



NEC3 Term Service Contract (TSC3)

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

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

for **THE MAINTENANCE AND REFURBISHMENT OF
MEDIUM VOLTAGE TRANSFORMERS, STANDBY
DIESEL GENERATORS AND STATION CONTINUITY
TESTING ON AN "AS AND WHEN REQUIRED BASIS"
AT ARNOT POWER STATION FOR A PERIOD OF
FIVE (5) YEARS**

Contents:	No of pages
Part C1 Agreements & Contract Data	[•]
Part C2 Pricing Data	[•]
Part C3 Scope of Work	[•]

CONTRACT No. [Insert at award stage]

PART C1: AGREEMENTS & CONTRACT DATA

Contents:	No of pages
C1.1 Form of Offer and Acceptance	[●]
[to be inserted from Returnable Documents at award stage]	
C1.2a Contract Data provided by the <i>Employer</i>	[●]
C1.2b Contract Data provided by the <i>Contractor</i>	[●]
[to be inserted from Returnable Documents at award stage]	

C1.1 Form of Offer & Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

THE MAINTENANCE AND REFURBISHMENT OF MEDIUM VOLTAGE TRANSFORMERS, STANDBY DIESEL GENERATORS AND STATION CONTINUITY TESTING ON AN "AS AND WHEN REQUIRED BASIS" AT ARNOT POWER STATION FOR A PERIOD OF FIVE (5) 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 authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

Options A	The offered total of the Prices exclusive of VAT is	R [●]
	Value Added Tax @ 15% is	R [●]
	The offered total of the amount due inclusive of VAT is ¹	R [●]
	(in words) [●]	

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

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Tenderer's CIDB registration number:

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of

Date

witness

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

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

Note:

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

No.	Subject	Details
1	[•]	[•]
2	[•]	[•]

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

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

For the tenderer:

For the Employer

Signature

Name

Capacity

On behalf
of

(Insert name and address of organisation)

(Insert name and address of organisation)

Name &
signature
of witness

Date

C1.2 TSC3 Contract Data

Part one - Data provided by the *Employer*

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

¹ Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 539 1902 www.ecs.co.za

THE MAINTENANCE AND REFURBISHMENT OF MEDIUM VOLTAGE TRANSFORMERS, STANDBY DIESEL GENERATORS AND STATION CONTINUITY TESTING ON AN “AS AND WHEN REQUIRED BASIS” AT ARNOT POWER STATION FOR A PERIOD OF FIVE (5) YEARS

11.2(2)	The Affected Property is	Arnot Power Station					
11.2(13)	The <i>service</i> is	THE MAINTENANCE AND REFURBISHMENT OF MEDIUM VOLTAGE TRANSFORMERS, STANDBY DIESEL GENERATORS AND STATION CONTINUITY TESTING ON AN “AS AND WHEN REQUIRED BASIS” AT ARNOT POWER STATION FOR A PERIOD OF FIVE (5) YEARS					
11.2(14)	The following matters will be included in the Risk Register	<table><tr><td>Risks</td></tr><tr><td>Cost: Overpricing or under-pricing</td></tr><tr><td>People Reworks and substandard work not according to Eskom procedure</td></tr><tr><td>Time Failure to adhere to delivery plan</td></tr><tr><td>Quality Reworks and substandard work not according to Eskom procedure</td></tr></table>	Risks	Cost: Overpricing or under-pricing	People Reworks and substandard work not according to Eskom procedure	Time Failure to adhere to delivery plan	Quality Reworks and substandard work not according to Eskom procedure
Risks							
Cost: Overpricing or under-pricing							
People Reworks and substandard work not according to Eskom procedure							
Time Failure to adhere to delivery plan							
Quality Reworks and substandard work not according to Eskom procedure							
11.2(15)	The Service Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.					
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa					
13.1	The <i>language of this contract</i> is	English					
13.3	The <i>period for reply</i> is	Two (2) weeks					
2	The Contractor's main responsibilities	Data required by this section of the core clauses are 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					
21.1	The <i>Contractor</i> submits a first plan for acceptance within	Two (2) weeks after Eskom's submitted task order					
3	Time						
30.1	The <i>starting date</i> is.	[•]					
30.1	The <i>service period</i> is	Five (5) Years					
4	Testing and defects	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data					
5	Payment						
50.1	The <i>assessment interval</i> is	between the 25th day of each successive month.					
51.1	The <i>currency of this contract</i> is the	South African Rand					

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51.2	The period within which payments are made is	<p>Thirty (30) Calendar days after the signed assessment by both Parties and a valid Tax Invoice.</p> <p>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.</p>			
51.4	The <i>interest rate</i> is	<p>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</p> <p>(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted <i>mutatis mutandis</i> every 6 months thereafter (and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.</p>			
6	Compensation events	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data			
7	Use of Equipment Plant and Materials	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data			
8	Risks and insurance				
80.1	These are additional <i>Employer's</i> risks	<table><tr><th>Risks</th></tr><tr><td>Delays on outage starting dates</td></tr><tr><td>Availability of the contractor</td></tr></table>	Risks	Delays on outage starting dates	Availability of the contractor
Risks					
Delays on outage starting dates					
Availability of the contractor					
83	Insurance cover by <i>Contractor</i>	Refer to Z 12.1 INSURANCE TABLE A of the <i>additional conditions of contract "Z" clauses</i>			

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86	Insurance cover by <i>Employer</i>	Refer to Z 12.2 INSURANCE TABLE B of the <i>additional conditions of contract "Z" clauses</i>
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
A	Priced contract with price list	
20.5	The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the service at intervals no longer than	Two (2) weeks after receipt of the approved Task Order
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 Arbitration Foundation of Southern Africa (AFSA).
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.
	Address	
	Tel No.	
	Fax No.	
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	[•] South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.

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12 Data for secondary Option clauses

X1	Price adjustment for inflation			
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
		45%	Table C3 - All hourly paid employees	SEIFSA
		30%	Table L1(B) Road freight Costs	SEIFSA
		10%	Table D4 – Consumer Price Index	SEIFSA
		15%	non-adjustable	
		100%		
X2	Changes in the law			
X2.1		is a compensation event if it occurs after the Contract Date		
X17	Low service damages			
X17.1	The <i>service level table</i> is in	Refer to Table C below		
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 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		

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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	<p>the total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> • Defects due to his design, 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 end of liability date is	52 weeks after the end of the service period.
X19	Task Order	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	7 days of receiving the Task Order
Z	The additional conditions of contract are	Z1 to Z16 always apply.

