



NEC3 Supply

Short Contract (SSC3)

A contract between Eskom Holdings SOC Ltd (Reg No. 2002/015527/30)

and

for **The supply of Low Voltage (LV) motors project at Camden Power Station.**

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Documentation prepared by: Msizi Blose

C1 Agreements & Contract Data

C1.1 Form of Offer and Acceptance

Offer

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

The supply of Low Voltage (LV) motors project at Camden Power Station.

The tenderer, identified in the signature block below, has

<i>either</i>	examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.
<i>or</i>	examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

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 Supplier 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.

The offered total of the Prices exclusive of VAT is	R _____
Value Added Tax @ 15% is	R _____
The offered total of the Prices inclusive of VAT is	R _____
(Amount Excl. VAT in words) _____ _____	

This Offer may be accepted by the Purchaser by signing the form of Acceptance overleaf 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 Supplier in the conditions of contract identified in the Contract Data.

Signature _____

Name _____

Capacity _____

Date _____

Address: _____

For the tenderer:

Witness

Name _____

Signature _____

Date _____

Acceptance

By signing this part of this Form of Offer and Acceptance, the Purchaser identified below accepts the tenderer's Offer. In consideration thereof, the Purchaser shall pay the Supplier 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 Purchaser 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 1 Agreements and Contract Data, (which includes this Form of Offer and Acceptance)

Part 2 Pricing Data

Part 3 Scope of Work: Goods 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 Tender Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Purchaser 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, which must be signed by the duly authorised representative(s) for both parties.

The tenderer shall within one week of receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Purchaser'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 copy of this document, including the Schedule of Deviations (if any) together with all the terms of the contract as listed above.

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

Signature

Name

Capacity **Camden Power Station Manager**

Date

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

For the purchaser:

Witness

Name

Signature

Date

Schedule of Deviations

Note:

1. To be completed by the Purchaser prior to award of contract. 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 Purchaser prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		
3		
4		
5		

By the duly authorised representatives signing this Schedule of Deviations below, the Purchaser 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 Purchaser 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 Purchaser
Signature	_____	_____
Name	_____	_____
Capacity	_____	Camden Power Station Manager
Date	_____	_____
On behalf of:	Quench Management Services cc	Eskom Holdings SOC LTD., Camden Power Station
Witness		
Name	_____	_____
Signature	_____	_____
Date	_____	_____

C1.2 Contract Data

Data provided by the *Purchaser*

Completion of the data in full is essential to create a complete contract.

Clause	Statement	Data
General		
10.1	The <i>Purchaser</i> is (Name):	Eskom Holdings SOC Limited (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
	Tel No.	017 827 8591
	E-mail address	BlouseM@Eskom.co.za
11.2(4)	The <i>delivery date</i> is	
11.2(5)	The Goods Information is in	the document called 'Goods Information' in Part 3 of this contract.
11.2(8)	The <i>goods</i> are	The supply of Low Voltage (LV) motors project at Camden Power Station.
12.2	The <i>law of the contract</i> is	
13.2	The <i>period for reply</i> is	___ Days
15.1	The <i>premises</i> are	Camden Power Station
23.1	The <i>Purchaser</i> requires the <i>Supplier</i> to Provide the Goods when instructed by batch Order.	No
23.1	If the <i>goods</i> are instructed by Batch Order,	N/A
	the batch order interval is	[•]
	the end date is	[•]
	the quantity range of <i>goods</i> in a batch is	from [•] to [•]
30.1	The <i>starting date</i> is.	
41.1	The <i>defects date</i> is	___ weeks after Delivery.
42.2	The period for the correction of Defects after Delivery is	___ weeks
50.1	The <i>assessment day</i> is the	25th of each month.
50.5	The <i>delay damages</i> are	10% per day.
51.2	The interest rate on late payment is	0% per complete week of delay.

86.1	The <i>Supplier's</i> liability to the <i>Purchaser</i> for indirect or consequential loss, including loss of profit, revenue and goodwill is limited to	Zero
86.2	The <i>Supplier</i> is not liable to the <i>Purchaser</i> for loss of or damage to the <i>Purchaser's</i> property in excess of	_____ for any one event.
93.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
93.2(2)	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 (UK) or its successor body (See www.ice-sa.org.za).
93.4	The <i>tribunal</i> is: If the <i>tribunal</i> is arbitration, the arbitration procedure is	arbitration. the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
11.1	The conditions of contract are the NEC3 Supply Short Contract (April 2013)^{1 2} and the following additional conditions.	

