



NEC3 Term Service Contract (TSC3)

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

and

for **Maintenance of Camden Power Station Cooling
Towers for a period of 4 years**

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CONTRACT No.

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[to be inserted from Returnable Documents at award stage]

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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:

Maintenance of Camden Power Station cooling towers for a period of 4 years

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 authorized, 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
	Value Added Tax @ 15% is	R
	The offered total of the amount due inclusive of VAT is ¹	R
	Amount 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 organization)

Name &
signature of
witness

Date _____

Tenderer's CIDB registration number:

--

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

Acceptance

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

The terms of the contract are included 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)

Mr. Justice Bore

Capacity

Camden Power Station Manager

for the
Employer

**ESKOM HOLDINGS SOC LTD., Camden Power Station, Private Bag X1002, NUCAM,
2355**

(Insert name and address of organization)

Name &
signature of
witness

Date

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

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

Note:

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

No.	Subject	Details

By the duly authorized 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:

Signature _____
Name _____
Capacity _____
On behalf of _____
Name & signature of witness _____
Date _____

For the Employer:

Mr. Justice Bore
Camden Power Station Manager

C1.2(a) TSC3 Contract Data

Data provided by the *Employer*

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

1. Please read the relevant clauses in the conditions of contract before you enter the data. The number of the clause which requires the data is shown in the left-hand column for each statement however other clauses may also use the same data.
2. Some TSC3 options are always selected by Eskom Holdings SOC Ltd. The remaining TSC3 options are identified by shading in the left-hand column. In the event that the option is not required, select and delete the whole row. Where the following symbol is used "[•]" - data is required to be inserted relevant to the specific option selected.]

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

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option:	
	dispute resolution Option	A: Priced contract with price list
	and secondary Options	W1: Dispute resolution procedure
		X1: Price adjustment for inflation
		X2: Changes in the law
		X17: Low service damages
		X18: Limitation of liability
		X19: Task Order
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Term Service Contract April 2013 ² (TSC3)	
1.1	The <i>Employer</i> is (name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state-owned company incorporated in terms of the company laws of the Republic of South Africa
	Address:	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
	Tel No.:	017 827 8000
	Fax No.:	TBA

²Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 539 1902 www.ecs.co.za

1.2	The <i>Service Manager</i> is (name): Address: Tel: e-mail:	Lwandiswa Ncwane Camden Power Station Private Bag x1002 Nucam, 2355 017 827 847617 827 8105 NcwaneLS@eskom.co.za
1.3	The Affected Property is:	Camden Power Station
1.4	The <i>service</i> is:	Maintenance of Camden Power Station cooling towers for a period of 4 years
1.5	The following matters will be included in the Risk Register:	
1.6	The Service Information is in:	Part 3: Scope of Work and all documents and drawings to which it refers.
1.7	The <i>law of the contract</i> is the law of:	the Republic of South Africa
1.8	The <i>language of this contract</i> is:	English
1.9	The <i>period for reply</i> is:	3 Working Days 24 Hours for Emergencies
2	The Contractor's main responsibilities	Data required by this section of the core clauses is also provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data
2.1	The <i>Contractor</i> submits a first plan for acceptance within:	2 weeks of the Contract Date
3	Time	
3.1	The <i>starting date</i> is:	
3.2	The <i>service period</i> is:	48 Months
4	Testing and defects	Testing and defect on suppliers' site before delivered to Camden Power Station. Final quality inspection will be done at main stores at Camden Power Station for acceptance of goods and services. If a test or inspection shows that any work has a defect, the supplier corrects the defect, and the test or inspection is repeated whether supply of spares or services rendered as per SOW.
4.1	Notifying and correction of defects:	The Contractor corrects a Defect whether or not the Service Manager notifies him of it
4.2	Defects correction period is:	Defect Correction Period is 52 weeks after the respective Task Order Completion Date
4.3	Access to site to correct defects:	The Service Manager arranges for the Employer to allow the Contractor access if it is needed for correcting a Defect

5	Payment	
5.1	The <i>assessment interval</i> is:	between the 25 days of each successive month
5.2	The <i>currency of this contract</i> is the:	South African Rand
5.3	The period within which payments are made is:	Thirty (30) Calendar days after the signed assessment by both Parties and a valid Tax Invoice. ATTENTION: Eskom's standard policy on payment term for all contracts valued above R50 000 0000 (Fifty Million Rand), including VAT, is 60 days. Bidders are requested to bear this payment term in mind when submitting bids and concluding contracts.
5.4	The <i>interest rate</i> is:	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
6	Compensation events	To be managed as per core clause 6 of the NEC3 TSC
7	Use of Equipment Plant and Materials	To be managed as per core clause 7 of the NEC3 TSC
8	Risks and insurance	To be managed as per core clause 8 of the NEC3 TSC
8.1	These are additional <i>Employer's</i> risks:	1. Natural disaster 2. Industrial action 3. Community Unrest 4. Epidemic / Pandemic (e.g. COVID)
9	Termination	To be managed as per core clause 9 and Z15 of the NEC3 TSC
10	Data for main Option clause	
A	Priced contract with price list	
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:	2 weeks

11	Data for Option W1	
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 www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the ICE-SA Division.
	Address:	N/A
	Tel No.:	N/A
	Fax No.:	N/A
	e-mail:	N/A
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the Institution of Civil Engineers (London) (see www.ice-sa.org.za) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	arbitration
W1.4(5)	The <i>arbitration procedure</i> is:	The latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is:	Johannesburg, South Africa
	The person or organization who will choose an arbitrator - if the Parties cannot agree to a choice or - if the arbitration procedure does not state who selects an arbitrator, is	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.

12	Data for secondary Option clauses			
X1	Price adjustment for inflation		CPA will be applied 16 months after base date maturity	
X1.1	The <i>base date</i> for indices is			
	The proportions used to calculate the Price Adjustment Factor are:		proportion	linked to index for
				Index prepared by
			15%	non-adjustable
	Prices are fixed and firm for 16 months and subject to escalation thereafter.		100%	
X2	Changes in the law		Becomes a Compensation Event only if the changes in the Law of the Republic of South Africa took place after the Contract Date	
X17	Low service damages			
X17.1	The <i>service level table</i> is in		See below Appendix for Z17.1 and X19.1 table	

X18	Limitation of liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to	R0.0 (zero Rand)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to	the amount of the insurance deductibles relevant to the event"
X18.3	The <i>Contractor's</i> liability for Defects due to his design of an item of Equipment is limited to	The greater of • the total of the Prices at the Contract Date and • the amounts excluded and unrecoverable from the <i>Employer's</i> insurance (other than the resulting physical damage to the <i>Employer's</i> property which is not excluded), plus, the applicable deductibles
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	the total of the Prices other than for the additional excluded matters. The <i>Contractor's</i> total liability for the additional excluded matters are not limited. The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for • Defects due to his design, plan and specification, • Defects due to manufacture and fabrication outside the Affected Property, • loss of or damage to property (other than the <i>Employer's</i> property, Plant and Materials), • death of or injury to a person and • infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	• 12 months after the end of the <i>service period</i>.
X19	Task Order	
X19.3	The delay damages in a Task Order	See below Appendix for Z17.1 and X19.1 table
X19.5	The <i>Contractor</i> submits a Task Order program to the <i>Service Manager</i> within	3 days of receiving the Task Order

Appendix for Z17.1 and X19.1

No.	Low Service Damage Description X17.1	Value of Low Service Damage	Limit of Low Service Damage
1	Failure to submit the inspection report within the agreed turnaround time after inspection/s	0.5% of the applicable Task Order value per day	Limited to 10% of the Task Order value
2	Failing to meet completion date of agreed program.	0.5% of the applicable Task Order value per day	Limited to 10% of the Task Order value
3	Failure to comply with Eskom SHEQ requirements during refurbishment and testing activities	1% of the applicable Task Order value per occurrence	Limited to 10% of the Task Order value
4	Re-work on same component after 2nd attempt	0.5% of the applicable Task Order value per day	Limited to 10% of the Task Order value

No.	Low Service Damage Description X19.3	Value of Low Service Damage	Limit of Low Service Damage
1	Delivery of incorrect components, or components not conforming to SOW specifications	0.5% of the applicable Task Order value per occurrence	Limited to 10% of the Task Order value
2	Delivery of components after the committed delivery date	0.5% of the applicable Task Order value per occurrence	Limited to 10% of the Task Order value

Z1 to Z18 always apply.