Z1 Cession delegation and assignment

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

Z2 Joint ventures

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

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

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

Z4 Confidentiality

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

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

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *service*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Affected Property;
 - warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of the *service*; and
 - undertakes, in and about the execution of the *service*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Z6.2 The *Contractor*, in and about the execution of the *service*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z7 Provision of a Tax Invoice and interest. Add to core clause 51

- Z7.1 Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

Z8 Notifying compensation events

- Z8.1 Delete the last paragraph of core clause 61.3 and replace with:
- If the *Contractor* does not notify a compensation event within eight weeks of becoming aware of 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.

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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

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.

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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.
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

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Z 12.2 Replace core clause 86 with the following:

**Insurance
by the
Employer**

86

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

INSURANCE TABLE B

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*.

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

exposures, i.e. 10-minute TWA.

Z14.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

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- Z14.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z14.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z14.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z14.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
- Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

Z15 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.

- Z15.1 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.
- Z15.2 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 requires 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.
- Z15.3 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.
- Z15.4 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

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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.

Z16 Protection of Personal Information Act Compliance

Z16.1 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").

Z16.2 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 and the manner in which the Shared Personal Information is, or is to be, processed.

Z16.3 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.

Z16.4 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:-

Z16.4.1 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

Z16.5 If either Party receives any complaint, notice or communication from the Regulator which relates directly to:

Z16.5.1 the other Party's Processing of the Shared Personal Data; or

Z16.5.2 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.

Z16.6 If a Data Subject makes a written request to either 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:

Z16.6.1 promptly and without undue delay forward the request to the other Party; and

Z16.7 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

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Shared Personal Information.

- Z16.8 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.
- Z16.9 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.

X17.1 Table C: Service Level Table

Damage	Penalty
Reworks and substandard work not according to Eskom procedure	Contractor to carry corrective costs
Failure to adhere to delivery plan	1% of the task order value per day
Failure to submit QCP's after each completed task	1% of the task order after value per day

C1.2 Contract Data

Part two - Data provided by the *Contractor*

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)¹ 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 in ink.

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is	%
	The <i>subcontracted fee percentage</i> is	%
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the <i>Contractor's</i> plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key people are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications:	

¹ Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 5391902 or www.ecs.co.za

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	_____

PART 2: PRICING DATA

TSC3 Option A

Document reference	Title	No of pages
	This Cover page	1
C2.1	Pricing assumptions: Option A	2
C2.2	<i>The Price List</i>	6
	Total number of pages	9

C2.1 Pricing assumptions: Option A

1. How work is priced and assessed for payment

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

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 <ul style="list-style-type: none"> the Price for each lump sum item in the Price List which the <i>Contractor</i> has completed and where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the <i>Contractor</i> has completed by the rate.
		(19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

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

2. 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.

3. 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).

4. 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.

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

- Has taken account of the guidance given in the TSC3 Guidance Notes relevant to Option A;
- Understands the function of the Price List and how work is priced and paid for;
- Is aware of the need to link operations shown in his plan to items shown in the Price List;
- Has listed and priced items in the *price list* which are inclusive of everything necessary and incidental to Providing the Service in accordance with the Service Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate item within the Prices or rates of other listed items in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.
- Understands there is no adjustment to items priced as lump sums if the amount, or quantity, of work within that item later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the (lump sum) Prices is as a result of a compensation event.

4.1. 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.

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C2.2 the *price list*

Item no:	Description	Unit	Expected Quantity	Rate	Price
A – LABOUR & SAFETY REQUIREMENTS					
TRANSFORMER MAINTENANCE					
Call outs (Weekdays & Saturdays) – OT1.5					
01	Supervisor (20 hrs/pm x 60m)	HR	1200		
02	Electrician (2 x 20 hrs/pm x 60m)	HR	2400		
03	Skilled labour (3 x 20 hrs/pm x 60m)	HR	3600		
Call Outs (Sundays & Public Holidays) – OT2					
04	Supervisor (20 hrs/pm x 60m)	HR	1200		
05	Electrician (2 x 20 hrs/pm x 60m)	HR	2400		
06	Skilled labour (3 x 20 hrs/pm x 60m)	HR	3600		
07	Travelling (estimated @ 400kms return trip x 7d/m x 60m)	KM	168 000		
STATION EARTH CONTINUITY TESTING					
Normal working hours					
08	Technician	HR	800		
09	Skilled labour	HR	800		
Safety Budget					
10	Overalls	EA	50		
11	Hardhat with chin strap	EA	50		
12	Safety boots	EA	50		
13	Gloves	EA	50		
14	Safety goggles	EA	50		
15	Medicals	EA	50		
16	Police clearances	EA	50		
17	Safety file: first year	EA	1		
18	Safety file: year two - five	EA	4		

The total of Prices A

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Item no:	Description	Unit	Expected Quantity	Rate	Price
B - TRANSFORMER SPARES					
Supply & deliver					
Winding Temp Indicator (WTI)					
19	Indicator Type: Winding Temperature Dimensions: Rad 140 Mm Range: -20 To 140 Scale: -20 To 140 Rating: Output: 4-20 MA Material: Galvanized and Stainless Steel Specification: Ip55 to Din Vde 0470-1 Potential: 250 Vac; Current: 5; Indicator Ring and Casing made of Steel, Galvanized and Paint Ral7033; Laminated Safety Glass; Mounting Plate is Stainless Steel, Indoor and Outdoor Use; Ventilated and Remains Mist Free Up To 80% Rh; Contact Material Is Silver Cadmium Oxide; Sensor Is Piezo Resistive Load Cell; 1-6 Microswitches	EA	15		
Oil Temp Indicator (OTI)					
20	Indicator Type: Oil Temperature Dimensions: Rad 140 Mm Range: -20 to 140; Scale: -20 to 140 Rating: Output: 4-20 MA; Material: Galvanized And Stainless Steel; Specification: Ip55 To Din VDE 0470-1; Potential: 250 Vac; Current: 5; Indicator Ring and Casing Made of Steel, Galvanized and Paint Ral7033; Laminated Safety Glass; Mounting Plate is Stainless Steel, Indoor and Outdoor use; Ventilated and Remains Mist Free up to 80% Rh; Contact Material is Silver Cadmium Oxide; Sensor Is Piezo Resistive Load Cell; 1-6 Microswitches	EA	15		

