amendments to the act or the Regulations or reasonable amendment to the *Employer's* Safety and Operating Procedures will entitle the *Contractor* to claim any additional costs or time incurred in complying therewith, from the *Employer*.

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### 3.1.10 Safety Regulations of the Employer

The *Contractor* conforms to the *Employer's* Plant Safety Regulations

The *Employer* makes available to the *Contractor*, on request, a copy of the latest revision of the Plant Safety Regulations.

### 3.1.11 Barricading / Screens and Scaffolding:

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

The Employer will supply scaffolding if not stated differently in the Works Information. Arrangements of such must be made at least one- (1) week in advance by the Contractor. (Tampering of any approved scaffold is not allowed for any adjustments – The Service Manager should be notified of any adjustments.)

- a) The *Contractor* is responsible for supplying his or her own barricading or scaffolding, which must comply with the construction regulations.
- b) Only solid barricading may be used.
- c) The Contractor shall ensure that scaffolding when used, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act. SABS 085, SABS 1808 and SABS 1093.
- d) The Contractors shall ensure all scaffolding work operations are carried out under supervision of a competent person who has been appointed in writing and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.

## 3.2 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints stated in the following: -

All waste from the project must be disposed in a sound environmental manner in accordance with Tutuka Power Station Waste Management Procedure 14 Risk ENV-013. Oil spillages must be contained and cleaned as per Oil Spill Management procedure 15 ENPRENV-001. The project must conform to the *Employer's* Environmental Legal and other Requirement's procedure 14 Risk ENV-012 and the project must conform to Tutuka Power Station ISO14001 Standard with reference to Tutuka Power Station's Environmental Management System Manual 14 Risk ENV-010. All environmental incidents must be dealt with as per the Station's Incident Management, Corrective and Preventative Procedure 14 Risk PC-001 and all environmental incidents must be reported to the Environmental Department.

It is made known to the *Contractor's* that the Power Station is situated in an environmentally sensitive area.

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 when using any hazardous chemicals, as well as complying with the requirements of the National Environmental Management Act of 1998.

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### 3.3 Quality assurance requirements

The Contractor shall be required to demonstrate by means of a Quality Plan that this organisation is so structured that all the requirements of the specification will be properly monitored and controlled. The Quality Plan and Control procedures are to be carried out in accordance with QM 58. The Quality Control document is to be submitted for approval to Tutuka within three (3) days after order placement by the Contractor.

No work may commence unless the Quality Control document has been approved in writing and a copy submitted to the Service Manager. The Contractor, in conjunction with Tutuka Engineering must sign off all Quality Control documents after completing all work on site. The Contractor to submit a copy of the final signed off document to the Service Manager within 1 week after Completion of each activity or task

- a) QCP and contract quality plan standards as per QM 58 to be adhered to
- b) The *Contractor* must provide Quality Control Plan documents for approval by Eskom *Service Manager* performing any activity.

#### Information in the quality plan

- (a) The *Contractor* shall demonstrate, provide and maintain a Quality Management System (QMS) that is ISO 9001 compliant or provide Quality Policy and Method statement or Contract Quality Plan
- (b) The *Contractor* agrees to control and professionally preserve and store appropriate documents, records and recordings to guarantee the traceability of the services rendered and inspection thereof;
- (c) The delivered services shall be uniform in Quality and condition, consistent with good industry practices and adhere to requested Eskom requirements, without deviation.
- (d) The Employer shall have the right to conduct surveys and perform surveillance of the Contractor's facilities to
- (e) The Employer reserves the right to inspect any or all of the work. Verification by the Employer shall not absolve the Contractor of the responsibility to provide acceptable services, nor shall it preclude subsequent rejection by
- (f) The services must comply with the agreed specifications and the applicable directives set out in the agreement. Defects notified by The Employer shall be remedied by the Contractor upon demand by Eskom without undue delay and at no extra cost. The Contractor shall continuously monitor and identify non-conformances, relating to the scope of work, as signals of opportunities for improvement making process and other relevant changes to prevent recurrence.
- (g) The Contractor shall further identify potential problems before they occur by identifying deviations in patterns or trends in service or process performance.
- (h) Nothing contained in the Contract shall relieve in any way the Contractor from the obligation of Quality control thereof.
- (i) The Contractor guarantees that the quantity, Quality and outward appearance of the delivered services will comply with the requirements of the contract and/or relevant specifications.
- (j) The Contractor shall prove its ability, on request, to relate to the proposed scope of work which establishes the manner in which the Contractor intends to perform the Contract.
- (k) The Contractor shall, on request, prove its organisational, logistics and support resources to ensure the requirements of the contract can be achieved.
- (l) The Employer reserves the right to assess and measure, in the selection process, the qualifications, capability and competence of the key staff (assigned personnel) in relation to the scope of work and to interview any / all Contractor to confirm the Quality evaluation