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 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 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 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 it with:

If the *Contractor* does not notify a compensation event within eight weeks of becoming aware of the event, he is not entitled to a change in the Prices.

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.

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>	<u>Loss of or damage to property</u> The replacement cost

Z 12.2 Replace core clause 86 with the following:

Insurance by the *Employer*

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	<u>Bodily injury to or death of a person</u> 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 course of their employment in connection with this contract	The amount required by the applicable law

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

INSURANCE TABLE B

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

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 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:

AAIA	means approved asbestos inspection authority.
ACM	means asbestos containing materials.
AL	means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4-hour period. The value at which proactive actions are required in order to control asbestos exposure to prevent exceeding the OEL.
Ambient Air	means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
Compliance Monitoring	means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is compliant with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
OEL	means occupational exposure limit.
Parallel Measurements	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
Safe Levels	means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
Standard	means the <i>Employer's Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.</i>
SANAS	means the South African National Accreditation System.
TWA	means the average exposure, within a given workplace, to airborne asbestos fibres, normalized to the baseline of a 4-hour continuous period, also applicable to short term exposure, 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.
- 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.
- Z15 The Employer's rights to Terminate the obligations to provide the Services due to Power Station Shutdown in 2030.**
- Z15.1 The Employer is the operator of the Camden Power Station, a coal fired plant installation, as designated by the National Electricity Regulator of South Africa (NERSA) and is the holder of the electricity generation licence in respect of the Camden PS which is one of the stations selected for repurposing. Therefore, the contract usage may from time to time reduce during the ramping down of the units and the usage of services will be on an "as and when required" basis.
- Z15.2 Subject to the provisions of sub-clause Z15.1 above, the Employer may after giving the Contractor a written notice of not less than 60 days (Sixty days) Terminate the Contractor's obligations to Provide the Services if the Employer's business cease to operate at Camden Power Station prior to the end of the service period in this contract.
- Z15.3 If the Contractor's obligation to Provide the Services is terminated for this reason sated in sub-clause Z15.1 above, this shall constitute a reason for termination by the Employer as contemplated under NEC3, and the procedures shall be those on termination table P1 and P4 as stated in clause 92 and the amount due on termination shall be A1 and A2 and stated in clause 93.

Z16

The objective of this SOW and NEC3 TSC is to refurbish all the cooling towers 1- 6 up to design specifications. This will be achieved by means of offline maintenance as opportunity arises. Therefor the contractor will not have a core crew permanently on site when there is no opportunity for a PTW (Permin to work) to be issued for the execution of the inspections or work.

Once the objective of refurbishing all the cooling towers 1 - 6 are met, the core crew will be released from site.

Thereafter pre-arranged periotic inspection will be carried out on as and when required base. Any defect/s that are raised during the inspections will be planned for on a task order basis for repairs.

Z17 Security Clearance/ Criminal Checks

These clauses are not only, but are especially, applicable for accessing critical infrastructure in terms of the Critical Infrastructure Protection Act, 2019 (previously referred to as National Key Points), but may include other sites, and/or where persons are rendering a service or have given notice of intention to render a service to an organ of state, which service may (1) give him or her access to classified information and intelligence in the possession of the organ of state; or (2) give him or her access to or information concerning areas designated as critical infrastructure.

- Z17.1 The *Contractor* and its subcontractors implement risk and security management processes and measures to mitigate any threats against any premises, installations or sites, systems, or information of the *Employer* with only persons with criminal verification record security clearance certificates being given access after verification of these and identifying documents by the *Employer's* security system.
- Z17.2 The *Contractor* provides, at the *Contractor's* cost, to the *Employer*, criminal verification record security clearance certificates for each person the *Contractor* or its subcontractors needs to access any premises, installations or sites, systems, or information of the *Employer*, with copies of their identifying documents, such as passports, before allowed such access by the *Employer*. The *Employer's* refusal to allow access to premises, installations or site/s, systems or information is at the *Employer's* sole discretion and is not a compensation event.
- Z17.3 The criminal verification record security clearance certificates provided are to have been issued by a service provider which is to be a reputable screening company accredited by the South African Police Services, are to be no older than four weeks since issue and valid for as long as each person is required to access premises, installations or sites, systems or information. The *Employer* may require updated certificates and identifying documents every 26 to 52 weeks, subject to safety and security concerns and the risk rating of the works or services undertaken and/or premises, installations or sites, systems or information.
- Z17.4 If any such criminal verification record security clearance certificates is cancelled, withdrawn, invalidated, amended, or expires, or a criminal conviction is noted against any person requiring access, even if an appeal against the criminal conviction has been noted, the *Service Manager* may instruct the *Contractor* to ensure that such person leaves the premises, installations or site/s and is blocked from systems and information and the giving of this instruction is not a compensation event.

Z18 Protection of Personal Information Act Compliance

- Z18.1 For the purposes of this clause, the terms "Data Subject", "Personal Information", "Processing" and "Regulator" and "Responsible Party" have the meanings given to them in the Protection of Personal Information Act, 2013 ("POPIA").
- Z18.2 Each Party acknowledges that it is an independent Responsible Party in relation to the Personal Information processed in terms of this contract ("Shared Personal Information") and that it determines the purposes for which as well as the manner in which the Shared Personal Information is, or is to be, processed.
- Z18.3 Each Party shall always comply with POPIA when performing its obligations under this contract and shall not perform any of their respective obligations under this contract in such a way as to cause the other Party to breach any of that other Party's obligations under POPIA.
- Z18.4 Each Party shall ensure that, in respect of all Shared Personal Information provided to the other Party and in respect of the use of that Shared Personal Information under this contract:
- Z18.4.1 all necessary fair Processing notices have been provided to and consents obtained from Data Subjects by that Party, where required, in terms of POPIA, including to specify that the other Party is also a Responsible Party in respect of the Data Subject's Personal Information and to provide a link (for example, <https://www.eskom.co.za/about-eskom/website-terms-and-conditions/>) to the other Party's Privacy Statement or to include a statement that the other Party's Privacy Statement can be found on the other Party's corporate website; and
- Z18.4.2 all necessary steps have been taken to ensure that Shared Personal Information has been collected and processed in accordance with the principles set out in POPIA, particularly those relating to:
- lawful, fair and transparent Processing;
 - specified, legitimate and explicit purposes of Processing; and
 - adequate, relevant and not excessive Processing.
- Z18.5 If either Party receives any complaint, notice or communication from the Regulator which relates directly to:
- Z18.5.1 the other Party's Processing of the Shared Personal Data; or
- Z18.5.2 a potential failure by the other Party to comply with POPIA in respect of the activities of the Parties under or in connection with this contract,
- it shall, to the extent permitted by law, promptly notify the other Party and provide such information as it shall reasonably request in that regard.
- Z18.6 If a Data Subject makes a written request to any Party to exercise any of their rights under POPIA, the receiving Party shall respond to that request in accordance with POPIA. To the extent the request concerns Processing of Shared Personal Information undertaken by the other Party, the receiving Party shall:
- Z18.6.1 promptly and without undue delay forward the request to the other Party; and
- Z18.6.2 cooperate and provide reasonable assistance in relation to that request to enable the other Party to respond in accordance with POPIA.

- Z18.7 Each Party acknowledges that the other Party may disclose Shared Personal Information to any Regulator or law enforcement authority with jurisdiction to request access to the Shared Personal Information.
- Z18.8 Neither Party discloses or otherwise makes available the Personal Information to any third party (including sub-contractors, but excluding its authorised employees who require access to such Personal Information strictly in order for the Parties to carry out their obligations pursuant to this contract), unless a Party has provided, to a requesting Party, its prior written consent to do so, and the requesting Party has submitted to the other Party (consenting Party), to its satisfaction, a copy of a written contract or undertaking that the requesting Party has entered into with a third party for the protection of Personal Information of the Data Subjects or unless there is an applicable exemption in terms of the law to process or further process the personal information.
- Z18.9 The requesting Party indemnifies and holds harmless the consenting Party and its staff, successors, cessionaries, delegates, and assigns, from any and all losses, costs, expenses and damage, as well as penalties and fines arising from the requesting Party's non-compliance with the provision of any relevant legislation applicable to Personal Information or data protection, as well as damage to the consenting Party's reputation and costs of compliance as directed by the Regulator, including but not limited to publication of the data breach.