The total of Prices B

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C – MAINTAIN, STRIP AND ASSESS TRANSFORMERS - PRICE BREAKDOWN

21. Unit Lighting Transformers

Oil Quantity (L) - Average	640			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	18		
Strip & assess	EA	1		

22. Turbine Transformers

Oil Quantity (L) - Average	1250			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.75			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	18		
Strip & assess	EA	1		

23. Standby Transformers

Oil Quantity (L) - Average	640			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	9		
Strip & assess	EA	1		

24. Boiler Transformers

Oil Quantity (L) - Average	6440			
Voltage Rating (Kv)	11/3.3			
MVA Rating	10			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	39		
Strip & assess	EA	1		

25. Boiler Transformers

Oil Quantity (L) - Average	964			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.75			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	36		
Strip & assess	EA	1		

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26. Boiler Circulation Pump Transformers				
Oil Quantity (L) - Average	615			
Voltage Rating (Kv)	3.3/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	72		
Strip & assess	EA	1		

27. Sub-Station Transformers				
Oil Quantity (L) - Average	3500			
Voltage Rating (Kv)	11/3.3			
MVA Rating	5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	12		
Strip & assess	EA	1		

28. Sub-Station Transformers				
Oil Quantity (L) - Average	805			
Voltage Rating (Kv)	3.3/0.4			
MVA Rating	0.75			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	12		
Strip & assess	EA	1		

29. Distribution Transformers				
Oil Quantity (L) - Average	530			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	6		
Strip & assess	EA	1		

30. Coal Plant Transformers				
Oil Quantity (L) - Average	805			
Voltage Rating (Kv)	3.3/0.4			
MVA Rating	0.75			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	12		
Strip & assess	EA	1		

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31. Conveyor Transformers				
Oil Quantity (L) - Average	570			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	39		
Strip & assess	EA	1		

32. CW Transformers				
Oil Quantity (L) - Average	2800			
Voltage Rating (Kv)	11/3.3			
MVA Rating	4			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	24		
Strip & assess	EA	1		

33. CW/AWR Spare Transformer				
Oil Quantity (L) - Average	2997			
Voltage Rating (Kv)	11/3.3			
MVA Rating	4			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	3		
Strip & assess	EA	1		

34. Water Treatment Plant Transformers				
Oil Quantity (L) - Average	570			
Voltage Rating (Kv)	3.3/0.4 & 11/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	9		
Strip & assess	EA	1		

35. Arnot Single Quarters Transformers				
Oil Quantity (L) - Average	835			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.75			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	6		
Strip & assess	EA	1		

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36. Sewage Plant Transformers				
Oil Quantity (L) - Average	530			
Voltage Rating (Kv)	11/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	3		
Strip & assess	EA	1		

37. Ash Water Return Transformers				
Oil Quantity (L) - Average	1900			
Voltage Rating (Kv)	11/3.3 & 3.3/0.4			
MVA Rating	4/0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	6		
Strip & assess	EA	1		

38. Workshop Transformers				
Oil Quantity (L) - Average	1050			
Voltage Rating (Kv)	3.3/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	6		
Strip & assess	EA	1		

39. Contractor Supply Transformers				
Oil Quantity (L) - Average	1317			
Voltage Rating (Kv)	11/0.4			
MVA Rating	1.6			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	6		
Strip & assess	EA	1		

40. Main Drain Sump Pump Transformers				
Oil Quantity (L) - Average	570			
Voltage Rating (Kv)	3.3/0.4			
MVA Rating	0.5			
Description	Unit	Expected quantity	Rate	Price
Maintenance	EA	3		
Strip & assess	EA	1		

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The total of the Prices C

Item no:	Description	Unit	Expected Quantity	Rate	Price
D – MAINTENANCE OF EMD STANDBY DIESEL GENERATORS:					
Diesel generators					
41	Make: Perkins Engine No.: DGDF6002 U10376V Designation: 4006 – 23TAG3A Engine Revs: 1500 Rpm Engine Rating: 679BKW 17.5 DEG Weight: 11 Tons	EA	10		
42	Make: Perkins Engine No.: DGDF6002 U12689A Designation: 4006 – 23TAG3A Engine Revs: 1500 Rpm Engine Rating: 675BKW 17.5 DEG Weight: 11 Tons	EA	10		
43	Make: Volvo Model No.: TAD 532 GE Serial No: 5312550552 Engine Revs: 1500 Rpm Engine Rating: 130 KVA Power: 129 KW Voltage: 400V	EA	10		
44	Make: Volvo Model No: TAD 531 GE Engine Revs: 1500 Rpm Power: 102KW	EA	10		
45	Make: Doosan Model No: P3231 F-S Engine Revs: 1500 Rpm Power: 890KW	EA	10		
Supply & install					
46	12V Batteries of size 685C (118Ah - First National Battery)	EA	12		
47	12V Smart DSE Battery Charger	EA	6		

The total of Prices D

Note: Maintenance of generators to include consumables and or free issue materials

The total of the Prices A, B, C & D

Note:

- All rates and prices will be assumed to be fully inclusive of everything (such as correct labour rates (Normal Time), allowances, bonus, annual and sick leave, etc)

PART 3: SCOPE OF WORK

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C3.2	<i>Contractors Service Information</i>	
	Total number of pages	

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C3.1: EMPLOYER’S SERVICE INFORMATION

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1 Description of the service

1.1 Executive overview

Transformers: Complete maintenance and repair services are required at Arnot Power Station on all in-use and spare transformers (rated below 10MVA) within the station perimeter as well as in the Rietkuil property. All maintenance and repairs need to be conducted in line with maintenance standards. Competent and qualified personnel are required to carry out such maintenance and repair activities.

Earth Continuity Testing: Supplier to examine and perform earth continuity and earthing integrity testing on Generation plant earthing systems at Arnot Power Station on an “as-and-when-required basis”. Testing shall be conducted in accordance with applicable Eskom standards, guidelines, and procedures. All tests shall be recorded using the Arnot Power Station Earth Continuity Test Report provided by the Employer and in accordance with the standards listed in Section 4.1.2.1 (Eskom Standards and Guidelines).

Standby Generators service & repairs: Provision of maintenance and repairs of standby Diesel generators at Arnot Power Station. All maintenance and repairs need to be conducted in line with maintenance standards. Competent and qualified personnel are required to carry out such maintenance and repair activities.