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**4 Procurement**

**4.1 People**

**4.1.1 Minimum requirements of people employed.**

- a) All of the *Contractor's* staff must to be able to communicate in English.
- b) All of the *Contractor's* staff must have the necessary qualifications to execute the designated functions.
- c) All of the *Contractor's* staff who are not South African citizens, must have valid work permits.
- d) Supervisor must be qualified and have proof of qualifications.
- e) All relevant personnel names and titles must be specified to the *service manager*.
- f) All new staff to be appointed in writing.
- g) All new staff to do induction training.
- h) All new staff to be approved by *the Service Manager* before entering the site or commencing work.
- i) All new staff must hand in all qualifications and relevant documentation to the *Service Manager*
- j) When changing personnel, a new access to work form to be completed by the *Contractor*.
- k) Only required specified approved amount of personnel to be allowed on site, pre-arranged with *Service Manager*
- l) All *Contractors* personnel specified in this contract as per 4.3 to be on site at all times, otherwise replacement of same skill required.
- m) *Contractor* to provide a monthly scheduled leave plan for his employees to the *Service Manager*.
- n) *Contractor's* leave to be planned and discussed with *Service Manager* before such permission will be allowed by *Service Manager*
- o) If *Contractor* employee for any reason becomes unfit to perform His or Her normal duties a replacement of same skill is required.
- p) *Leave can be rejected by the Service Manager depending on Business needs.*
- q) *If any Contractor employee is dismissed or resigns must be replaced within 10 working days.*
- r) *Contract Staff are not allowed to work on any other contract or site.*
- s) *All replacements of staff will be in the same discipline (eg. an artisan to be replaced with an artisan with proof of qualifications)*
- t) *Do monthly inspections and report all defects to the supervisor.*
- u) *Contractor to comply with the minimum leave requirements as per Occupational Health and Safety Act*
- v) Experience / Knowledge must have qualification / certificate / reference of where and when this was gained

**4.1.2 BBBEE and preferencing scheme**

As per clause Z3 within contract data

**4.1.3 Procurement Requirements:**

The percentage (%) that is allocated to:

Price	<b>90%</b>
BBBEE Status	<b>10%</b>
Designated commodity (Yes / No)	<b>No</b>

**4.2 Subcontracting**

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#### 4.2.1 Preferred subcontractors

Not applicable

#### 4.2.2 Subcontract documentation, and assessment of subcontract tenders

When applicable, any Subcontractor documentation, and assessment of subcontract tenders to be administered and handled by the Principal *Contractor*.

#### 4.2.3 Limitations on subcontracting

The Contractor shall not subcontract any part of the work beyond the scope specified in the contract without prior written approval from the Service Manager. Subcontracting shall not relieve the Contractor of its primary responsibilities, and the Contractor shall remain fully accountable for the performance and quality of all subcontracted work. Subcontractors must comply with all contractual obligations, standards, and regulations applicable to the project.

#### 4.2.4 Attendance on subcontractors

When applicable, the Contractor shall ensure regular attendance and supervision of subcontractors to monitor progress, quality, and compliance with project requirements. The Contractor's site management team shall maintain effective communication, coordination, and oversight of subcontractor activities to ensure seamless integration with the overall project schedule and standards.

### 4.3 Plant and Materials

#### 4.3.1 Specifications

- a) Where applicable: - All plant spares and materials to be inspected (Quality Checked) before installing on plant.
- b) Risk Assessment to be completed and current.
- c) *Contractor* must be "trained and authorised" with the necessary PPE, equipment, tools, skilled to handle any equipment, spares, tools and materials related to the scope of work.
- d) The *Contractor* will be responsible for the safeguarding, care and security of all items whilst in the Contractors custody and control, until Completion of the whole of the works
- e) Hold and witness points must be attended and witness all intervention points as per approved QCP as per activity.
- f) The Contractor is responsible for the transportation of equipment and other material.
- g) The Contractor is not allowed to use any equipment, materials or spares for private usage or on other Eskom sites.
- h) Work and QC to be carried out according to all Eskom regulations and procedures
- i) Check sheets to be updated, signed and handed in to the Eskom Supervisor

#### 4.3.2 Correction of defects

- a) All work must be carried out strictly under a valid permit to work. Certain plant areas pose trip and safety risks and can only be accessed and worked on during scheduled outages or unit shutdowns, in accordance with the approved outage schedules and safety procedures. The Contractor shall ensure that all permits are obtained prior to commencing any work and that all safety protocols are strictly adhered to throughout the work process.

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- b) All defective or damaged spares and components must be replaced promptly, only with the explicit permission of the Service Manager or the Employer's Supervisor. The Contractor shall ensure that replacements meet the required specifications and standards, and all replacements shall be documented and approved before installation.
- c) All rework or rectification of deficiencies identified during inspections or work activities must be attended to within 24 hours or as soon as practically possible, depending on the urgency and safety considerations. The Contractor shall bear all costs associated with rework that is required due to their scope of work or negligence. Failure to address rework within the specified timeframe may result in penalties or direct intervention by the Employer.
- d) All inspections and related activities shall be conducted in accordance with the inspection checklists provided by the Employer (GGP 1045 pages 33-35; GGP 1046 pages 33-35). The Contractor shall ensure that all inspection requirements are fully complied with, documented, and signed off by the Employer's inspectors or authorized personnel before progressing to subsequent work stages or final acceptance.