C1.2(b) Contract Data

Data provided by the *Contractor*

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

Whenever a cell is shaded in the left-hand column it denotes this data is optional and would be required in relation to the option selected. In the event that the option is not required select and delete the whole row.]

Notes to a tendering contractor:

1. Please read both the both the NEC3 Term Service Contract April 2013 and the relevant parts of its Guidance Notes (TSC3-GN)³ in order to understand the implications of this Data which the tenderer is required to complete.
2. The number of the clause which requires the data is shown in the left-hand column for each statement however other clauses may also use the same data.
3. Where a form field like this [] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise, complete by hand and ink.

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address: Tel No.: Fax No.:	
11.2(8)	The <i>direct fee percentage</i> is: The <i>subcontracted fee percentage</i> is:	% 0%
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:	

³ Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 5391902 or www.ecs.co.za

Responsibilities:
Qualifications:
Experience:

CV's (and further key person's data including CVs) are in.

A	Priced contract with price list
11.2(12)	The <i>price list</i> is in:
11.2(19)	The tendered total of the Prices is: R

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PART C2: PRICING DATA

TSC3 Option A

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

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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:

This	Identified and defined terms	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.
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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 21.2 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 finalizing the *price list* the *Contractor*:

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

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PART 3: SCOPE OF WORK

1. EXECUTIVE SUMMARY

1.1 BACKGROUND

Camden Power Station started operating in 1967 and comprised six natural draught, asbestos cement packed, hyperbolic type Cooling Towers. The Cooling Towers were originally constructed and packed by Hamon Group. The cooling tower internals consist of asbestos fill-material, asbestos distribution pipework and drift eliminators which have been replaced with PVC material.

1.2 SCOPE

1.2.1 Purpose

This document stipulates the refurbishment work required on the Camden Cooling Towers which will have to be conducted under online conditions and off-line conditions upon agreement of necessity of scope of work with the system engineer. The aim is to restore cooling tower performance and reduce load losses caused by high condenser vacuum.

NB. The objective of the contract is to restore all the cooling towers to their optimal / required efficiency. Once all the maintenance is completed and accepted by the Eskom Engineer on all 6 cooling towers, periodic inspections will need to be executed on all the cooling towers and repairs will be done through task orders on an as and when requirement. Therefore, after acceptance of the refurbishment of all 6 cooling towers the contractor will reduce the staff to meet with the periodic inspections and as and when required maintenance.

- The Contractor is expected to take permits as per the Plant Safety Regulations (PSR) and High Voltage (HV) regulations. The Contractor must have responsible persons for each activity during normal working hours and on standby (and for multiple activities when required by the Employer if it is deemed to be safe).
- The Contractor is further expected to liaise daily with the Operating Department to plan work and to optimize the availability of the plant.
- The Contractor must have representation in the Auxiliary Plant Maintenance meetings.
- The Contractor may be requested by the Employer to conduct plant modifications as per Engineering instructions or SOW's.
- All work must be executed by qualified and trained personnel using the correct tools and equipment to ensure a reliable plant. Quality inspections to be done on all critical tasks with Eskom personal signing it off.
- All welding work must comply with 240-106628253 - Standard for Welding Requirements on Eskom Plant. Welding procedures and welding QCP's must be supplied to Eskom for approval prior to welding work commencing. All weld repairs must be 100% Non-Destructive Tested (NDT) and inspected by an Eskom Welding Inspector.
- All final welds must be NDT as per 240-83539994 Standard for Non-Destructive Testing on Eskom Plant.

1.2.2 Applicability

This document applies to Camden Common Plant Maintenance and Camden Turbine Engineering Department, Materials Management Department, Camden Procurement Department Camden Management, Operations Department and Potential Contractors.

1.2.3 Effective date

Date of authorization

1.2.4 Normative References (Eskom documents)

Standard	Description
204-63094243	Quality Management Systems
240-105020315	Standard for low pressure valves
ESKADAAI8, Rev 1	The safe processing, storing, removing and handling of asbestos and asbestos containing materials
240-56030508	Cooling Water System Health Care Guideline
240-123919938	Legionella Control and management in Water Systems
OHSA	Occupational Health and Safety Act 85 of 1993

1.2.5 Informative References (non-Eskom documents i.e., Acts, SANS, ISO, etc.)

Standard	Description
ISO 9001	Quality Management Systems
QM 58	Supplier Contract Quality Requirements Specification
SANS 966-1:2024	Unplasticized poly (vinyl chloride) (PVC-U) pressure pipe systems

1.3 DEFINITIONS

The Client	The end user will be Eskom who will be represented by Camden Power Station throughout the duration
Contractor	Refers to the corporation appointed to perform the maintenance activity for the duration of the

1.4 ABBREVIATIONS

Abbreviation	Explana
CW	Cooling Water
CT	Cooling Tower
DE	Drift Eliminator
ISO	International Standards Organization
OHSACT	Occupational Health and Safety Act.
PVC	Poly Vinyl Chloride – A type of synthetic polymer
QC	Quality Controller
QM	Quality Management
QCP	Quality Control Plan
SOW	Scope Of Work
UV	Ultra-Violet – refers to radiation from the sun

1.5 ROLES AND RESPONSIBILITIES

Contract Manager: Drive the tender process to effectively establish and manage the contract to execute the scope of work as presented in this document.

System Engineer: Assist with any technical abnormalities that might be encountered during the execution of the scope of work. Further to be involved in high level technical quality control pertaining to legal and ISO standards conformity.

Quality Department: Responsible for ensuring that all stipulated quality documentation and processes are adhered to in conformance with the requirements stipulated in this scope of work and the QM58 standard.

Contractor: Execute the scope of work stipulated in this document and conform to all the requirements set out in the final contract and this scope of work.

1.6 PROCESS FOR MONITORING

Monitoring the progress and execution of this scope of work will be the responsibility of the contract managers.

1.7 RELATED/SUPPORTING DOCUMENTS

Not Applicable

2. REFURBISHMENT OF COOLING TOWERS

This scope of work contains basic technical specifications to be adhered to during refurbishment of the cooling tower internals, drain pond and surroundings. Cooling tower internals refers to:

- Distribution pipes and endcaps
- Drift eliminators
- Spray nozzles
- Fill packing
- Walkways
- Ponds

2.1 DOCUMENTATION

This section stipulates the use of technical documentation during the refurbishment process.

2.1.1 Quality Control Documentation

- Quality management during execution of any activity must be according to the requirements stipulated in QM58 document governing all Eskom related activities.
- As a bare minimum requirement, any work being executed must be executed according to a QCP that is pre-approved by the system engineer with relevant intervention points that must be adhered to.
- All QCP's must be accompanied by an execution programme with completion dates and durations of all activities on the QCPs.

2.1.2 Reports, Certificates and Data Packs

The following reports must be generated and supplied to the client before, during and after the execution of work:

Inspection report: Must be submitted to the client prior to commencement of any work.

Certificates: Must accompany all the supplied replacement components (sprayers, end caps, etc.) supplied under this contract and must be included in the data packs.

Data Packs: Must be handed over to the client with any item worked on or supplied under this contract and must include all documentation relevant to the component or work executed.

3. GENERAL REQUIREMENTS

Camden Power Station has 6 natural draft cooling towers. These towers are maintained and cleaned during outages to improve and sustain their thermal efficiency. This document aims at outlining the complete scope of work for all cleaning and maintenance related work of the 6 cooling towers for a period of 4 years during off-line opportunities. Task orders during this period shall include work instructions consisting of, but is not limited to the following:

- Draining and cleaning of the cooling tower pond.
- Repairs/replacement of damaged drift eliminators, end caps, piping and sprayers.
- Repairs to walkways and staircases.
- High pressure washing (typically 400 bar) of the fill from the top.
- High pressure washing (typically 400 bar) of distribution pipes.
- Washing (typically 6-10 bar) of the drift eliminators from the bottom.
- **The cleaning and removal of algae, mud, sludge and debris from the cooling tower.**
- Removal and disposal of all waste removed from the tower(s) including asbestos which requires proof of waste handling.