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1.2 Employer’s requirements for the service

1.2.1 Transformers

On site repair work and maintenance:

- Drain used transformer oil and dispose of the used oil in accordance with 32-245 Eskom Waste Management Standard and SANS 290 Mineral insulating oils (uninhibited) – Purchase, management, maintenance, testing and safe disposal. (Upon request).
- *Contractor* to notify *Service Manager* if there is a need to replace or repair damaged cable terminal boxes on the HV and LV sides of the transformer. (Terminal boxes to be replaced with air insulated boxes)
- Removal of bitumen and replacement of existing bitumen containing cable terminal boxes with air insulated cable terminal boxes with the correct clearances according to SANS 876 on the HV and LV sides of the transformer.
- Clean transformer main tank, radiators, auxiliaries and conservator tank.
- Remove existing, supply and replace the sight glass/oil gauge on the conservator tank.
- Repair leaks on transformers and address all corrosion and rust in accordance with 240-56030674 Corrosion Protection and Maintenance of New and In-Service Transformers and Reactors Standard.
- Priming of the outside area of the main tank and painting of outside area of main tank (Outer coat colour must be Battleship Grey G13).
- Supply and fitting of gaskets (top cover gaskets, cable termination box gaskets, valve gaskets, flange gaskets, bushing gaskets, sight glass/oil gauge gaskets etc). Re-gasketing of all leaking gaskets with Transformer Grade Cork gaskets (TD1049 sealing material that is compounded with Nitrile (NBR) rubber, operating temperatures -30°C to 125°C, stress range 5.5 MPA to 20 MPA)
- Priming of the outside area of the conservator tank and painting of outside area of the conservator tank (Outer coat colour must be Cloud White SANS 1091 G80).
- *Contractor* to notify *Service Manager* if there is a need for replacement of Buchholz relays (damaged Buchholz relays must be returned to the Service Manager/Supervisor for disposal)
- Install sampling, test and bleed piping points from the Buchholz relay, valves to be installed 100mm from the Buchholz as well as on the ends of the pipes (half-way down the transformer tank)
- Remove and re-install radiators upon request. Clean/flush and inspect radiators for leaks, overhaul radiators upon request (radiators to be pressure tested in a pre-approved workshop upon request).
- Remove existing, supply and install sampling valves upon request
- Clean LV, HV and neutral earth bushings, replace the cone rubbers and gaskets on the bushings.
- Remove existing, supply new (upon request) and install/replace LV, HV and neutral earth bushings.
- Remove existing, supply and properly install new HE201 marshalling/auxiliary box with spring-loaded terminal block that accommodates all auxiliaries, all auxiliaries to be re-wired. Re-seal or supply auxiliary boxes that seal. (upon request)
- Supply and install waterproof sealant for HV, LV and auxiliary cables protruding from the ground inside the bund walls.
- Remove existing and install new auxiliary cable (2.5mm² 4 core blue line).
- Remove silica gel and clean silica gel breather. Supply silica gel (upon request) and refill breather with Envirogel silica gel beads that conform to the 240-9072885 standard for silica gel used in breathers for electrical equipment.
- Clean temperature probe pockets.
- Refill the transformer with oil to the normal working level. Oil must conform to 240-75661431, Specification for Mineral Insulating Oils (Uninhibited and Inhibited Type U for transformers rated ≤132 kV)
- P&T to assist with oil sampling and results analysis – Oil to conform to the following specification. (240-692-69201489 Online Transformer Condition Information Display System Standard Appendix A)
- Supply and secure UV protected PCB labels according to SANS 290:2016 Ed 2 Annexure C. (upon request)
- Supply and secure UV protected sample valve labels according to 240-56062720 Oil Sample Point Label Standard. (upon request)
- The correct PPE must be worn when performing work. The minimum PPE requirements to work in certain areas are indicated on the signage on the walls.
- No work may be conducted without a Permit to Work; isolations should be verified before work commences.

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- All consumables must be supplied by the *Contractor*.
- Any access medium to be supplied by the *Contractor* (e.g. step ladders). All tools and portable electrical equipment to be supplied by the *Contractor*. A copy of inspection and compliance with the OHS Act on all equipment used to be handed in prior to use.
- Contractor to develop QCP that must be sent to the Transformer System Engineer for approval prior to the activity. The activity will not commence if the QCP was not approved.

Purification of transformer oil (11kV < rated > 11kV):

- Oil sample to be taken prior to purification by Arnot P&T Department from the sample valve at the bottom of the main tank (results must at a minimum include results of moisture, electric strength and tan delta, dissipation factor will be a bonus).
- Arnot P&T Department must send the oil sample results to the Transformer System Engineer.
- Purification contractor to provide proof of training records for transformer oil purification.
- Purification contractor to develop QCP that must be sent to the Transformer System Engineer for approval prior to the activity. The activity will not commence if the QCP was not approved. The Purification Contractor must record temperatures and times on the QCP.
- The Purification Contractor must provide a certificate of a sample that was taken from the purifier that will be used to purify the oil, to prove that the purifier is PCB free prior to the activity. This certificate must indicate the PCB levels of the purifier.
- Purification Contractor to prove that the filters on the purifier that will be used were cleaned and are not damaged.
- The minimum circulation time for a transformer is 24 hours (11kV) and 6 hours (<11 kV).
- All cooler/radiator valves (if present) and the conservator shut off valve should be verified to be in the open position by the purification contractor prior to the activity.
- The transformer oil must be circulated until a minimum temperature of 40°C is reached.
- During the purification process the oil temperature must always be kept between 40°C and 70°C.
- The transformer oil must be circulated at least 3 times after the minimum temperature of 40°C was reached.
- After the oil is circulated at least 3 times at a temperature between 40°C and 70°C, an oil sample is to be taken by P&T Department (the contractor can take their own sample as well) from the sample valve at the bottom of the main tank. ((results must at a minimum include results of moisture, electric strength and tan delta, dissipation factor will be a bonus).
- While waiting on the oil sample results from the laboratory, the purification can continue or the contractor can decide, based on the rate of improvement if the purifier will be disconnected taking into consideration that the minimum circulation time was reached, and that the purifier would take time to reach 40°C when re-connected.
- Arnot P&T Department must send the oil sample results to the Transformer System Engineer as soon as possible.
- If the moisture and electric strength results do not conform to the Eskom Specification 240-75661431 (Moisture ≤ 10ppm and electric strength ≥ 70 kV), purification should continue until the sample results are in line with the Eskom specification. Purification should also continue if the minimum circulation time did not reach 24 hours (11 kV) and 6 hours (<11 kV).
- The transformer must be bled at all bleeding points directly after hot circulation.
- A final inspection must be done by the purification contractor, EMD and the System Engineer to ensure that all valves are in the correct position. The following valves (if present) must be open: valves from the main tank to the coolers/radiators, conservator shut off valve, flexible cable box oil filling valve and dehydrating breather valve. The sample valve, bleeding point valves, tank drain valves and cooler drain valves must be shut.
- Purification Contractor to supply EMD and the System Engineer with a report that contains all purification data and recordings.
- QCP's and final acceptance to be signed by the purification contractor, EMD and the System Engineer.
- The transformer (11 kV) must be standing for 24 to 48 hours, or the transformer (<11 kV) must be standing for 6 to 12 hours before it is energised. All excess air must be bled off at all bleeding points prior to energisation.