#### **4.3.3 Contractor's procurement of Plant and Materials**

- a) Purchasing of spares, equipment or materials will go through the Eskom procurement process.
- b) The Contractor will supply its own consumables.

#### **4.3.4 Tests and inspections before delivery**

- (a) All spares removed and returned to Tutuka premises must be declared at the main entrance where the removal permit for the spares must be shown to the Protective Services personnel.

#### **4.3.5 Plant & Materials provided "free issue" by the Employer.**

- a) The *Employer* will issue all plant related spares and materials as and when required.

### **5 Working on the Affected Property**

The affected Property is Tutuka Power Station

#### **5.1 Employer's site entry and security control, permits, and site regulations.**

- a) The Contractor and all personnel shall undergo Eskom induction prior to entering the Affected Property.
- b) The Employer's Life-Saving Rules shall be adhered to at all times.
- c) Access to the plant is restricted and controlled in accordance with the Plant Safety Regulations.
- d) No employee may enter or perform work on the plant without a valid access permit issued by the responsible authority.
- e) All personnel required to work on the plant must be registered in the Worker's Register by the Responsible Person.
- f) All personnel must attend site induction training prior to commencing work and must obtain gate permits through the Service Manager.
- g) Unauthorised access to the site is strictly prohibited.
- h) Personnel are expected to remain within their designated work areas at all times.
- i) Recruitment activities on site or at the main access gates are not permitted.
- j) All activities shall comply with the Occupational Health and Safety Act (OHS Act) and all applicable site regulations.

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## Roads and Vehicles

- a) All vehicles used on site, by the Contractor will be compliant with the Employer's Standards.
- b) All road signs and traffic laws / regulations on site will be adhered to. Employees of the Contractor failing to comply will be removed from site and denied any further access.

## Security

- a) The Contractor's staff will be subject to all security measures, rules and regulations of the Employer's Security Services
- b) Vehicles and staff agree and accept the searching of all staff, bags, briefcases and vehicles.

## Access to and Departure from the Site

- a) Access to the site will be via the main security gate. The Employer informs the Contractor of the access procedures, and it should be expected that such procedures may change depending on the prevailing security situation.
- b) The Employer reserves the right for its Security personnel to search persons or vehicles entering or leaving the premises. This includes, but is not limited to staff, briefcases, bags and toolboxes.
- c) All persons entering the Employer's sites are subjected to alcohol testing.

## Temporary Gate Permits

- a) The Contractor provides the Employer with the personal details of their staff at least two weeks prior to the contract start date. All names and details to be submitted to the Employer who arranges for all gate permits.
- b) If an employee is no longer in the employ of the Contractor, the Contractor shall notify the Employer in advance, and replacements communicated to the Employer as well, whereby they will have to attend induction as well.
- c) The Contractor ensures that all equipment and materials brought through the security gate is signed in at the main security gate on the approved Eskom security form.
- d) Contractor on site must supply a SAPS clearance certificate to the Employer before contract start and every 12 months thereafter for all Contractor's employees to ensure continued access to site. This will also be handed in to security for Contractor to obtain access permits.
- e) Acceptance of this tender is subject to the condition that both the contracting company's management and its employees will provide Eskom with a clear criminal record not older than thirty (30) days from a reputable screening company. If the principal Contractor appoints a subcontractor, the same provisions and measures will apply to the subcontractor. Acceptance of the tender is also subject to the condition that the Contractor will implement all such security measures for the safe performance of the work as required in the scope of the contract.
- f) Contractors are to submit proof of verification record(s) (Security clearance) from SAPS or accredited supplier linked to SAPS AFIS system not older than thirty (30) days, as part of Risk Management process in order to curb any threats against the Installation. It is compulsory for these documents to be submitted to Security for verification before access to site is granted. Only individuals with clear criminal records will be considered.
- g) Contractors are required to submit the SAPS Clearance Certificate obtained by the employee along with a copy of his/her Identity Document or Passport to the site Security Manager. The Security Manager is required to verify the authenticity of the CRC Certificate with SAPS and to cross reference the employee seeking access against known HR databases and site databases to determine if the employee in question has in the past participated in disruptive labour actions and if the individual was dismissed from Eskom and the reason for such dismissal. Every employee applying for access must be evaluated as an individual and subsequent finding recorded. A risk analysis of the employee profile indicating whether the employee is a risk to the installation must be completed. Any risk rating allocated above a level III will be deemed unsuitable.

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- h) The process shall be repeated every 12 months for low-risk employees (Risk Rating 5, 4) and every 6 months for medium to high-risk employees.

## Removal

- a) The *Contractor* is not allowed to remove any equipment or materials from site without producing the relevant *the Employer* security forms, and the equipment lists.
- b) If the equipment or material is to be removed the same day, on which they were brought on to site, then the security form will need to be produced at the gate when leaving the site.
- c) The removal of any item at a later stage of the contract will require a security form with the necessary approval and responsible manager's signature.
- d) If the equipment or material is removed after this time then a Non-Returnable Gate Release will be provided by the *Employer's* Representative, on receipt of the original security form, with which the *Contractor* brought the equipment on site.