NB.: For off-line work to be completed, there is a possibility of main cooling tower isolation valves not functioning properly and thus perfect isolation may not be possible. Therefore, it is the responsibility of the contractor to make means to work in such conditions.

The contractor must be aware and fully comply with the following list of activities and requirements whenever work is carried out on site.

ACTIVITY	SPECIFICATIONS
3.1 ACCESS CONTROL	
3.1.1 Provide all authorized people with entry permits. Obtain permit to work as per site procedure.	
3.1.2 Relevant PPE to be used on specified systems, e.g. where there are chemicals etc.	Refer to Legionella Control and management in Water Systems (240-123919938)
3.2 QUALITY	
The contractor shall provide a detailed QCP, derived from the issued and accepted SOW from Camden Turbine Engineering. The QCP must make allowance for Engineering to add hold points, viewpoints, etc.	10 days before work starts on each work instruction/task order.
3.3 SPARES	
3.3.1 Spares will be provided by Eskom to the Contractor on a free issue stores withdrawal basis. Spare items required include: a) Sprayers body, nozzles, grommets and saddles. b) Endcaps (304 SS latch & body with rubber seal, fully openable i.e., exposing entire pipe end diameter for cleaning purposes.) c) Stainless steel repair clamps. d) Fill replacement, blocks – only damaged sections as required. e) Drift eliminators: UV inhibited PVC only shall be allowed. The maximum unsupported span length 1.5 m. If additional support beams are required, these shall be of Grade 304 stainless steel or GRP. f) Distribution piping: 6", 8", 10" and 12" PVC class 9 piping and repair clamps. NOTE: Spares that are not stuck (as and when required scope of work) will be provided by the contractor with the relevant data sheets provided to Eskom Turbine Engineering before scope of work commencement.	

3.4 ASBESTOS	
3.4.1 The existing distribution system and fill are manufactured from asbestos cement. Cutting and removal of any of the existing asbestos material may only be carried out by contractors (or sub- contractors) who have the necessary registration with the Department of Labour as Registered Asbestos Contractors.	
3.4.2 The appointed tenderer needs to comply with the OHS Act 85 of 1993 and more specifically the ASBESTOS ABATEMENT REGULATIONS 2020. The pre-identified waste site for disposal will be communicated to the relevant Eskom business unit in advance and the internal, informal, auditing of the ultimate fate of the waste will be conducted by Eskom.	
3.4.3 The process will be under direction of the Occupational Hygiene Practitioner at the relevant Eskom business unit subjected to asbestos handling procedures, as stipulated in Eskom procedure 32-303 and the waste management procedure 32-245.	
3.4.4 All the requirements of the Occupational Health and Safety Act 85 of 1993, Asbestos Regulations must be adhered to including: a) Asbestos plan drawn up by an accredited Approved Inspection Authority (AIA). b) Asbestos training for all personnel handling asbestos cement components as well as all those working in the dirty area. Demarcation of the site into clean and dirty (asbestos contaminated) areas.	
3.5 PREPARATORY WORK FOR OFF-LINE WORK - COOLING TOWER ISOLATION AND DRAINING	
3.5.1 Isolate the specific tower for maintenance.	Isolation to be carried out by the station (Ops)
3.5.2 Cooling Water in the cooling tower pond to be drained before work can start. If it is found that the cooling tower cannot be 100% isolated, the contractor must manage the level in the cooling tower pond by draining to an adjacent cooling tower pond as stipulated in section 3.7.	
3.6 COOLING TOWER GEOMETRY	
Cooling Towers	1, 2, 3, 4, 5 and 6
Distribution pipe material	Asbestos, PVC and Carbon Steel
Drift eliminator material	PVC
End-cap valves	Stainless Steel
Type of system / Fill	Asbestos
Tower diameter (skirt)	25 m
Pond diameter	43 m
Shell height	105 m
Air opening height	8 m

Ham Sprayer sizes	Thread = 2 ¼ BSF Material = ABS
Sprayer orientation	Upwards
No. of sprayers/tower	7303 Cooling tower 1 and 3 7320 Cooling tower 2, 4, 5 and 6
Number of diametral duct(s)	16 (Refer to drawing KEC – 272 rev 4)

3.7 WATER AND ELECTRICITY SUPPLY/USAGE

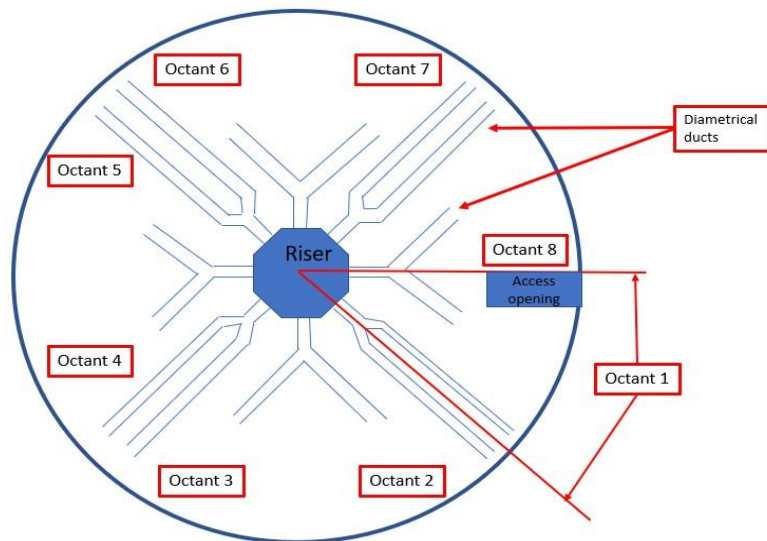
- In order to save potable water, all water to be used as part of the maintenance contract shall be supplied/sourced from adjacent cooling tower ponds i.e., **no potable water is available for cleaning purposes.**
- Also note that in some cases isolation from the main CW system is not guaranteed. It will be the responsibility of the contractor to manage the level in the cooling tower pond using a drainage pump to an adjacent cooling tower pond. Therefore, the contractor shall supply pumping equipment for the supply to the relevant tower and removal/drainage from its pond.
- The supply to the tower shall be a minimum of **1000 L/min** at a pressure of at least **6 bar**. The drainage pump away from the tower shall be at least **100 L/s**.
- The contractor shall provide filters and all other necessary equipment and distribution piping for cleaning and scope-related activities including HP water cleaning as detailed in Section 4 and 5.
- All equipment shall be powered by the contractor's own power supply i.e., Generators.

4. SCOPE OF WORK (OFF-LINE SCOPE)

ACTIVITY	COMMENTS
4.1 DIAMETRAL DUCTS (OFF-LINE SCOPE)	NOTE: Debris and sludge must NOT be dumped down the risers or on top of the fill.
4.1.1 Position shade cloth below the distribution pipe that requires cleaning to collect all the debris which will be discharged at the cleaning.	
4.1.2 Remove sprayers from diametrical ducts.	
4.1.3 All debris and sludge to be cleaned manually by bucket as far as practically possible and by HP cleaning from the end by opening the end flange. NB: No sludge or debris shall be thrown down the risers.	Eskom to designate an area for dumping sludge with the assistance from the station cleaning and Environmental.

4.1.4 HP-clean (400 bar and above at a flow rate of 45 l/min) the internal of all diametral ducts. This includes the removal of flakes and sludge. The HP nozzle to be used for cleaning of the diametral duct surfaces shall be a zero-degree non-rotating nozzle (i.e., the jet shall be a solid forward projecting jet).	Acceptance criteria: All scale to be removed until bare concrete.
4.1.5 Removal of fallen algae sheets and sludge from the top of the diametral ducts. NOTE: This is a continuous activity that should be carried out during the entire outage of the cooling towers.	
4.1.6 Diametral duct sprayers are to be cleaned and replaced after the distribution pipes are cleaned. All damaged or missing diametral duct sprayers shall be replaced.	Acceptance criteria: All sprayers to be clean as visible from the walkways/diametrical duct floors.
4.2 DISTRIBUTION PIPEWORK AND SPRAYERS	

- Distribution pipe cleaning shall be done in a systematic way (per Octant), and the contractor shall not be allowed to work in the entire cooling tower simultaneously in a hap-hazard manner.
- All cleaning activities will be completed and all sprayers replaced before moving on to the next section to be cleaned. It is a mandatory requirement that the contractor clearly indicates which sections are completed daily to allow Eskom's QC's opportunity to perform effective inspections on a timeous basis as informed by the Hold Points on the signed QCP by all the departments concerned.
- Eskom QC's will only inspect sections completed by the Contractor. Defects found in a completed section which does not meet the acceptance criteria will introduce a financial penalty towards the contractor (i.e., re-work until acceptance criteria is met will not come at extra cost to the client). The Contractor shall provide Camden Engineering with a cooling tower map with sections similar to the example provided below indicating the date when each section will be completed for inspection.
- In some cases, the task order may require only partial completion as agreed upon before work starts as per the identified defects on each part of the octants.