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Supply & Installation of the following components on an “as and when required basis”

- Winding Temperature Indicators (WTI's) and Oil Temperature Indicators (OTI's). Calibration certificates must be supplied. Eskom to supply specifications of the WTI and OTI.
- PRD (Pressure Relief Device)
- Tap Changer Switch. Convert the Tap Changer to a fixed tap.
- Cable terminal boxes on the HV and LV sides of the transformer. (Terminal boxes to be replaced with air insulated boxes)
- Buchholz relays (old Buchholz relays must be returned to Arnot EMD) (Calibration certificates must also be supplied.)
- Sampling, test and bleed piping points from the Buchholz relay, valves to be installed 100mm from the Buchholz as well as on the ends of the pipes (half-way down the transformer tank)
- Radiators
- Sampling valves
- LV, HV and neutral earth bushings
- HE201 marshalling/auxiliary box with spring-loaded terminal block that accommodates all auxiliaries, all auxiliaries to be re-wired.
- Conservator sight glass/oil gauge.
- Silica gel that conforms to the 240-9072885 standard for silica gel used in breathers for electrical equipment.
- UV protected PCB labels according to SANS 290:2016 Ed 2 Annexure C.
- UV protected sample valve labels according to 240-56062720 Oil Sample Point Label Standard.

Strip, assess and repairs of Medium Voltage Transformers, on an “as and when required basis”

- Transformers to be collected from Arnot Power Station and transported to the Contractors workshop.
- *Contractor* to Strip and assess the transformer and provide a report. Arnot Technical team to verify the scope and sign it off.
- *Contractor* to quote for repairs as per the approved scope.
- *Contractor* to submit data pack to the *Service Manager*, i.e (breakdown report / investigation report, including pictures indicating the breakdown or failure, tests conducted, recommendations and a quotation to repair the damaged transformer/s), *Service Manager* to verify if all documentation is in order and issue a task order.
- *Contractor* to send a repair program to the *Service Manager* within the stated period of reply.
- Once repair work is completed, *Contractor* arranges with the *Service Manager* for testing of the transformer. (Factory Acceptance Testing) FAT
- Transformer to be delivered back to Arnot Power Station.
- Contractor to develop QCP that must be sent to the Transformer System Engineer for approval prior to the activity. The activity will not commence if the QCP was not approved.

1.2.2 Earth Continuity Testing

This Maintenance Scope of Work (SOW) covers the provision of earth continuity and earthing integrity testing services for generation plant earthing systems at Arnot Power Station on an as-and-when-required basis over a period of 60 months.

The objective of this SOW is to ensure that all plant, equipment, and associated electrical systems are effectively bonded and earthed in accordance with applicable Eskom standards, South African National Standards (SANS), and statutory requirements.

The scope includes the inspection, testing, verification, and reporting of earthing systems across all units and auxiliary plant areas, including but not limited to generating units, control rooms, switchgear rooms, battery rooms, MCCs, and associated infrastructure.

All testing activities shall be conducted using calibrated equipment by competent personnel, and results shall be recorded, reported, and maintained in accordance with Arnot Power Station requirements to support compliance, reliability, and safety of the plant.

- A competent and trained Technician shall be available on an “as and when required basis” by Arnot Power Station to conduct earth continuity and earthing integrity testing.

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- Earth continuity and earthing integrity testing shall be conducted at intervals specified by applicable Eskom standards and guidelines, and after major outages, faults, or plant modifications.
- All work shall be performed by a trained and competent personnel with proven experience in earthing and continuity testing.
- The *Service Manager* and *Contractor* to establish a communication link for standby purposes, and share with Electrical Maintenance Department (EMD) standby team
- The maximum response time for the Technician to be on site shall not exceed 1.5 hours from the time the call is logged.
- The *Contractor* shall ensure that all earthing tests are conducted in compliance with applicable Acts, Regulations, Eskom standards, and approved procedures as listed.
- The *Contractor* shall submit test reports and records for all earth continuity and earthing integrity tests conducted, and these shall be handed to the *Service Manager* for record keeping.
- All test records shall be signed, dated, and kept up to date. Failure to maintain proper records may result in non-conformance being raised.

1.2.3 Standby Diesel Generators – Service & repairs:

The *Contractor* to maintain and service EMD standby diesel generator on a bi - annual basis, upon completion of each service / maintenance reports and records to be handed over to the *Service Manager* for record keeping.

The following inspections/ service shall be carried out:

- (i) **General Inspection**
 - Perform a full visual inspection of the generator set
 - Check for oil leaks, fuel leaks, coolant leaks, and loose connections.
 - Inspect mounting, vibration isolators, and structural integrity.
- (ii) **Engine Service**
 - Drain and replace engine oil with manufacturer-approved grade.
 - Replace oil filters.
 - Replace fuel filters (primary and secondary).
 - Replace or clean air filters.
 - Inspect turbocharger (if applicable).
 - Check and adjust drive belts and tensioners.
 - Inspect exhaust system for leaks, corrosion, and secure mounting.
- (iii) **Fuel System**
 - Inspect fuel lines, hoses, and connections.
 - Check fuel tank condition and clean if required.
 - Drain water and sediment from fuel tank and separators.
 - Test fuel quality if necessary.
- (iv) **Cooling System**
 - Check coolant level and concentration.
 - Flush and replace coolant.
 - Inspect radiator, hoses, clamps, and water pump.
 - Clean radiator fins and ensure proper airflow.
 - Test thermostat operation.
- (v) **Electrical System**
 - Inspect and tighten all electrical connections.
 - Test starting system (starter motor and solenoid).
 - Check alternator output and voltage regulation.
 - Inspect wiring harnesses for wear or damage.
- (vi) **Battery and Charging System**

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- Inspect batteries for condition, corrosion, and secure mounting.
- Clean battery terminals and apply protective grease.
- Check electrolyte levels (if applicable).
- Test battery voltage and load capacity.
- Verify battery charger operation.