Z1 Cession delegation and assignment

- Z1.1 The *Supplier* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Purchaser*.
- Z1.2 Notwithstanding the above, the *Purchaser* may on written notice to the *Supplier* 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 and the Electricity Distribution Industry.

Z2 Change of Broad Based Black Economic Empowerment (B-BBEE) status

- Z2.1 Where a change in the *Supplier's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Supplier's* B-BBEE status, the *Supplier* notifies the *Purchaser* within seven days of the change.
- Z2.2 The *Supplier* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Purchaser* within thirty days of the notification or as otherwise instructed by the *Purchaser*.
- Z2.3 Where, as a result, the *Supplier's* B-BBEE status has decreased since the Contract Date the *Purchaser* may either re-negotiate this contract or alternatively, terminate the *Supplier's* obligation to Provide the Goods.

¹ Can be obtained from Engineering Contract Strategies on www.ecs.co.za, Tel 011 803 3008, Fax 086 539 1902

² If the December 2009 edition is being used, replace April 2013 with December 2009

- Z2.4 Failure by the *Supplier* to notify the *Purchaser* of a change in its B-BBEE status may constitute a reason for termination. If the *Purchaser* terminates in terms of this clause, the procedures on termination are the same as for Reason 3 identified in clause 90.3.

Z3 Waiver and estoppel: Add to clause 12.3:

- Z3.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, 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.

Z4 Provision of a Tax Invoice and interest. Add to clause 51

- Z4.1 The *Supplier* provides the *Purchaser* with a tax invoice in accordance with the *Purchaser's* procedures stated in the Goods Information, showing the correctly assessed amount due.
- Z4.2 If the *Supplier* does not provide a tax invoice by the time required in this contract for his assessment of each amount due, the time by when the *Purchaser* 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 *Purchaser* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z4.3 The *Supplier* (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 *Purchaser's* VAT number 4740101508 on each invoice he submits for payment.

Z5 Purchaser's limitation of liability

- Z5.1 The *Purchaser's* liability to the *Supplier* for the *Supplier's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z5.2 The *Supplier's* entitlement under the indemnity in 83.1 is provided for in 60.1(8) and the *Purchaser's* liability under the indemnity is limited.

Z6 Termination: Add to clause 90.2 before (Reason 1)

- Z6.1 or had a judicial management order granted against it.

Z7 Addition to clause 50.5

- Z7.1 If the amount due for the *Supplier's* payment of *delay damages* reaches the limits stated in this Contract Data (if any), the *Purchaser* may terminate the *Supplier's* obligation to Provide the Goods using the same procedures and payment on termination as those applied for Reason 3. Identified in clause 90.3.

Z8 Ethics

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

Affected Party	means, as the context requires, any party, irrespective of whether it is the <i>Supplier</i> or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,
Coercive Action	means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,
Collusive Action	means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,
Committing Party	means, as the context requires, the <i>Supplier</i> , or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractors or the Subcontractor's employees,
Corrupt Action	means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
Fraudulent Action	means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,
Obstructive Action	means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and
Prohibited Action	means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

- Z8.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.
- Z8.2 The *Purchaser* may terminate the *Supplier's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Supplier* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Purchaser* 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 *Purchaser* can terminate the *Supplier's* obligation to Provide the Services for this reason.
- Z8.3 If the *Purchaser* terminates the *Supplier'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.
- Z8.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Purchaser* does not have a contractual bond with the Committing Party, the *Supplier* ensures that the Committing Party co-operates fully with an investigation.