## 5.2 People restrictions, hours of work, conduct and records.

- a) The Contractor's Normal working hours shall align with Eskom standard working hours as follows:
  - Monday to Thursday : **07:00 – 16:15**
  - Friday : **07:00 – 12:00**
  - During outages : **07:00 – 19:00**
- b) Overtime may be required and must be approved by the Service Manager prior to commencement.
- c) All overtime worked shall comply with the Employer's overtime policy.
- d) Standby may be required on an as-and-when basis depending on plant status, including outages and breakdowns.
- e) Personnel on standby must attend to breakdowns as and when required.
- f) All standby call-outs shall be coordinated through the Shift Manager.
- g) Toolbox meetings must be conducted every morning for normal weekdays and for planned overtime work.
- h) For all planned overtime, the Contractor shall submit an overtime plan and obtain approval from the Service Manager before work commences.
- i) Additional working hours may be required based on critical path activities during outages or breakdowns.
- j) Overtime or shift work may be required on an as-and-when basis, subject to approval by the Service Manager.
- k) All timesheets must be completed, logged, and signed by the Service Manager at all times.
- l) The Contractor must be available for plant breakdowns after hours, on weekends, and on public holidays, and must be on site within one hour of receiving a call-out.
- m) All work shall be performed on an as-and-when required basis, as instructed by the Service Manager and in line with plant performance requirements.

## 5.3 Health and safety facilities on the Affected Property

The *Contractor* to provide own Emergency preparedness procedure and align to site emergency procedure. In cases of emergency or when these are inadequate, the Employer has the following facilities on site which may be made available to the Contractor, however, the Employer is entitled to recover the associated costs from the Contractor.

- a) A Proto Team is available and fully operational on each shift to respond promptly to any fire, rescue, or emergency in accordance with site emergency response procedures.

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- b) A Medical Station, staffed with qualified medical personnel, is available on site to provide immediate medical assistance in the event of injury, illness, or emergency.
- c) Each workshop and designated work area shall be equipped with a clearly marked and fully stocked First Aid Box, which shall be routinely inspected and replenished to meet health and safety requirements.
- d) All personnel shall undergo a comprehensive yearly safety induction and refresher training to ensure awareness of site safety rules, emergency procedures, and hazard control measures.
- e) In the event of an emergency, incident, or near-miss, the Contract Supervisor and Service Manager must be immediately notified to initiate the required response and reporting protocols.

#### **First aid centre**

The *Contractor* provides a first aid service to his employees and *Sub-Contractors*. In the case where these prove to be inadequate, like in the event of a serious injury, the *Employer's* medical centre and facilities are available.

Outside the *Employer's* office hours, the *Employer's* first aid services are only available for serious injuries and life-threatening situations.

The *Employer* is entitled, however, to recover the costs from the *Contractor* for the use of the above *Employer's* facilities

The Employer shall have the right to recover from the Contractor any costs incurred for the use of the above-mentioned Employer's facilities.

## **5.4 Environmental controls, fauna & flora**

### **Environmental management**

- a) Proper care of the natural environment is important to prevent nuisance and environmental degradation.
- b) All *Contractors* shall comply with the *Employer's* environmental management procedures and Environmental legislation.
- c) Environmental incidents shall be reported to the *Employer's* Environmental Department as per incident management requirements.
- d) The following Environmental procedures must be adhered to:
  - 1) 14RISK ENV-0557 Oil spill clean-up and Rehabilitation
  - 2) 14RISK ENV-013 Waste Management

### **Waste Management**

- a) Waste segregation is important to facilitate recycling of waste. Ensure waste is disposed of in the correct colour bin.
- b) The *Employer's* periodically collects waste from the bins for disposal in the correct manner.
- c) No waste should be burned or buried on site.
- d) Where the *Employer* and the *Contractor* have agreed that the *Contractor* is responsible for the disposal of its waste, the *Contractor* shall safely dispose of such waste and keep disposal certificates on file.

### **Types and colours of bins used on site:**

- a) Yellow bin for domestic waste
- b) Orange bin for hazardous waste
- c) Maroon bin for scrap

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- d) Green box for cartridges
- e) Blue box for recyclable paper

### **Radiation protection**

The *Contractor* conforms to the *Employer's* procedure OMOP 2049 and OMOP 2051 when performing any industrial radiography.

### **Hazardous Substances**

It is required in terms of the General Administrative Regulation (Regulation 7) of the Act that any manufacturer, importer, seller or supplier of hazardous chemical substances shall supply the receiver, free of charge with sufficient information for the user, to enable the user to introduce the necessary measures as regards the protection of the health and safety of persons. It is therefore the responsibility of the supplier (dealing directly with the Employer) to supply the information. If information is not available for whatever reason, the supplier must indicate and give reasons to the Employer.

### **Environmental management**

The Contractor is required to ensure that all goods, services or works supplied in terms of the contract conform to all applicable environmental legislation. Where work is done on the Site, the goods, services or works supplied will also conform to the Employer's environmental specifications.

### **Handling of waste produced by the Contractor.**

All waste introduced to and/or produced on the Employer's premises, by the Contractor, for this contract, must be handled in accordance with the minimum requirements for the Handling and Disposal of Hazardous Waste in terms of Government Legislation as proclaimed by the Department of Water Affairs and Forestry Act 1994 Ref.:BN0621-16296-5.