(vii) Control Panel and Protection Systems

- Inspect control panel components and indicators.
- Test alarms and shutdown protections, including:
 - Low oil pressure
 - High coolant temperature
 - Overspeed
 - Overcurrent/overload
- Verify automatic and manual operation modes.

(viii) Lubrication System

- Inspect lubrication lines and pumps.
- Confirm proper oil pressure during operation.

(ix) Load Testing

- Perform no-load start-up test.
- Monitor and record:
 - Voltage
 - Current
 - Frequency
 - Oil pressure
 - Coolant temperature
- Confirm stable operation.

(x) Safety Checks

- Verify proper grounding/earthing of the generator.
- Inspect fire extinguisher availability and condition.
- Ensure compliance with safety standards and site requirements.
- Provide detailed service report including:
 - Work performed
 - Test results and readings
 - Identified defects or risks
 - Recommendations for repairs or replacements

- Service stickers indicating next service due date.

(xi) Tools, Equipment, and Consumables

- All necessary tools, testing equipment, and consumables shall be provided by the service provider.
- Replacement parts must comply with OEM specifications.

(xii) Compliance and Standards

- All work must comply with:
 - Manufacturer specifications
 - Applicable national standards (e.g., SANS where applicable)
 - Occupational health and safety regulations

(xiii) Service Schedule

- Service to be conducted bi - annually or after a specified number of operating hours (e.g., 250–500 hours), whichever comes first.

(xiv) Exclusions (if applicable)

- Major repairs or component replacements (quoted separately)
- Fuel supply
- Structural modifications

(xv) Acceptance Criteria

- Generator starts and operates reliably.
- All parameters within acceptable limits.
- No leaks, abnormal noise, or excessive vibration.
- All safety and protection systems fully functional.

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Applicable standards and guidelines

The Contractor shall comply with the latest editions of the following Acts, Eskom Standards, and South African National Standards, as applicable:

Eskom Standards and Guidelines:	South African National Standards (SANS):	International Standards / Guides (where applicable):	Legislation	Reports
Eskom Standard 240-56356396 – Earthing and Lightning Protection Standard (Rev 2)	SANS 10142-1 – The Wiring of Premises (Low-Voltage Installations)	IEEE 665 – Guide for Generating Station Grounding	Occupational Health and Safety Act, 85 of 1993 and Regulations	Arnot Power Station Earth Test Continuity Test Report:
Eskom Guideline – Maintenance of Power Station Earthing and Earth Mats	SANS 10313 – Protection Against Lightning – Physical Damage to Structures and Life Hazard	IEEE 1050 – Guide for Instrumentation and Control Equipment Grounding in Generating Stations		
PTM Practice Note – Scope Change Regarding Earth Mat Testing at Power Station Sites	SANS 10199 – The Design and Installation of Earth Electrodes	IEC 61662 – Assessment of Risk of Damage Due to Lightning		
Eskom Standard 240-84854974 – Continuity Measurement of Substation Earth Grid Systems	SANS 10198-12 – Installation of Earthing Systems	NRS 042 – Protection of Electronic Equipment Against Damaging Transients		
Eskom Standard 240-84854974 – Continuity Measurement of Substation Earth Grid Systems	SANS 1063 – Earth Rods, Couplers and Connections			
Eskom Standard 240-170000153 – Copper Conductors Used for Earthing in Substations	SANS 121 – Hot-Dip Galvanized Coatings on Fabricated Iron and Steel Articles			
Eskom Standard 240-170000349 – Copper-Clad Steel Conductors Used for Earthing	SANS 61000-5-2 – EMC – Earthing and Cabling			
Eskom Standard 240-170000535 – Exothermic Weld Connections for Substation Earthing	SANS 62305 Series – Protection Against Lightning (Parts 1–4)			
Eskom Drawing Standard 0.54/393 – Applicable Earthing Drawing Standards				

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Arnot Power Station Transformers:

Unit Lighting Transformers				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
68-84	10BLT01	530	11/0.4	0.5
68-82	20BLT01	530	11/0.4	0.5
68-74	30BLT01	530	11/0.4	0.5
PE7919	40BLT01	750	11/0.4	0.5
PE8102	50BLT01	750	11/0.4	0.5
PE7921	60BLT01	750	11/0.4	0.5
Turbine Transformers				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
28128	10BFT10	1250	11/0.4	0.75
23980	20BFT10	1250	11/0.4	0.75
23979	30BFT10	1250	11/0.4	0.75
PE8105	40BFT10	1250	11/0.4	0.75
PE8110	50BFT10	1250	11/0.4	0.75
PE8113	60BFT10	1250	11/0.4	0.75
Standby Transformers				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
PE8104	01BHW01	750	11/0.4	0.5
68-75	02BHW01	530	11/0.4	0.5
68-73	03BHW01	750	11/0.4	0.5
Boiler Transformers (11 kV/3.3 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
S548-2	10BDT01	5800	11/3.3	10
T433-1	10BDT02	5070	11/3.3	10
27328	10BDT03	8450	11/3.3	11
S548-6	20BDT01	5800	11/3.3	10
S548-4	20BDT02	5800	11/3.3	10
S548-3	30BDT01	5800	11/3.3	10
S548-1	30BDT02	5800	11/3.3	10
S548-5	40BDT01	5800	11/3.3	10
T-433-2	40BDT02	5800	11/3.3	10
T433-3	50BDT01	5070	11/3.3	10
T433-4	50BDT02	5070	11/3.3	10
T433-6	60BDT01	5070	11/3.3	10
T433-5	60BDT02	5070	11/3.3	10