Z9 Insurance

Replace condition of contract 84 with the following:

Insurance cover 84

- 84.1** When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.
- 84.2** The *Supplier* provides the insurances in this Insurance Table A from the *starting date* until Delivery and against any risks he carries under this contract between Delivery and the *defects date*.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage to the <i>goods</i> , plant and materials	<p>The replacement cost where not covered by the <i>Purchaser's</i> insurance.</p> <p>The <i>Purchaser's</i> policy deductible as at contract date where covered by the <i>Purchaser's</i> insurance.</p>
Liability for loss of or damage to property (except the <i>goods</i> , plant and materials and equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Supplier</i>) caused by activity in connection with this contract	<p><u>Loss of or damage to property</u></p> <p><u><i>Purchaser's</i> property</u></p> <p>The replacement cost where not covered by the <i>Purchaser's</i> insurance.</p> <p>The <i>Purchaser's</i> policy deductible as at contract date, where covered by the <i>Purchaser's</i> insurance.</p> <p><u>Other property</u></p> <p>The replacement cost</p> <p>Death of or bodily injury</p> <p>The amount required by the applicable law.</p>
Liability for death of or bodily injury to employees of the <i>Supplier</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

84.2 The Purchaser provides the insurances in this Insurance Table B

INSURANCE TABLE B

Insurance against or name of policy	Minimum amount of cover or minimum limit 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

Z10 Nuclear Liability

- Z10.1 The *Purchaser* 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.
- Z10.2 The *Purchaser* is solely responsible for and indemnifies the *Supplier* or any other person against any and all liabilities which the *Supplier* 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 *Supplier* or any other person or the presence of the *Supplier* or that person or any property of the *Supplier* or such person at or in the KNPS or on the KNPS site, without the permission of the *Purchaser* or of a person acting on behalf of the *Purchaser*.
- Z10.3 Subject to clause Z10.4 below, the *Purchaser* 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 *Supplier* or any other person, or the presence of the *Supplier* or that person or any property of the *Supplier* or such person at or in the KNPS or on the KNPS site, without the permission of the *Purchaser* or of a person acting on behalf of the *Purchaser*.
- Z10.4 The *Purchaser* 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.
- Z10.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z11 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>Purchaser'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.

- Z11.1 The *Purchaser* ensures that the Ambient Air in the area where the *Supplier* 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.
- Z11.2 Upon written request by the *Supplier*, the *Purchaser* 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 *Supplier* may perform Parallel Measurements and related control measures at the *Supplier'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 Z11.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z11.3 The *Purchaser* manages asbestos and ACM according to the Standard.
- Z11.4 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.
- Z11.5 The *Supplier'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.
- Z11.6 The *Supplier* 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.
- Z11.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Purchaser* at the *Purchaser's* expense, and conducted in line with South African legislation.

Data provided by the *Supplier* (the *Supplier's Offer*)

The tendering Supplier is advised to read both the NEC3 Supply Short Contract (April 2013) and the relevant parts of its Guidance Notes (SSC3-GN)³ in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on page 28 of the SSC3 Guidance Notes and Flow Charts.

Completion of the data in full is essential to create a complete contract.

10.1	The <i>Supplier</i> is (Name):	_____
	Address	_____
	Tel No.	_____
	Fax No.	_____
	E-mail address	_____
11.2(7)	The Price Schedule is in	the document called 'Price Schedule' in Part 2 of this contract.
11.2(7)	The offered total of the Prices	See C1.1 Form of Offer and Acceptance
63.2	The percentage for overheads and profit added to the Defined Cost is	____%

³ Available from Engineering Contract Strategies on www.ecs.co.za Tel 011 803 3008, Fax 086 539 1902.

C2 Pricing Data

C2.1 Pricing assumptions

Entries in the first four columns of this Price Schedule are made either by the *Purchaser* or the tenderer. If the *Supplier* is to be paid an amount for the item which is not adjusted if the quantity of goods in the item changes, the tenderer enters the amount in the Price column only, the Unit, Quantity and Rate columns being left blank.

If the *Supplier* is to be paid an amount for the item of goods which is the rate for the goods multiplied by the quantity supplied, the tenderer enters a rate for each item and multiplies it by the Quantity to produce the Price, to be entered in the final column.

The rates and Prices entered for each item includes for all work and other things necessary to supply the item.

C2.2 Price Schedule

The rates and Prices entered for each item includes for all work and other things necessary to supply the item.