The Contractor is responsible to appoint a waste coordinator to ensure that all waste produced is handled according to the applicable legislation.

The Contractor is required to ensure that all goods, services or work supplied in terms of the contract conform to all applicable environmental legislation. Where work is done on the Employer's site, the goods, services or work supplied also conforms to the Employer's environmental specifications.

### **Waste from the cleaning and maintenance of equipment**

The Contractor is responsible to contain all waste due to cleaning and maintenance of equipment and disposes of as described below.

### **Stockpiling of waste**

Waste is removed promptly to the designated deposit areas. No stockpiling is permitted.

### **Hazardous waste**

Waste declared as hazardous substances in terms of the Hazardous Substances Act no 15 of 1973 is the responsibility of the Contractor to ensure safe removal from the property to a registered Class 1 site.

### **Pest Control**

- a) Only approved herbicides with a low environmental risk shall be used for pest control.
- b) Only registered pest controllers may apply herbicides on a commercial basis.
- c) Application of herbicides shall be in accordance with the Fertilisers, Farm Feeds, and Agricultural Remedies and Stock Remedies Act 36 of 194.

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### **Water Conservation**

- a) Incidents related to water pollution must be reported to the *Employer's* environmental department within 24 hours.
- b) Report / fix leaking taps and pipes to save water.
- c) Use water sparingly.
- d) Chemical substances shall not be disposed of in wastewater or storm water drains.

### **Air Pollution**

- a) Dust suppression measures must be in place to reduce airborne dust.
- b) Noxious and offensive odours arising from work activities shall be adequately controlled.
- c) Ground Pollution
- d) Measures to prevent or control ground contamination shall be put in place e.g., drip trays, bund walls.

### **Ground Pollution**

- a) Measures to prevent or control ground contamination shall be put in place e.g., drip trays, bund walls.
- b) Spill containment, clean-up and ground rehabilitation shall be done as per Tutuka procedures.

## **5.5 Cooperating with and obtaining acceptance of Others.**

### **Interface with Others**

It is likely that other contractors will be working in the same area. Others might however from time to time require limited access to the same area in order to execute maintenance activities and the contractor is to be accommodating in such instances.

The *Contractor* will cooperate with the *Service Manager*, his delegates and support structures, in matters relating to this contract.

The *Contractor* will cooperate with the management staff of the Affected Property.

The Contractor will cooperate with all statutory authorities or inspection agencies.

### **Planning**

Programmes are submitted in hard and electronic copy. The software package is MS Projects, Open Plan or equivalent, accepted by the *Service Manager*.

### **Progress report**

A Report will be submitted to the *Service Manager* as and when requested.

### **Completion**

*Contractor* to submit a completion certificate after each task is complete.

Final completion certificate of contract must submitted at the end of Contract period.

### **Requirements for Completion.**

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Completion is when the *Contractor* has done all the work, which the Works Information states he is to do by the Completion Date and has corrected notified Defects, which would have prevented the *Employer* from using the works.

The Site is handed back to the *Employer* in a condition acceptable to the *Service Manager*.

### **Feedback report**

As and when required by the Service Manager, the Contractor will submit written reports in softcopy for the following:

- a) Execution plan of daily work includes breakdowns, services, and outage work. Resource Utilisation to be indicated as per task item list.
- b) All feedback on overtime work (call out time, duration, reason for call out, work executed and completion time) completed between previous normal shift and current normal Shift must be submitted to *Service Manager* before they leave site.
- c) Hourly work done by each person as per task item list submitted.
- d) Standby crew requirements
- e) Defective plant list with *Employer's* notification number

## **5.6 Records of Contractor's Equipment**

- a) Prior to starting work on the Affected Site, the Contractor will compile a list his equipment, either owned or hired, which will be used for the execution of this contract. It should include the make, type, year of manufacture, colour and function or use. This list will be signed off by the Contractor and the Service Manager.
- b) All equipment and tools shall be clearly marked, and a comprehensive list, including identification numbers, shall be submitted to the Service Manager upon entering the site.
- c) Any lost equipment or tools shall be immediately reported to the Service Manager, accompanied by full details of the incident.
- d) All Contractor equipment (e.g., cellular phones with cameras, computers, cameras, etc.) shall be declared and signed in at site security prior to entry.
- e) All test equipment shall be calibrated and tested at regular intervals, with valid calibration certificates submitted to the Service Manager for record purposes.

### **All Equipment and Appliances**

All equipment and appliances used by the Contractor shall comply with applicable South African Safety Standards and shall be maintained in a safe and proper working condition at all times. The Service Manager reserves the right to prohibit the use of any equipment or appliance that, in the Service Manager's opinion, does not comply with the above requirements. The Contractor shall ensure that only suitably qualified and certified personnel, as required by relevant legislation, operate such equipment or appliances.

## **5.7 Equipment provided by the Employer.**

All of the *Employer's* equipment will be returned to the *Employer* by the *Contractor* upon completion of the task.