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Boiler Transformers (11 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
23983	10BFT01	840	11/0.4	0.75
23984	10BFT02	840	11/0.4	0.75
23982	20BFT01	725	11/0.4	0.75
23981	20BFT02	725	11/0.4	0.75
23978	30BFT01	725	11/0.4	0.75
23977	30BFT02	725	11/0.4	0.75
PE8107	40BFT01	1250	11/0.4	0.75
PE8106	40BFT02	1250	11/0.4	0.75
PE8108	50BFT01	1040	11/0.4	0.75
PE8109	50BFT02	1250	11/0.4	0.75
PE8112	60BFT01	1250	11/0.4	0.75
PE8111	60BFT02	1250	11/0.4	0.75
Boiler Circulation Pump Transformers (3.3 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
68-101	10BFV01	570	3.3/0.4	0.5
68-100	10BFV02	570	3.3/0.4	0.5
68-90	10BFV03	570	3.3/0.4	0.5
68-94	10BFV04	570	3.3/0.4	0.5
68-97	20BFV01	570	3.3/0.4	0.5
68-93	20BFV02	570	3.3/0.4	0.5
68-95	20BFV03	570	3.3/0.4	0.5
68-96	20BFV04	570	3.3/0.4	0.5
68-85	30BFV01	570	3.3/0.4	0.5
68-86	30BFV02	570	3.3/0.4	0.5
68-89	30BFV03	570	3.3/0.4	0.5
68-87	30BFV04	570	3.3/0.4	0.5
PE8116	40BFV01	750	3.3/0.4	0.5
PE8117	40BFV02	750	3.3/0.4	0.5
PE8114	40BFV03	750	3.3/0.4	0.5
PE8115	40BFV04	750	3.3/0.4	0.5
PE8121	50BFV01	750	3.3/0.4	0.5
PE8120	50BFV02	750	3.3/0.4	0.5
PE8119	50BFV03	750	3.3/0.4	0.5
PE811	50BFV04	750	3.3/0.4	0.5
PE8123	60BFV01	750	3.3/0.4	0.5
PE8243	60BFV02	750	3.3/0.4	0.5
193952-1	60BFV03	525	3.3/0.4	0.5
193952-4	60BFV04	525	3.3/0.4	0.5

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Sub-Station Transformers (11 kV/3.3 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
PE5249	01BHU01	3600	11/3.3	5
PE5250	01BHU02	3600	11/3.3	5
194195-1	02BHU01	3850	11/3.3	5
194195-2	02BHU02	3850	11/3.3	5
21141901/01	00BAT01AB001KB01	3070	11/3.3	5
21142001/01	00BAT01AB001KB01	3070	11/3.3	5
Sub-Station Transformers (3.3 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
23974	01BHU03	805	3.3/0.4	0.75
23970	01BHU04	805	3.3/0.4	0.75
23968	02BHU03	805	3.3/0.4	0.75
23973	02BHU04	805	3.3/0.4	0.75
Distribution Transformers (11 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
68-72	00BHV01	530	11/0.4	0.5
68-76	00BHV02	530	11/0.4	0.5
Coal Plant Transformers (3.3 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
23972	00BFT13	805	3.3/0.4	0.75
23976	00BFT14	805	3.3/0.4	0.75
23971	00BFT08	805	3.3/0.4	0.75
23969	00BFT10	805	3.3/0.4	0.75
Conveyor Transformers (11 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
PE5274	00BFT15	570	11/0.4	0.5
PE5270	00BFT16	570	11/0.4	0.5
PE5269	00BFT17	570	11/0.4	0.5
PE7920	00BFT18	570	11/0.4	0.5
PE8350	00BFT19	570	11/0.4	0.5
PE5275	00BFT20	570	11/0.4	0.5
PE5271	00BFT21	570	11/0.4	0.5
PE5272	00BFT22	570	11/0.4	0.5
PE5267	00BFT23	570	11/0.4	0.5
PE5268	00BFT24	570	11/0.4	0.5
PE5273	00BFT25	570	11/0.4	0.5
PE5276	00BFT26	570	11/0.4	0.5
PE8101	00BFT27	570	11/0.4	0.5

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CW Transformers (11 kV/3.3 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
T195-1	00BDT00	2997	11/3.3	4
T195-5	00BDT02	2997	11/3.3	4
T433-4	00BDT04	2530	11/3.3	4
T433-1	00BDT03	2997	11/3.3	4
T195-2	00BDT05	2997	11/3.3	4
T433-3	00BDT06	2530	11/3.3	4
T195-3	00BDT07	2997	11/3.3	4
T443-2	00BDT08	2997	11/3.3	4
CW/AWR Spare Transformer				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
T195-6	00BDT01	2997	11/3.3	4
Water Treatment Plant Transformers (11 kV/0.4 kV and 3.3 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
68-92	00BFT05	570	3.3/0.4	0.5
68-99	00BFT07	570	11/0.4	0.5
68-88	00BFT03	570	3.3/0.4	0.5
Arnot Single Quarters Transformers (11 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
02A-67-218	00BFT28	835	11/0.4	0.75
67-217	00BFT29	835	11/0.4	0.75
Sewage Plant Transformers (11 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
68-83	00BFT02	530	11/0.4	0.5
Ash Water Return Transformers (11 kV/3.3 kV and 3.3 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
T195-4	00BCT01	2997	11/3.3	4
PE8122	00BFT38	750	3.3/0.4	0.5
Workshop Transformers (3.3 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
68-91	00BFW01	570	3.3/0.4	0.5
T9831-1	00BFW02	480	3.3/0.4	0.5

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Contractor Supply Transformers (11 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
TXM0233-4	00BFT11	1317	11/0.4	1.6
TXM0233-3	00BFT12	1317	11/0.4	1.6
Main Drain Sump Pump Transformers (3.3 kV/0.4 kV)				
SERIAL NUMBER	KKS CODE	OIL QUANTITY (l)	RATING	
			Voltage (kV)	MVA
68-98	00BFT06	570	3.3/0.4	0.5

Arnot Power Station Standby Diesel Generators

<u>Generator 1</u>	
Make:	Perkins
Engine No:	DGDF6002 U10376V
Designation:	Designation
RPM:	1500
Engine Rating:	679BKW 17.5 DEG

<u>Generator 2</u>	
Make:	Perkins
Engine No:	DGDF6002 U12689A
Designation:	4006 – 23TAG3A
RPM:	1500
Engine Rating:	675BKW 17.5 DEG
Power:	6798KW

<u>Generator 3</u>	
Make:	Volvo
Model No:	TAD 532 GE
Serial No:	5312550552
RPM:	1500
Engine Rating:	130 KVA
Power:	129KW

<u>Generator 4</u>	
Make:	Volvo
Model No:	TAD 531 GE
RPM:	1500
Power:	102KW

<u>Generator 5</u>	
Make:	Doosan
Model No:	P3231 F-S
RPM:	1500
Power:	890KW

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1.3 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
EMD	Electrical Maintenance Department
HV	High Voltage
LV	Low Voltage
kV	Kilo Volt
OBL	Outside battery limits
OHS Act	Occupational Health and Safety Act and Regulations, 85 of 1993
OTI	Oil Temperature Indicator
WTI	Winding Temperature Indicator
SANS	South African National Standards
SABS	South African Bureau of Standards
PRD	Pressure Relief Device
PTM	Protection, Testing and Metering Department
P&T	Performance and Testing Department

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2 Management strategy and start up.