Item	Description	Voltage (V)	Motor KW	Speed (RPM)	Frame	Shaft Height	Shaft Ø (mm)	Mounting	Insulation class - motor	Coupling Type	Unit	Qty	Rate	Amount
	<u>User notes:</u>													
	<i>All rates tendered on and / or pricing in these bills of quantities to be in the South African Rands Currency (ZAR)</i>													
	<i>All individual amounts in these bills of quantities exclude Value Added Tax (VAT) VAT is to be calculated as a lump sum and added to the total of all values in the Final Summary under the item provided for VAT</i>													
	<i>The contractor shall comply with all requirements of the "Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes" issued in terms of the "Basic Conditions of Employment Act, 1997 (Act No. 75 of 1997)" and the related "Ministerial Determination", for the employment of locally employed temporary workers on a labour-intensive infrastructure project under the Expanded Public Works Programme (EPWP)</i>													
	<i>All items to be as per the Eskom's provided specification/s</i>													

1	AIR HEATER MOTORS													
1.1	Right Hand Air Heater Main Motor	380	7.5KW	970	160M	160	42	Base	H	Welman Bibby	No	5		
1.2	Left Hand Air Heater Barring Motor & Gearbox (This is the only motor required with new gearbox)	380	3KW	1410	100L	100	28	Flange	H	Claw clutch	No	5		
1.3	Left Hand Air heater Lubrication Oil Pump Motor	380	0.55KW	1410	80	80	19	Flange	H	N/A	No	5		
1.4	Right Hand Air Heater Lubrication Oil Pump Motor	380	0.55KW	1410	80	80	19	Flange	H	N/A	No	5		
2	JACKING OIL MOTORS													
2.1	Jacking oil AC (Alternating Current) Motor	380	5.5KW	965	132M	132	38	Base	H	Spider coupling	No	3		
3	STATOR COOLANT MOTORS													
3.1	Generator stator coolant pump A Motor	380	7.5KW	1455	132M	132	38	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3		
3.2	Generator stator coolant pump B motor	380	7.5KW	1455	132M	132	38	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3		

4 H2 CW (COOLING WATER) BOOSTER MOTORS													
4.1	H2 CW (cooling water) booster pump A motor	380	11KW	965	160L	160	42	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3	
4.2	H2 CW (cooling water) booster pump B motor	380	11KW	965	160L	160	42	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3	
5 TURBINE OIL SYSTEM MOTORS													
5.1	Turbine AC Seal Oil Pump Motor	380	18.5KW	2935	160L	160	42	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3	
5.2	Turbine DC Seal Oil Pump Motor	220	15KW	1460	180	180	42	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3	
5.3	Auxiliary bearing oil pump motor (AOP - Auxiliary oil pump)	380	110KW	2975	280S/M	280	65	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3	
5.4	AC bearing oil pump motor (Lubrication oil pump)	380	11KW	1460	160M	160	42	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3	

5.5	DC (Direct current) bearing oil pump motor	220	11KW	1460	180	180	42	Base	H	Tire coupling: Fenner - Fenaflex Series F	No	3		
6	VAPOUR EXTRACTION FAN MOTORS													
6.1	Turbine AC (Alternating Current) motor	380V	0.55kW	1400	80	80	N/A	Flange - PCD's: The PCD on motor = 127 mm ² (5"). Three holes tapped M8 X 1.25 Thread.	H	N/A	No	2		
7	MILD STEEL BASE PLATES													
7.1	280 x 300 x 30 mm Mild Steel Base Plate										No	4		
7.2	300 x 330 x 20 mm Mild Steel Base Plate										No	2		
7.3	300 x 380 x 30 mm Mild Steel Base Plate										No	1		
7.4	350 x 300 x 30 mm Mild Steel Base Plate										No	4		
7.5	550 x 450 x 30 mm Mild Steel Base Plate										No	2		
7.6	550 x 650 x 20 mm Mild Steel Base Plate										No	2		
7.7	550 x 650 x 30 mm Mild Steel Base Plate										No	4		

7.8	2500 x 1200 x 20 mm Mild Steel Base Plate										No	2		
7.9	2500 x 1200 x 25 mm Mild Steel Base Plate										No	2		
7.1	2500 x 1200 x 30 mm Mild Steel Base Plate										No	2		

Grand-Total (Excl. VAT)

C3: Scope of Work

C3.1 Goods Information

1. Introduction

Camden Power Station is installed with old type Low Voltage motors that are no longer available in the market for supply and support. These motors are required to be replaced by equivalent type motors that are readily available in the market. By doing so, a risk of LV motor spares unavailability suitable for the existing installations will be eliminated. The project will only be implemented on units 5 and 8 due to the generation shutdown plan.