The *Employer* may allow the *Contractor*, for the execution of the works, the reasonable use of its equipment, provided that the *Employer's* own work and business are not interfered with in any manner by such use. The *Contractor* shall leave all equipment in as good a condition as he found them, fair wear and tear accepted, and the Contractor shall be liable for any damages to the Employer's equipment due to any acts of negligence by the *Contractor*, his employees or sub-contractor while using such workshop, cranes, tools and equipment.

- Mobile, Overhead cranes, forklifts, air winches and other winches to be provided and operated by the *Employer*

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- All rigging equipment over five tons to be provided by the *Employer* and to be used under Eskom supervision.

## **5.8 Site services and facilities**

### **5.8.1 Provided by the Employer**

- The *Employer* supplies 220 & 380 V AC power supply at existing points for the purpose of the works only
- The *Employer* supplies portable water for the purpose of the works, at existing points and in reasonable quantities. Uninterrupted supply is not guaranteed and is not grounds for compensation events.
- *Employer* will provide facilities (such as toilets).
- Scaffolding where needed and must be planned 2 days upfront for non-emergent work
- Working space / area
- Gas test and environmental certificate
- All *Employers* required training will be provided by the *Employer*.

### **5.8.2 Provided by the Contractor**

- For Outage – The Contractor must supply own certified rigging equipment's up to 5Tons (Chain blocks, Pull lifts, Nylon slings and wire slings and other rigging equipment as required to perform the scope of work)
- All certificates of Rigging equipment should be included on the safety file
- Contractor to provide and ensure safe transportation services for all his Contractors employees and it must comply with 32-93 and 33-345 procedures.
- Access permits [Refer to procedure: Access Control at Eskom premises (32-1134)]
- Contractor to provide own (coffee, sugar, milk, tea, etc.)
- All computers and printers accessories needed to be provided by the Contractor.
- All PPE to be provided by Contractor and must be SABS approved and of Eskom standards.
- Gloves and dusk masks will supplied by the Contractor.
- Provide SABS approved Safety harnesses as per Eskom Safety requirements and must be inspected daily and logged.
- Contractor will provide a Method Statement to explain how the SOW will be executed, and this must form part of the Tender returnable.
- The Contractor makes his own arrangements for accommodation and meals.
- The Contractor provides his own cell phone and the cost thereof.
- The Contractor will be responsible for all non-Eskom telephone calls, faxes and internet usages.
- Contractor to provide 2 x (380VAC 63 Amp) 50m extensions. Extensions must be COC certified.
- All lifting gear / equipment (such as slings, eyebolts, shackles, snatch block, ratchet level hoists, lifting blocks, chain blocks, turfers, and pull lifts and other equipment's required to perform the scope of work) up to five tons to be provided by the Contractor.
- Contractor to provide barricading for no-entry in works areas.
- The Contractor shall keep the equipment continuously insured against any loss, damage, or breakage and he shall indemnify the Employer against any claims in this regard. Upon completion of the whole of the Works the ownership of the equipment shall revert to the Contractor.
- The Contractor shall maintain the equipment in good working order (calibrated) and keep it clean throughout the contract period.

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### 5.8.3 Parking Facilities

No sheltered parking will be supplied.

### 5.8.4 Protective Clothing

The *Contractor* shall provide, keep on site and maintain protective clothing conforming to the *Employer's* safety standards. PPE for all weather and plant conditions must be provided when required.

### 5.8.5 Recruitment of General Labour

The *Contractor* recruits 100% of all new recruits, of general labour/Semi-Skilled from Standerton local municipality, using the recruitment form provided by the Department of Labour. Contact details and application forms will be provided by the *Service Manager* on request.

In an event that new general labour/Semi-Skilled recruits are not from the defined Standerton municipality, the *Contractor* needs to provide proof that the local municipality could not provide proof of such individual.

The *Contractor* needs to update the *Employer* as well as the Department of Labour, in the event that there is a staff compliment, e.g., Dismissal, resignation, etc.

The *Contractor* submits an updated monthly statistic on the 1st day of each month, using the reporting template that is provided by the *Services Manager*.

Local labour is not to be hired at the Tutuka Power Station Access gates.

### Housekeeping

The *Contractor's* Equipment does not impair the operation of the plant or access to the plant.

No unauthorized vehicles will be allowed on Site. Contract vehicle application should be directed to the *Service Manager*.

The *Contractor* will be limited to the working areas associated with the works. The *Contractor* is forbidden to enter any other areas and must ensure that his employees abide by these regulations.

## 5.9 Control of noise, dust, water and waste

Comply to the Occupational Health and Safety Act, Act 85 of 1993 and the applicable Regulations relating to noise and dust. The Water Act, Act 54 of 1956 for water and the Waste Act, Act 107 of 1998

Having due regard for local communities and dwellings, the *Contractor* shall restrict any of his operations which result in undue noise disturbance to those communities and dwellings.

The *Contractor* shall take appropriate measures to minimise the generation of dust as a result of his works, operations and activities to the satisfaction of the *Service Manager*.

The management of waste on site shall be strictly controlled and monitored. Only accepted waste disposal methods shall be allowed.

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Littering shall be avoided.