Cooling water towers 1 – 6

NB. All diametrical ducts to be fitted with blank flanges at pipe end as per drawing KEC – 272 Rev 4.

4.2.1 Open all end-cap valves. Any valve caps that are faulty or do not open must be removed and replaced.

Refer to figure below as example of endcaps to be used for replacements.



Specification for end-cap valves: 304 stainless steel valve body and latch with rubber seal, fully openable for cleaning purposes.

NB: Contractor to size end cap sleeves according to fit endcaps.

4.2.2 HP-clean the distribution pipework internals.

All sprayers to be removed before HP cleaning.

- Pressure of between 400 bar (up to 600 bar) at the pump discharge with a flow rate of 45 l/m shall be maintained during cleaning.
- Rotating nozzle to be used which travels the entire length of each pipe. (The length of the longest pipe is 32 metres.)
- Various nozzles shall be available on site for cleaning of the pipes, and the nozzle shall be centralized in the pipe.
- **If it is difficult for scale to be removed, it is the duty of the contractor to inspect ducts after drying for visible flakes that need to be removed by HP cleaning. The system engineer is to be with the contractor such that the cleanliness expectation from the system engineer can be communicated to the contractor.**

Acceptance criteria:

No loose debris or adherent scale should be visible in the entire length of the pipe.

4.2.3 Shade cloth to be placed below entire distribution pipe being cleaned to collect all debris which may be discharged via the sprayer holes during HP cleaning. The debris collected on the shade cloth must be removed from the cooling tower and not dropped on top of the fill (heat exchange will be affected). Any loose scale remaining in the distribution pipes after HP cleaning to be flushed from the distribution pipes.	Acceptance criteria: No loose debris should be visible on the fill. Eskom QC to inspect before and after, of the fills at the area of work.
4.2.4 Broken and/or cracked pipes to be fitted with stainless steel clamps as shown below. The clamp consists of a flexible 304 stainless-steel band fully lined on the inside face with a rubber gasket with minimum operating pressure of 200 kPa. The ends of the one or more sections of the band are tightened together by a minimum of three long threaded stainless-steel studs and stainless-steel washers and nuts for tightening. NPS pipe diameters are as follows: 12", 10", 8" and 6" at pipe end. 	Acceptance criteria: No broken or leaking pipes

4.2.5 After final inspection of HP cleaning, the sprayers are installed again. Only damaged or missing sprayers must be replaced.



Acceptance criteria:

All nozzles of all sprayers shall be clean and unobstructed.

NB. If distribution pipe sprayer mount is damaged, a stainless-steel strapped saddle and grommet to be used to attach nozzle onto the distribution pipe. The grommet is to be sized such that the inner diameter fits over the distribution pipe nozzle, and sprayer can thread into grommet. Grommet material to be HDPE (see example concept below).



4.3 DRIFT ELIMINATORS

4.3.1 Cleaning of the DE's is generally not a high priority and shall not take preference over cleaning the distribution pipes or fill. The Contractor must do the cleaning from below ONLY (no from top cleaning allowed due to it being a safety hazard) and clean with water (typically 6-bar). Pressures higher have potential to damage the drift eliminators.

4.3.2 All fallen algae must be removed to avoid it falling through on top of the fill on a regular basis. When cleaning is done all flakes and excessive sludge will be removed. The contractor is to propose a method to clean the fallen algae without access on top of DE's for review by Eskom Engineering.

4.3.3 The contractor to replace all broken DE's and replace with UV stabilized PVC drift eliminators. The contractor only carries out the replacement scope when defects are noted as on the following site photo.



Acceptance criteria:

No visible sludge/mud/algae between DE panel profiles.

Drift Eliminator specification: The maximum unsupported span length for the drift eliminator is 1.5 m. If additional support beams are required these shall be of Grade 304 Stainless Steel or GRP. The support beams shall be designed to support at least 5 times the weight of new drift eliminators. The contractor shall supply a drawing of the drift eliminators used indicating the material and dimensions of the drift eliminators as well as maximum supporting beam span to avoid sagging or deformation at a continuous temperature of 45°C. Only DE profiles with a proven track record shall be used, a verifiable reference list of where the drift eliminators were used in past to be supplied as part of the tender. The minimum technical requirements for the modules shall be: • Maximum profile spacing of 55 mm • Non see through design • Minimum profile depth of 150 mm	
4.4 FILL	
• The approach to cleaning the fill shall be that of a systematic methodology. • The contractor shall not be allowed to work in the entire cooling tower simultaneously. The contractor together with the Engineer will determine priority areas (classified by Octants) to be completed. • It is a mandatory requirement that the contractor clearly indicates which sections are completed daily to allow Eskom's inspectors the opportunity to perform effective inspections daily (using QCP & hold points).	
4.4.1 Fill to be cleaned from top with HP water between 400 bar and 600 bar at the pump discharge with a flow rate of 45 l/min. The nozzle discharge shall be directly forward and shall be a single jet, i.e., no rotating nozzles or nozzles with multiple jets allowed. A rigid lance shall be used which fits in between the sheets of fill and cleaning shall continue until a free jet/curtain of water discharge from the bottom. The gap, open space, between the asbestos fill sheets are typically 15 mm	Acceptance criteria: Pre and post inspection to be carried out as informed by QCP. The fill will be classified as clean when one can see the pond from the top of the fill.
4.4.2 Fill to be washed from the bottom with fire water/HP water to remove algae and sludge that could not be removed from above. Provision to be made for skyjacks for cleaning and inspection of fill from bottom.	Acceptance criteria: Pre and post inspection to be carried out.
4.4.3 Remove all debris on top of fill.	Acceptance criteria: As part of final inspections all debris on top of fill should have been removed.
4.4.4 All damaged fill to be replaced. Fill blocks of either HTP25, TC40V or VC25 are allowed. Additional support beams (Grade 304 stainless steel or GRP) shall be installed to support the fill blocks based on the supplier recommendation as per the data sheet. In case where the supplier does not specifically recommend a spacing distance, the maximum allowable support beam spacing shall be 600 mm. The support beams should be able to withstand at least 100 kg/m².	Acceptance criteria: Upon inspection and approval by Eskom Engineering.

4.5 POND AND OUTLET SCREENS (OUTAGE BASED)

4.5.1 Sludge and debris are to be removed from the pond by the contractor and dumped on a designated site area that will be predetermined by the Station. All dumped debris should be removed by the contractor.

Bobcats (or similar), brooms, spades and squeegees to be used for removing sludge from the ponds.

Acceptance criteria:

No mud layers (>10mm deep) or loose debris/particles (>10mm in diameter/length) anywhere on the pond floor.

4.5.2 The floor of the pond is then to be swept with brooms to remove all loose debris. The contractor must ensure that debris is not collected/ dumped to the outlet screens.

Acceptance criteria:

No debris visible in pond or screen outlet.

4.6 WALKWAYS

4.6.1 Replace all rotten wood walkways with suitable replacement.

Contractor to specify suitable replacement based on successful service history in the same application

Acceptable criteria:

Rotten wood walkways must be removed. Inspections to be carried out by Eskom QC or Turbine Engineering

4.7 STAIRCASES

4.7.1 Repair all defected staircases

NB. Contractor to sub-contract with letter of agreement if civil work is not covered directly.

Acceptable criteria:

No chipped or damaged staircase steps. To be inspected and by Eskom QC or Turbine Engineering

5. SITE EQUIPMENT REQUIREMENTS & TESTS

The contractor shall demonstrate to the Engineer that each of the **High-Pressure pumps can supply a volume flow rate of 45 l/min** with the pump being operated at rated speed with a pump **discharge pressure of 400 bar**. A container and stopwatch method, to be included as hold point on QCP, shall be used to verify.