2. Supporting Clauses

2.1 Scope

2.1.1 Purpose

The purpose of this document is to provide a scope of work that should be adhered to when replacing all old type LV motors with equivalent type motors in Camden Power Station.

2.1.2 Applicability

This document shall apply throughout Camden Power Station.

2.1.3 Effective date

Shall be effective from date of authorisation.

Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.1.4 Normative References

- [1] ISO 9001 Quality Management Systems.
- [2] ISO 10007: Guidelines for Configuration Management
- [3] IEC 61355: Classification and designation of documents for plants, systems and equipment
- [4] QM-58: Contractor Contract Quality Requirements Manual
- [5] 240-109607332: Plant Labelling Standard
- [6] 240-56227443: Requirements for Control and Power Cables for Power Stations Standard
- [7] 240-56355815: Control & Instrumentation Field Enclosures and Cable Termination Standard
- [8] 240-76992014: Technical Document and Record Management Work Instruction
- [9] 240-66920003: Documentation Management Review and Handover Procedure for Gx Coal Projects
- [10] 240-65459834: Project Documentation Deliverable Requirement Specification
- [11] 240-53114026: Project Engineering Change Management Procedure
- [12] 240-54179170: Technical Documentation Classification and Designation Standard
- [13] 240-86973501: Engineering Drawing Standard- Common Requirements
- [14] 240-57617975: New Low Voltage Motors Procurement Standard
- [15] 240-240-56357424: MV and LV switchgear Protection Standard
- [16] 56227426: Management of Power Station MV and LV Protection and Settings Standard
- [17] 240-56356396: Earthing and Lightning Protection Standard
- [18] 240-89217674: Refurbishment and Repair of Power Station Electrical Motors Work Instruction
- [19] 240-100457684: Motor Commissioning Work Instruction
- [20] 240-56360387: Storage of Power Station Electric Motors
- [21] SANS 10142-1: The wiring of premises

2.1.5 Informative

- [1] 240-56364545: Structural Design and Engineering Standard
[2] 240-72273656: Power generation Asset Criticality Classification Standard

Definitions

Disclosure Classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

Abbreviations

ABBREVIATION	DESCRIPTION
AC	Alternating Current
DC	Direct Current
IP	International Protection Rating / Ingress Protection Rating
ITP	Inspection Test Plan
KKS	Kraftwerk Kennzeichen system
LV	Low Voltage
QCP	Quality Control Plan
SANS	South African National Standards

Roles and Responsibilities

Engineering Change Design Review Panel - A committee/individual appointed by the Project Engineering Manager.

Their responsibilities include:

- Authorising the proposed Level 1 and Level 2 engineering changes.
- Authorising the engineering change based on the principles, use of technologies, and alignment to the process and procedure.
- Confirming the engineering change impact (change classification, environmental assessment, risk ranking, priority and technical content, etc.).
- Performing change level classifications.
- Periodical reviews of Level 3 changes.

*The responsibilities of the committee could be delegated to one person in certain instances.

Engineering Design Work Lead (EDWL) - EDWL is an engineering practitioner assigned by a delegated engineering person to co-ordinate the design work provided by the discipline Design Engineering roles and integrates this work into a final integrated design product. The EDWL is the custodian of the requirements set and the interface register between packages and part of his/her role is to maintain this information. The EDWL remains responsible for the integrity of the engineering product and is accountable for the overall management of interfaces and delivery of an integrated product.

Impact Assessment Team - The impact assessment team is defined by the impact assessment team leader. The impact assessment team shall consist of all affected stakeholders. Each member of the impact assessment team shall provide input (technical, financial, safety etc).

Lead Discipline Engineer (LDE) - The LDE shall ensure that the engineering change request is relevant, reviewed and fit for purpose to be implemented on the relevant plant area(s). The LDE shall verify that the engineering change impact assessment team is duly constituted of all affected stakeholders and CoE representatives.