(a) Domestic waste

All domestic waste shall be disposed of in an accepted domestic waste disposal site.

(b) Organic waste

All organic waste shall be disposed of in an accepted organic waste disposal site.

(c) Hazardous waste

All hazardous waste shall be disposed of in an accepted hazardous waste disposal site and a disposal certificate supplied to the *Service Manager*.

## 5.10 Constraints on how the Contractor provides the service

### 5.10.1 Constraints on how the Contractor provides the service

Hook-ups to existing works shall be planned, coordinated, and executed under the following constraints:

a) **Operational Constraints:**

- All hook-ups shall be carried out only during approved outages or under isolated and safe conditions as authorized by the Employer.
- Work shall not interfere with the normal operation of adjacent plant, systems, or equipment.
- Any required shutdowns, isolations, or switching shall be arranged and approved through the Employer's Plant Operator and Service Manager.

b) **Safety Constraints:**

- Hook-ups shall be performed under valid Work Permits and Isolation Certificates, in accordance with Eskom's safety procedures (e.g., Lockout/Tagout, Permit-to-Work).
- All pressure, electrical, and process systems shall be safely isolated, depressurized, and tested prior to connection.
- Only authorized and competent personnel shall perform hook-up work.

c) **Technical Constraints:**

- The Contractor shall verify all connection points, alignments, dimensions, and compatibility with existing systems before commencing hook-up.
- Modifications to existing systems may only be made with prior written approval from the Service Manager.
- All materials, fittings, and consumables used shall match the specification and quality of the existing installation.

d) **Environmental Constraints:**

- The Contractor shall ensure that no spillage, leakage, or contamination occurs during the connection process.
- Waste generated during cutting, welding, or flushing shall be contained and disposed of in accordance with environmental procedures.

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**e) Coordination Constraints:**

- All hook-up activities shall be coordinated with other Contractors and Eskom personnel working in the same area to prevent conflicts or safety risks.
- The Contractor shall submit a detailed Method Statement and Risk Assessment for each hook-up operation for approval by the Service Manager prior to commencement.

**f) General**

- The Employer reserves the right to have any of the Contractor's personnel removed off site without cancelling the contract if, in the Employer's opinion, it is warranted.
- The Employer reserves the right to request disciplinary / corrective action if, and when, required.
- The Employer reserves the right to have any of the Contractor's personnel removed off site without any compensation in the event of Contractor's personnel being in Contravention with the OHS Act or any other Employer's Rules, Regulations and Procedures
- The Employer reserves the right to terminate the contract, once 12 Non-Conformances Report / Performance Improvement Report (PIR / NCR) are raised against the Contractor for any SOW and Quality Non-Conformance, Re-work and Poor Workmanship or delays due to unavailability of the components during the period of 5 years.
- The Contractor must submit Curriculum Vitae of its entire staff prior to work commencing on site.
- The Contractor must submit valid, certified copies of qualifications and or certificates of its entire staff prior to work commencing on site.
- The Contractor will be responsible for the full payment of the legislative training costs for every employee at the Contractor's cost, in the event that the employee have to redo the training due to failing at the first attempt as well as the subsequent attempts that follows until the employee is authorised.
- Early warning to be raised by Contractor for any deviations on timelines or schedule to be sent to Service Manager for approval
- All known services will be brought to the attention of the Contractor by the Service Manager. Should the Contractor encounter any other services in the work area, he will immediately bring it to the attention of the Service Manager who will issue instructions as to what actions are to be taken.
- The contract will strictly be in accordance with the NEC TSC3. Early warnings, compensation events etc. are to be notified to the delegated personnel such as Service Manager.
- The Contractor complies with all site regulations issued by the Employer.
- Care must be taken to prevent damage to any surroundings such as plant, roads or equipment in and around existing buildings.
- The Contractor and his employees will be required to conduct themselves at all times in proper and orderly manner while on the Employer's premises.
- The Contractor and his employees may only smoke in the allowed / dedicated areas.
- The Employer will take immediate steps to institute criminal investigations in the event of any suspected criminal acts e.g. theft etc.
- Repeated serious criminal acts by Contractor's staff will be grounds for the cancellation of this contract.
- The Contractor will be required to clean and remove any debris and rubble arising from any work done under any agreement originated from this contract to ensure that the Employer's premises are left in a clean condition.
- All known services will be brought to the attention of the Contractor by the Service Manager. Should the Contractor encounter any other services in the work area, he will immediately bring it to the attention of the Service Manager who will issue instructions as to what actions are to be taken.
- The Employer's carries no responsibility for unforeseen delays unless such a delay is reported immediately to the Service Manager of the occurrence and written agreement is submitted by the Employer.

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- The Contractor is not allowed to start any work on site before the Employer's representative has issued the relevant working permits and safe to work on.
- All material, equipment and tools necessary to carry out the specific scope shall be supplied by the Contractor.