The high-pressure pump and hoses shall be equipped with a self-operated device to prevent over-pressure such as stand-alone safety relief valve or fail-safe pressure switch. The HP hoses shall be equipped with a foot valve to enable the operator positioned inside the cooling tower to stop the flow to the nozzle as required.

The flexible hoses shall be considered as piping defined in PER. The Health and Safety Standard (design code) of the hose shall be specified. As a minimum the hoses shall be tested to **1.25 the design pressure** of the hose. Valid pressure test specifications and certificates to be available and traceable to each hose used on site. All operators shall be equipped with appropriate PPE and shall operate a dead-man device. Only one HP lance per dead man device allowed. The lance operator shall be equipped with appropriate PPE to be protected against the high-pressure water jets. The contractor shall provide power for all pumps supplied.

6. BILL OF QUANTITIES

6.1 SPARES

The bill of quantities below should be completed after reading and understanding the scope as defined in Section 4 and 5. Table 1 allows contractor quoting for **estimated quantities** as specified on the table for spares that Stores department will keep and allow withdrawal as per scope requirement.

Table 1. Estimated spares quantities

Item no	Description and Stock number	Unit	Stock number	Price (ZAR)	Total Units per outage	Total Price (ZAR)
1	Supply of the Carbon Steel distribution pipe work (6" pipe, 8" pipe, 10" pipe, 12" pipe, 15" pipe, 18" pipe, 21" pipe, 24" pipe and 36" pipe)	Per 6 m	Non-Stock		4 of each	
2	Supply of the PVC distribution 6" pipe work	Per 6 m	0771276		10	
3	Supply of the PVC distribution 8" pipe work	Per 6 m	0771277		20	
4	Supply of the PVC distribution 10" pipe work	Per 6 m	0771147		10	

5	Supply of the PVC distribution 12" pipe work	Per 6 m	0771146		8	
6	Supply of 6" pipe coupling	Each	248376		40	
7	Supply of 8" pipe coupling	Each	625034		70	
8	Supply of 10" pipe coupling	Each	625377		40	
9	Supply of 12" pipe coupling	Each	629165		15	
10	Supply of plastic sprinkler	Each	39875		7 100	
11	Supply of end cap/flap	Each	704765		150	

6.2 MAINTENANCE COSTING

The bill of quantities below should be completed after reading and understanding the scope as defined in Section 4 and 5. Table 2 allows the contractor to list total price as per estimated quantities for maintenance.

Table 2. On-site off-line maintenance estimated costs

Item no	Description	Unit	Estimated quantities	Total Price (ZAR)
1	Off-line removal of mud from all distribution channels using shovels & buckets. Wash all distribution channels clean (400 bar)	Per tower	30	
2	On site removal of mud/sludge to area to designated area	1 m ³	Per tower	
3	Handling and disposal of Asbestos material. Remove asbestos to an Authorized dumping site. Safe disposal certificates to be handed to contract manager.	1 m ³	Per tower	
4	Off-line cleaning of the distribution pipe work, high pressure water jet clean scaled up pipes. Price to include different cleaning nozzle sizes and pressures to be used on asbestos and PVC pipes (400 bar)	Per tower	Per tower	
6	Off-line cleaning of all drift eliminators with high pressure water (~10 bar)	Per 1 m ²	50 m ²	
8	Off-line supply and replacement of defective or missing drift eliminators with new PVC eliminators and 304 stainless steel support on an as and when required basis . (All sizes & spacing to be the same as the original design)	Per 1 m ²	50 m ²	
10	Off-line replacement of all defective grommets with new saddle type HDPE grommets with stainless steel strapping on an as and when required basis . (Design to be approved by Eskom Engineering).	Per tower	100	
12	Off-line replacement of new cooling tower plastic sprinklers as per Eskom design requirement.	Per tower	5000	

14	Off-line stripping of damaged fill areas and repair damaged fill areas with new fill packs on an as and when required basis . Fill blocks of either HTP25, TC40V or VC25 are allowed. Data sheet of fill product to be supplied before installation. Supply and install 304 stainless steel or GRP fill support brackets and beams to support newly installed fill.	Per 1 m ²	50 m ²	
16	Off-line replacement of end cap valves, 304 stainless steel fully open rubber inserts, 304 SS latch, SS bolt attached and SS washer and nut set. Sizes could vary between 6" to 12".	Per tower	150	
18	Off-line drain, wash and cleaning of cooling tower pond. The contractor supplies his own pumps for draining the cooling tower pond to provide access to the screens, removal of fill & pond cleaning. The water from the pond must be pumped to the nearest adjacent cooling tower pond. It is the responsibility of the contractor to dispose of all material containing asbestos to an approved asbestos disposal site, and all paperwork to be handed in to Eskom's hazardous waste controller (on-site and off-site dumping)	Per tower	Per tower	
19	Off-line GRP beam supply and installation as required for DE installation.	Per tower	Per tower	
21	Off-line stainless steel clamp installation of broken pipe.	Per tower	100	
23	Rental of supply pump(s) per day (~1000 L/min)	Per tower	Per tower	
24	Rental of large drainage/submersible pump(s) per day (~100 L/s)	Per tower	Per tower	
25	Rental generator to supply power to pumps per day	Per tower	Per tower	
26	Rental on High Pressure water jet per day (min 400 bar)	Per tower	Per tower	
27	Rental of 30 L/s sludge pump per day.	Per tower	Per tower	

7. DESIGN AND SUPPLY RELATED COMPONENTS

Certain items and components are design and cooling tower specific. These items cannot be priced for upfront and shall require design and/or drawings, approved by Eskom Turbine Engineering, before any work commences. These items are not included in the initial contract value evaluated in Section 7.

These items include:

- Any type of ladder inside the cooling tower.
- Cooling tower pond screens.
- Any civil repairs required to carry out the scope of work as described in Section 4 and 5.

DRAFT

8. TENDER RETURNABLES

The following section describes the mandatory and non-negotiable tender returnable documents. To an equitable technical evaluation of the tenders the contractor must provide all documentation as per the requirements below. **If not provided, the tender will be considered non-compliant and will not be evaluated.**

All tenders will clearly define the roles and activities to be carried out by all sub-contractors and include an agreement related to that specific part of the work.

8.1 GENERAL RETURNABLES FOR TECHNICAL EVALUATION

8.1.1 Asbestos certification

- Contractor must supply a valid certificate stating that the company is certified to handle and dispose asbestos products to a recognized hazardous waste disposal site(s).

8.1.2 Reference list of cooling tower maintenance contracts

- Verifiable Reference list of Cooling Tower maintenance contracts done in the last 5 years including high pressure water cleaning. Three verifiable references shall be provided. For each Cooling Tower Maintenance Reference, the following must be submitted in the form of Table:
 - Project Description: Brief description of the maintenance activities performed on a natural draft cooling tower during the specific project.
 - Physical location of the natural draft cooling tower on which maintenance activities were carried out.
 - Date when the maintenance activities were done.
 - Water pressure that was used for cleaning of cooling tower distribution pipes (bar).
 - Company name of the client.
 - Client engineer or client quality control representative details – Client Name, Surname, Contact Number and company e-mail address

8.1.3 Method statements providing details of the following:

- Cleaning of distribution piping and sprayers.
- Drift Eliminator Installation – a detailed method statement for engineering design, supply, support, and installation of drift eliminators for off-line maintenance conditions. This method statement must include, at a minimum:
 - Structural design approach for drift eliminators, including support and bracing systems.
 - Material specifications and flexibility/rigidity considerations.
 - Fixing and mounting methodology/philosophy.
 - Handling and installation procedures during shutdown (off-line) maintenance.
 - Risk identification and mitigation related to structural integrity and operational performance.
 - The method statement must be on the contractor's company letter head.
- Fill cleaning and/or repairment as stipulated in Sections 4 and 5.
- Repair of staircases.
- Repair of DE's as stipulated in Sections 4 and 5.

8.1.4 Quality Control Plan

- The contractor must supply, previously, a fully signed Quality Control Plan (QCP) by the client representative indicating installation and/or cleaning of Drift Eliminators, Distribution Pipes, sprayers and End Caps or walkways.

8.1.5 The contractor submits a preliminary schedule (bar chart) for the complete off-line scope of work as per Section 4.