The Project Engineering Manager – The PEM ensures compliance to the ECP procedure in the project environment, the PEM accepts the engineering change for the implementation in the project based on comments and recommendations from the engineering change design review panel.

Process for Monitoring

This document is governed by the Project Engineering Change Management procedure. The scope of work execution shall be monitored using the project feedback and ITP's utilised to execute the works as per this document.

Related/Supporting Documents

- QCP's and ITP's checklist sheets shall be developed by the contractor and approved by electrical engineering.
- LV motor data pack.

LV Motor Replacement Requirements

General Requirements

1. The *Contractor* is responsible for the completing of all works that is outlined in the scope of works in Section 3.2 below. The works shall be conducted according to the applicable codes and standards and the requirements in this document.
2. Where this document is not clear about the location of an item to be installed or work to be performed, it is the Contractor's responsibility to determine the correct location from the Employer's engineering representatives.
 - The Contractor will only act upon confirmation by receipt of an Engineering Instruction via the Employer's Project Manager.
 - Incorrect work done will be reinstalled by the Contractor at his cost unless it can be explicitly proven that this document unambiguously shows an incorrect arrangement.
3. All referenced Eskom standards will be made available to the *Contractor* upfront.
4. Camden Power Station Plant coding shall conform to KKS Plant Codification Standard – 240-7314 3217
5. Plant Labelling shall conform to Plant Labelling Standard – 240-109607332.
6. Each drawing, diagram and list will refer to the area of plant by means of the plant labelling.
7. QCP's/ITP's and related documentation shall be subject to comment and accept by the Employer's Quality Control personnel as well as Engineering. QCP's will make provision for signatures for interventions by at least the Contractor's QC Representative, the Employer's QC Representative, the Employer's Engineering Department and the site AIA representative.
8. Intervention points will be signed as the work progresses and no back-dating will be allowed.
9. Notification for hold and witness points shall be in writing and shall be done at least 30 days in advance.
10. The following minimum hold points must be included for the Employer's Quality Control Department:
 - Acceptance of QCP/ITP – Contractor to supply QCP's and approved by Camden Electrical Engineering.
 - Acceptance of "As Required" arrangement and dimensional drawings
 - Final Sign off and Acceptance
 - Final Data book Review
11. Outline drawings of new motors and proposed list of these motors to be approved by Camden Electrical Engineering before any procurement can commence.

2.1.6 Material Requirements

- The *Contractor* is responsible for supplying all supplied materials for LV motors. Where a material is specified in this document, the material supplied shall be exactly in accordance with the specification.
- If the *Contractor* intends to use similar or equivalent materials the *Contractor* must apply in writing to the *Project Manager* for permission and the Responsible Engineer shall be notified and approve the equivalency for the consideration of the request, and respond in writing to either accept the request, request additional information for further consideration, or reject the request. All equipment shall be new and no re-use of any equipment shall be permitted.

2.1.7 Drawings Requirements

- The creation and control of all Engineering Drawings will be in accordance to the latest revision of 240-86973501 (Engineering Drawing Standards – Common Requirements).
- The *Contractor* shall provide detailed “As Required” arrangement/dimensional drawings for all motors.
- “As-built” drawings must be provided by the *Contractor*. The “As-built” drawings are subject to the *Employer’s* Engineering representative comments and acceptance.
- All drawings shall contain the following as a minimum:
 1. Description of component with KKS number.
 2. Design Code.
 3. All drawing revisions must be provided as paper copies in original (in all cases at least A3) size as well as provided in .pdf format.
- All required drawings shall be prepared in accordance with the requirements as specified in the Engineering Drawing Office and Engineering Drawing Standard (240-86973501). A drawing register which records the drawing’s information shall be maintained.
- Drawings to be prepared will include and not be limited to:
 - Equipment drawings;
 - Equipment lists;
 - Original Equipment Manufacture OEM manuals and part catalogues;
 - Set point and parameter lists;

Configuration Management and Document Management

Document Submission

- All documents shall be submitted to the Eskom Documentation Centre. The language of all documentation is required to be in English.