2.1 The Contractor's plan for the service

The *Contractor* issues a monthly report to the *Service Manager* as agreed by them. This report shall include all work done by the contractor to date, work in progress (including the status) and future work if an order is already in place during the preparation of the report and any other work that the Contractor is busy with.

- i. Investigate, identify and report potential plant failures as per Task order.
- ii. Participate in investigations as required by the Employer.
- iii. When working near the live electrical boards or inside the substation where there is live board(s), adherence to arc flash suit standard 36-942 to ensure the safety of personnel always working in the vicinity.
- iv. It is the *Contractor's* responsibility to familiarise themselves with the Power Station reticulation layout, all Eskom Standards mentioned on this contract, SANS and International Standards

2.2 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Overall contract progress feedback and risk register	As and when required	Service Manager's office/Microsoft Teams	<i>Employer, Contractor</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 convening the meeting within five days of the meeting.

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

2.3 Contractor's management, supervision and key people

Contractor to submit organo-gramme from the *Service Manager* showing his people and their lines of authority, for communication purposes.

2.4 Documentation control

The *Contractor* must submit QCP's and test reports to the *Service Manager* for acceptance and approval once repair work/ maintenance work is completed.

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2.5 Invoicing and payment

The Z clauses make reference 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)

All invoices to be send electronically in PDF to Eskom finance at invoiceseskomlocal@eskom.co.za

2.6 Insurance provided by the *Employer*

The *Employer's* Insurance Policies can be viewed on the following website:
<http://www.eskom.co.za/c/101/insurance-policies-procedures/>.

The *Employer's* Insurance Policies is reviewed and may be revised annually on the annual insurance policy maturity date at the end of March each year when the *Contractor* is advised to inform himself of such updates on the above website. Claims procedures and claim forms are also available from this website. If Marine insurance is applicable, the procedure for initiation of this insurance cover is also available from this website.

2.7 Training workshops and technology transfer

The *Contractor* provides safety training for his / her personnel onsite.
The list of courses to be trained on safety must be discussed with *Service Manager*.

2.8 Design and supply of Equipment

All equipment must be supplied in accordance with the specifications stated in the pricelist. If any clarity is required, the *Contractor* should contact the *Service Manager*.

2.9 Things provided at the end of the *service period* for the *Employer's* use

2.9.1 Equipment

The *Contractor* should supply all equipment that was removed for replacement purposes to the *Service Manager*, the *Service Manager* can request the *Contractor* to dispose of any equipment that cannot be used.

2.10 Management of work done by Task Order

A task order is work within the service which the *Service Manager* may instruct the *Contractor* to carry out within a stated period.

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The *Service Manager* has the format and will complete all the required information. Task order includes:

- A detailed description of the work
- A priced list of items of work in the Task in which items from the price List are identified
- The starting and completion dates for the Task
- The amount of delay damages for the late completion of the Task
- The total of the Prices for the Task

3 Health and safety, the environment and quality assurance

3.1 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 taken into account.

The Commodity Manager / Buyer must refer the tender to the Divisional/Regional Safety Risk Manager or his representative in order 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.

3.2 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 _____

3.3 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 particular 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.

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4 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.

4.1 People

4.1.1 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.

4.1.2 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.

4.1.3 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 in regard to 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.

4.2 Subcontracting

4.2.1 Preferred subcontractors

TSC3 does not make use of nominated subcontracting, 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 in order to comply with operational standards.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

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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.

4.2.3 Limitations on subcontracting

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

4.2.4 Attendance on subcontractors

State requirements for attendance on Subcontractors, if any

4.3 Plant and Materials

4.3.1 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.

4.3.2 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.

4.3.3 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*.

4.3.4 Tests and inspections before delivery

Core Clause 41.1 makes reference 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.

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4.3.5 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*, off loading, 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*’.

4.3.6 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).

5 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.

5.1 *Employer’s* site entry and security control, permits, and site regulations

No taking pictures allowed on *Employer’s* premises without prior approval or consent

Contractor to attend induction before entering site

Contractor must make pre-arrangements before coming to *Employer’s* site to allow *Employer* to make proper arrangements with Security. If no arrangements made, no access will be granted to the *Contractor* must have submitted their submitted their safety file with safety department and file passed evaluation before commencement of work

5.2 People restrictions, hours of work, conduct and records

Normal hours of working start and end at the following times

- Monday – Thursday working time: 07H00 – 16h15
- Fridays working time: 07H00 – 12H00

Access after the normal working hours must be arranged via the *Service Manager*.

5.3 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 if already addressed in 2.3.

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5.4 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.

5.5 Records of Contractor's Equipment

Records are to be kept of Equipment on Site including whether it is owned or hired. Should the Contractor require to use mobile crane, forklift and scaffold to notify the Service Manager 24 hours in advance.

5.6 Equipment provided by the Employer

The employer provides a crane, scaffold and other equipment required onsite.

5.7 Site services and facilities

5.7.1 Provided by the Employer

Potable water is available onsite,
Sanitary facilities are provided by the Employer.

Extra lighting, or any extra requirements not mentioned above, will be discussed between the Employer and Contractor.

5.7.2 Provided by the Contractor

The Contractor to provide tools and equipment's necessary for the service

5.8 Control of noise, dust, water and waste

Always wear correct PPE.

5.9 Hook ups to existing works

None

5.10 Tests and inspections

5.10.1 Description of tests and inspections

Tests be carried out as specified in the Service information.

5.10.2 Materials facilities and samples for tests and inspections

As specified in the Service information.

6 List of drawings

6.1 Drawings issued by the Employer

Not Applicable