8.1.6 Exclusions/deviations/qualifications to technical specifications

- Exclusions, deviations, or qualifications to the technical specifications outlined in the tender documents must be clearly identified. If there are no exclusions, a clear statement to this effect must be provided. The following information is to be considered:
 - List of exclusions.
 - List of deviations.
 - Qualifications.

8.1.7 Technical Personnel

- Supervisor relevant experience in natural draft cooling tower maintenance related activities. The following information must be provided:
 - Number of years the supervisor has been supervising cooling tower related maintenance activities.
 - Brief description of the maintenance activities which this supervisor has overseen.
 - Physical location of the natural draft cooling tower on which this supervisor overseen maintenance activities carried out.

8.1.8 Cooling Tower HP Pump Requirements

- The contractor shall provide technical details of HP Pumps that will be on site during the cooling tower maintenance contact, the technical details of the pumps to be completed by populating the tables below:
- The contractor to complete Tables 3 as part of the tender.

Table 3: HP (400 bar) Pumps Inventory

HP pump # ¹	Make & model of pump	Pressure rating or range, bar ²	Flow range, L/min
1			
2			
3			
4			

¹ For this contract, at least 2 HP Pumps are required from the Contractor during the period of each Cooling Tower maintenance.

² Each pump shall produce 400 bar (at the pump outlet) at the pump discharge with a flow rate of 45 l/minute.

8.2 DRIFT ELIMINATORS

- Material of drift eliminators.
- Guaranteed drift loss experienced in % of circulating water flow.
- Reference installations (natural draft cooling tower).
- Material of drift eliminator support beams
- Design load of drift eliminator support beam as well as support beam safety factor expressed in terms of drift eliminator weight.
- Drift eliminator support beam spacing. If this spacing exceeds 1 m, the Contractor shall provide a detailed technical justification considering the temperature the eliminators will be exposed to, verifiable reference installations where larger support spans were used, brochures or datasheets, etc.
- Drawing of the replacement distribution pipe end valve indicating component list with material identified.

3.1 Limit of the scope

The scope is only limited to Cooling Towers 1 to 6 including the ponds at Camden Power Station.
Description of the *service*

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Service Information</i>	
C3.2	<i>Contractor's Service Information</i>	
Total number of pages		

1. Description of the service

2. Executive overview

3. *Employer's requirements for the service*

The scope is limited to Cooling Towers 1 to 6 at Camden Power Station.

Purpose

The purpose of this scope of work is to define all the activities which need to be carried out.

4. Interpretation and terminology

5. Management strategy and start up.

6. The *Contractor's* plan for the service

2.1.6 Definitions

Refer to Part 3. Scope of work

2.2 Roles and Responsibilities

The requirements of this document shall be carried out by the contractor.

2.3 Process for Monitoring

Not applicable

2.4 Related/Supporting Documents

Not applicable.

1. Scope of Work

Refer to Part 3. Scope of work

7. Management meetings

The *conditions of contract* (e.g. Clause 16.2) and other sections of the Service Information (e.g. safety risk management) may require that a meeting shall be held. However, the intention of all NEC contracts is that the Parties and their agents use the techniques of partnering to manage the contract by holding meetings designed to pro-actively and jointly manage the administration of the contract with the objective of minimizing the adverse effects of risks and surprises for both Parties.

Depending on the size and complexity of the *service*, it is probably beneficial for the *Service Manager* to hold a weekly risk register meeting (Clause 16.2). This could be used to discuss safety, compensation events, subcontracting, overall co-ordination and other matters of a general nature. Separate meetings for specialist activities such as planning and activities of a technical nature may also be warranted.

Describe here the general meetings and their purpose. Provide particulars of approximate times, days, location, and attendance requirements, stipulating that attendees shall have the necessary delegated authority to make decisions in respect of matters discussed at such meetings.

The following text could be used as a model for this section:

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Weekly on _____ at _____		
Overall contract progress and feedback	Monthly on _____ at _____		<i>Employer, Contractor and _____</i>

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 holding the meeting within five days of the meeting.

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

8. Contractor's management, supervision and key people

State any additional constraining requirements on *Contractor's* supervision and key people that are not already stated in other sections such as for Health and Safety. This section could be used to solicit an organogram from the *Contractor* showing his people and their lines of authority / communication. This would be essential if the *Contractor* is a Joint Venture.

9. Provision of bonds and guarantees

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

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Service Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

10. Documentation control

Specify how documentation will be identified with an alpha numeric which indicates source, recipient, communication number etc. Provide details of any format or other constraints; for example; that all contractual communication will be in the form of properly compiled letters or forms attached to e-mail and not as a message in the e-mail itself. State any routing requirements but note from TSC3 who issues what to whom.

11. Invoicing and payment

The Z clauses refer to invoicing procedures stated here in this Service Information. Also include a list of information which is to be shown on an invoice.

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 address the tax invoice to

and 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)

Add procedures for invoice submission and payment (e.g. electronic payment instructions)

12. Contract change management

This section is intended to deal with any additional requirements to the compensation event clauses in section 6 of the core clauses; such as the use of standard forms. Not the same thing as documentation control.

13. Records of Defined Cost to be kept by the Contractor

If Option C or E applies first read clause 52.2 and then state whether the *Contractor* is required to keep any other records. Include any other constraint which may be required regarding format and filing of the records, and whether access for the *Service Manager* shall be provided in hard copy or electronically.

Could delete if Option A applies unless the *Employer* requires some form of control over the *Contractor's* record keeping for the purpose of compensation event management.

14. Insurance provided by the Employer

First read TSC3 Core Clause 86.1 and then add anything necessary for the management of insurance related issues such as a cross reference to where procedures for making claims can be found. Also provide contact details for persons capable of being able to answer any insurance related queries the *Contractor* may have, as well as to whom the information required by Marine Insurance (if any) may be addressed.

15. Training workshops and technology transfer

Describe type and frequency of any on-job training workshops, as well as any obligation for technology transfer being included as part of the *service* or at the end of the *service period*.

16. Design and supply of Equipment

On some complex services (e. g. nuclear) it could be in the Parties best interests that some details of the design of Equipment are shared with the *Service Manager*, not necessarily for his acceptance but as an assurance that the Equipment will be able to allow the *Contractor* to Provide the Service efficiently and without delay. For example; specialized handling Equipment for a particular maintenance operation. Clause 23.1 is always available to the *Service Manager* if this paragraph is not used.

Also, the *Employer* may wish to exercise constraints or include witness and hold points during manufacture, assembly or delivery of such Equipment. Include these constraints here.

Draft in such a way that there is no doubt that the liability for such design supply and use of the Equipment remains with the *Contractor*.

17. Things provided at the end of the service period for the Employer's use

18. Equipment

The *Employer* may wish to use some of the Equipment used by the *Contractor* after the end of the *service period*. Clause 70.2 requires that details of such requirement be stated in the Service Information. Complete here or if not applicable retain the heading and state 'None'.

19. Information and other things

Clause 70.2 requires that information and other things which the *Contractor* is to provide at the end of the *service period* be stated in the Service Information.

20. Management of work done by Task Order

Only use this heading if Option X19 applies to this contract.

In some cases, all work may be done in terms of Task Orders, in which case it may be logical to move this section closer to the start of part 2 of the Service Information. In some cases, only parts of the *service* may require to be handled by Task Order, for example a major repair which has become necessary during a continuous maintenance service contract.

Please read Option X19 before drafting requirements here as much of the procedure for the administration of Task Orders is already provided in X19, for example X19.2 specifies what a task Order should include

A Task Order format could be provided in an Annexure to this Service Information.

Many considerations can apply to Task Orders, such as availability of resources, arrangements for emergency work, Task Order reporting (work carried out and service results), assessment of additional Prices for *service* not included in the Price List etc.

Clause X19.6 requires information which should be included on a Task Order programme. Further requirements for Task Orders include things to be provided by the *Employer* under a Task Order and the conditions under which the *Employer* or Others are to work.

21. Health and safety, the environment and quality assurance

22. Health and safety risk management

In addition to the requirements of the laws governing health and safety, Eskom may have some additional requirements particular to the *service* and the Affected Property for this contract. The text below provides for these being attached as an Annexure to this Service Information. PLEASE ALSO READ CORE CLAUSE 27.4 TOGETHER WITH Z7 IN THE ADDITIONAL CONDITIONS OF CONTRACT TO MAKE SURE THAT WHATEVER IS INCLUDED IN THE ANNEXURE FOLLOWS ON FROM THOSE CLAUSES.