**5.10.2 Qualifications (Note – the below mentioned will change from time to time based on the skills required per contract)**

**Minimum qualifications requirements and experience of people employed by the Contractor are as follows:**

- (a) Senior Supervisor – Overseeing all activities on all plants  
Minimum Requirements: A National (Nated) Diploma or National Diploma in Electrical Engineering (Light Current), along with a minimum of seven years' experience in a power station plant or a similar industrial environment, is required
- (b) Senior Technician  
Minimum Requirements: A National (Nated) Diploma or National Diploma in Electrical Engineering (Light Current), along with a minimum of seven years' experience in a power station plant or a similar industrial environment, is required
- (c) Technicians – Auxiliaries, Boiler and Turbine Plants  
Minimum Requirements: A National (Nated) Diploma or National Diploma in Electrical engineering light current with a minimum of two years' experience in a power station or a similar industrial environment is required
- (d) Mechanics – Turbine Plant  
Minimum Requirements: An Instrumentation trade test with at least one year of experience in a power station or a similar industrial environment is required.
- (e) Mechanics - Boiler Plant  
Minimum Requirements: An Instrumentation trade test with at least one year of experience in a power station or a similar industrial environment is required.
- (f) Mechanics – Auxiliaries, Coal incline and CCP Plants  
Minimum Requirements: An Instrumentation trade test with at least one year of experience in a power station or a similar industrial environment is required.
- (g) Safety Officer - Overseeing safety matters for all the activities on the plant.  
Minimum Requirements : National Diploma in Safety Management with 2 years' experience in a power station or a similar industrial environment is required.

## 5.11 Tests and inspections

### 5.11.1 Description of tests and inspections

- Quality Control check sheets to be done between *Contractor* and *Employer*

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### **5.11.2 Materials facilities and samples for tests and inspections**

- Not Applicable

## **6 List of drawings**

### **6.1 Drawings issued by the Employer.**

- All relevant drawings can be obtained from the *Service Manager* or Eskom Supervisor.

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**7 Appendix A: X17 Low Service Damages**

ITEM	DESCRIPTION OF TASK	Measurement	DAMAGES TO BE IMPLEMENTED
Late arrival to work /reporting late for duty /	When arriving after start time	Per Individual per Incident	1% of Task Order Value cost per relevant Individual rates
Work not completed	Daily work incomplete as per instruction / plan, without reporting delays or concerns on this regard	Per incident per month	1% of monthly fixed price (For every incident per month)
SHEQ violation	Violation from the same individual	Violation from the same individual	First offence Disciplinary action; Second offence within same Outage to be suspension, third offence should be dismissal (and replacement of skill by Contractor).
Certificates	Company Validation Certificates Not Renewed In Time	Company	Put off site till all certification is valid and handed in to the employer and no payment for the days absent
Contractor Staff	Full staff complimentary not on site	Company	3% of monthly assessment value
Statutory work order	Statutory work order violation	Company	0.5% of Assessment value will be deducted
Scheduled Compliance	Scheduled compliance below 98%	Company	0.5% of Assessment value will be deducted

Description of the risk		Action to avoid or reduce the risk
Risk event	Cause & possible outcome	Action to be taken and who in terms of the contract is responsible for taking it
Adverse weather conditions	causing delays to work completion	monitor weather forecasts; reschedule work if necessary
Incomplete work	Delays on clearing permits or commissioning	Follow the schedule and execution plan
Statutory Violations	Violation affecting Station KPI's	Follow work week management (T's)
Schedule programme not followed	Delays on Outage Completion	Contractor to submit a programme for return to services, commissioning
Delays on Return to Service and Commissioning due to critical path	Outage Slip	Contractor to expedite and plan according to the execution plan.
Injury to personnel during Outages	Standing time and delays to work completion	Safety training: follow safe working procedures, enforce Correct use of PPE
Re-work	Poor quality of workmanship	Employer to hold and witness points

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**8 Annexure C: Key Performance Indicators:**

item	KPA	Objective	Weight	Poor	Good	Excellent
				2	3	5
1	<b>Task order Programme submission</b>	To ensure programme is submitted on time	15%	<b>Late submission</b>	<b>Submitted on time</b>	<b>Early submission</b>
2	<b>Outage Programme plan</b>	To ensure schedules are followed as per programme submitted	30%	<b>Behind schedule</b>	<b>Daily updates</b>	<b>Early submission of updates</b>
3	<b>QCP's submission</b>	Hold and witness Intervention points	10	<b>No QCP</b>	<b>QCP signed and submitted</b>	<b>QCP approved</b>
4	<b>SHEQ compliance</b>	To ensure <i>Contractor</i> complies to all SHEQ related matters	5%	<b>Non-Compliance</b>	<b>Compliant</b>	<b>Exceeding Expectations</b>
5	<b>Housekeeping</b>	To ensure <i>Contractor</i> area is clean and housekeeping is always maintained	5%	<b>Non-Compliance</b>	<b>Compliant</b>	<b>Exceeding Expectations</b>
6	<b>Risk Identification</b>	Early warnings	10 %	<b>No early warning reported</b>	<b>On time submission of early warning</b>	<b>Early submission with risk reduction meeting</b>
7	<b>Technical and SOW Compliance</b>	To ensure execution of SOW compliance	25%	<b>3 NCR issued per outage</b>	<b>2 NCR issued per Outage</b>	<b>0 NCR per Outage</b>