The Divisional/Regional Safety Risk Manager or his representative having jurisdiction over the *service* must provide the relevant safety, health and environmental (SHE) criteria for incorporation into this Service Information. The SHE specification / scope must be signed off by the Divisional/Regional Safety Risk Manager or his representative confirming that the applicable safety criteria have been considered.

The Commodity Manager / Buyer must refer the tender to the Divisional/Regional Safety Risk Manager or his representative to evaluate against enquiry-specific safety criteria.

The Divisional Safety Risk Managers who will be responsible for the allocation of resources to assist P&SCM with the above processes are as follows:

- Generation: Roley McIntyre
- Transmission: Tony Patterson
- Distribution: Alex Stramrood
- Enterprises: Jace Naidoo
- Corporate: Kerseri Pather

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

23. Environmental constraints and management

Describe or cross refer to environmental constraints applicable to the *Contractor's* plan and his activities on the Affected Property and how they should be managed. Include here or cross refer to an Annexure to the Service Information.

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

24. Quality assurance requirements

Specify minimum requirements for the *Contractor's* Quality Plan and Work Procedures or provide the *Employer's* Quality Plan if that is to be used. Make sure witness and hold points are identified generally and describe any requirements for QA outside the Affected Property. Indicate how the *Contractor's* QA documentation is to be submitted for acceptance and any conditions that need to be imposed relating to acceptance. State whether ISO compliance is a condition and if so, which ISO standard shall apply.

25. Procurement

There is a cross reference from the core clause 11.2(6) definition of Disallowed Cost to the Service Information regarding procurement procedures. This part of the Service Information MUST include any such procedures to be able to administer Disallowed Cost.

26. People

27. Minimum requirements of people employed

Specify any constraints relating to people employed to Provide the Service; for example; permits for foreigners, training (other than H & S), use of labour from designated areas and industrial relations.

28. BBBEE and preferencing scheme

Specify constraints which *Contractor* must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures.

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

If the ASGI-SA requirements are to be included in this contract specify constraints which *Contractor* must comply with after contract award regarding any ASGI-SA requirements. The ASGI-SA Compliance Schedule completed in the returnable tender schedules is reproduced here. If ASGI-SA does not apply, delete this paragraph.

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

[Insert the agreed ASGI-SA Compliance Schedule here]

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

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

30. Subcontracting

31. Preferred subcontractors

TSC3 does not make use of nominated sub-contracting, but the *Employer* may list which subcontractors or suppliers the *Contractor* is required to enter into subcontracts with. This is usually only required where specialist services need to be obtained from a particular supplier or group of suppliers to comply with operational standards.

32. Subcontract documentation, and assessment of subcontract tenders

Specify any constraints on how the *Contractor* is to prepare subcontract documentation, whether use of the NEC system is compulsory or not (compulsory is recommended) and how subcontract tenders are to be issued, received, assessed (using a joint report?) and awarded.

33. Limitations on subcontracting

The *Employer* may require that the *Contractor* must subcontract certain specialized work, or that the *Contractor* shall not subcontract more than a specified proportion of the whole of the contract.

34. Attendance on subcontractors

State requirements for attendance on Subcontractors, if any

35. Plant and Materials

36. Specifications

Plant and Materials are defined as items intended to be included in the Affected Property. This will refer to replacement of worn or defective parts, routine replacement as part of regular preventative maintenance and supply of spare parts. Quality is usually designed in or specified in the technical specifications. However, to cover circumstances where quality may not be prescribed, this sub-paragraph could also be used to state an overarching default requirement – fitness for purpose etc.

Either specify here or provide a list of the applicable specifications and attach them as Annexure or state where they can be obtained from.

37. Correction of defects

State any constraints when dealing with defective Plant and Materials such as how repairs are carried out - can the item be fixed up or must it be replaced by a new one.

38. Contractor's procurement of Plant and Materials

Specify any constraints on how the *Contractor* is to order, codify, expedite, freight, import, transport to the Affected Property and any other requirements for delivery and storage before installation. The *Employer* may require warranties from suppliers to be in favour of the *Employer* and not just to the *Contractor*. The *Employer* may also need schedules of vendor data for his own use after the end of the *service period*.

39. Tests and inspections before delivery

Core Clause 41.1 refers to the Service Information stating which Plant and Materials are to be inspected and tested before delivery. Specify any requirements particularly if such tests and inspections are to be carried out by agents of the *Employer* overseas.

40. Plant & Materials provided "free issue" by the Employer

List any Plant and Materials which are to be provided by the *Employer*.

State arrangements for collection by *Contractor* or delivery by others on behalf of the *Employer*, offloading, inspection, storage, care custody and control, return of unused Plant and Materials, etc. Always include a statement to the effect that 'all other Plant and Materials are to be provided by the *Contractor*'.

41. Cataloguing requirements by the Contractor

State whether cataloguing is applicable, if it is, reference the requirements for cataloguing that need to be satisfied by the *Contractor* (consult Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974).

42. Working on the Affected Property

This part of the Service Information addresses constraints, facilities, services and rules applicable to the *Contractor* whilst he is doing work on the Affected Property.

43. Employer's site entry and security control, permits, and site regulations

Sites such as Koeberg Nuclear Power Station have very strict entrance requirements which tendering contractors need to allow for in their prices, and the *Contractor* must comply with. State these or similar requirements here.

In addition to the above there may be other restrictions once on the site, plus rules relating to roads, walkways and the provision of barricades.

44. People restrictions, hours of work, conduct and records

Restrictions and hours of work may apply on some sites. It is very important that the *Contractor* keeps records of his people working on the Affected Property, including those of his Subcontractors. State that the *Service Manager* shall have access to them at any time. These records may be needed when assessing compensation events.

45. Health and safety facilities on the Affected Property

Section 3 deals with contractual H & S requirements in addition to those of the OHSA Act. This section allows the *Employer* to state what measures are to be taken on the Affected Property by describing where First Aid facilities provided by the *Employer* are located and any other emergency arrangements. Do not use it if already addressed in 2.3.

46. Environmental controls, fauna & flora

This sub-paragraph may not be required in a service contract or if these matters are dealt with in the general environmental requirements referred to in section 3 above.

47. Cooperating with and obtaining acceptance of Others

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

- 1) The cross reference from core clause 25.1 about cooperation generally as well as details about Others with whom the *Contractor* may be required to share the Affected Property. See clause 11.2(9) for the definition of Others.
- 2) Requirements for liaison with and acceptance from statutory authorities or inspection agencies.

48. Records of *Contractor's* Equipment

This sub-paragraph is intended to address how records are to be kept of Equipment on Site including whether it is owned or hired. Include any constraints about scaffolding, rigs, heavy lifts and cranes, including removal from the Affected Property.

49. Equipment provided by the *Employer*

Provide details of equipment (e.g. overhead cranes) made available for use by the employer and set out conditions relating thereto.

50. Site services and facilities

51. Provided by the *Employer*

This is a mandatory cross reference form clause 25.2 in TSC3. State what the *Employer* will provide in the way of power, water, waste disposal, telecoms, ablutions, fire protection and lighting (etc.) on the Affected Property. Give hook up locations and any constraints on how the hook up is to be done. Always conclude by stating that the *Contractor* shall provide everything else necessary for Providing the Service.\

52. Provided by the *Contractor*

Describe what the *Contractor* is to provide in the way of accommodation, laboratories, storage, vehicles and office equipment for the *Service Manager* and any restrictions or minimum requirements concerning the *Contractor's* own facilities. Also state what happens to these facilities upon completion of the contract.

53. Control of noise, dust, water and waste

State requirements, if any.

54. Hook ups to existing works

State any constraints

55. Tests and inspections

56. Description of tests and inspections

Describe the tests and inspections to be carried out by the *Contractor* and the *Service Manager* and others [40.1].

57. Materials facilities and samples for tests and inspections

State what materials, facilities and samples for tests and inspections the *Contractor* and the *Employer* are to provide, per core clause 40.2.

58. List of drawings

59. Drawings issued by the *Employer*

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

Drawing number	Revision	Title
N/A		