2.1.7.1 Transmittal

- The *Contractor* lists all project documents (soft copies and hard copies) for submittal on the transmittal with the following metadata fields:
 - Title of the document
 - Document Unique Identification number
 - Revision number
 - Name of Discipline
 - Reason for issuing/submission
 - Sender’s detail
 - Sent date
 - Recipient’s Details
 - Date received
 - Quantity of documentation referenced on the transmittal
 - Number of copies
 - Format/medium submitted (e.g., paper, USB, etc.)
 - Sender signature
 - Recipient signature, once submitted, to acknowledge receipt

2.1.7.2 Email Subject

- The email subject shall as a minimum have the following:

(Project Name_Discipline_Subject)

- The *Contractor* submits documentation to the Eskom Representative as well as the Project’s Documentation Centre in the following media:
 - Electronic copies will be submitted to Eskom Documentation Centre. Electronic copies too large for email will be delivered on a USB, large file transfer protocol and/or hard drives to the Project Documentation Centre. The communication will be done directly with an Eskom Representative.
 - Hard copies shall be submitted to the Eskom Representative accompanied by the Transmittal Note.
 - The format of the final documentation handover will be specified in the Vendor Document Submittal Schedule.

2.1.7.3 Documentation requirements

- All documents supplied by the *Contractor* shall be subject to Eskom's approval. Documents such as QCP's, Method Statements, commissioning procedures and other documents impacting the work must be approved by the *Employer* at least 10 working days prior to commencement of the Works.
- Each revision of a document or drawing shall be accompanied with a list of the comments made by the *Employer* on the previous revision if applicable and the response/corrective action taken by the *Contractor*. Changes will be recorded in a revision table contained on/in each drawing/document.
- Documents and drawings shall indicate the *Employer's* drawing number as allocated by the *Employer*. The *Contractor* may have his own internal document or drawing number on the document or drawing, but where reference is made among documents or drawings, the *Employer's* number shall be used.
- The *Contractor* shall compile a complete data book for all work done containing the following as a minimum if applicable:
 1. Scope of work
 2. Approved "As built" drawings
 3. Approved QCP / ITP
 4. Inspection reports
 5. Settings and Parameters
 6. As built drawings
 7. Material summary that gives full traceability between components used, drawings and material certificates
 8. Maintenance manual

2.1.7.4 Documentation

- For consistency, it is important that all documents used within the project follow the same layout, style and formatting standard. Therefore, the *Contractor* shall ensure that the 240-76992014: Technical Document and Record Management Work Instruction is used for any documentation requirements.

2.1.7.5 General Requirement

- The *Contractor* includes the *Employer's* drawing number in the drawing title block. This requirement only applies to design drawings developed by the *Contractor* and his Subcontractors. It does not apply to drawings developed by manufacturers for equipment and material such as instruments, etc. Drawing numbers will be assigned by the Employer as drawings are developed.
- The project name shall be listed on all drawings, including manufacturers' drawings. A separate sheet may be attached to the submittal if needed to adequately list all tag numbers associated with the drawings such as instruments which may have numerous tag numbers associated with it.
- The language of all documentation shall be in the English language. The units of measure shall be metric.

- The *Contractor* retains project design calculations and information for the entire life cycle of the plant and provides these to the *Employer* on prior written notice at any time notwithstanding the expiry or termination of the contract.

2.1.7.6 Engineering Change Management

- All Design change management shall be performed in accordance to the latest revision of the Eskom Project Change Management Procedure (240-53114026) and the Employer shall ensure that Contractor is provided with latest revisions of this procedure. Any uncertainty regarding this procedure should be clarified with the Employer and clarification updates should be reflected in updated versions of this procedure.

LV Motor Replacement Scope of Work

The following scope of works is required to be executed for the replacement of LV motors. The works shall be conducted according to the Eskom standards listed in Section 4. The contractor shall supply all the motors, gearboxes, and couplings necessary.

The motors contractor shall comply with all applicable safety standards.

Electrical Requirements

- The contractor to supply all LV motors and gearboxes that needs to be replaced.
- Supply IE3, premium efficiency motors.
- Motors shall be of S1 duty. According to IC 60034- 1, these are motors running continuously.
- Supply/design equivalent AC or DC motor/s for each system (2x Units) in accordance with 240-57617975 standard.
- Motors shall be supplied according to the list of Camden LV Motors (AC and DC) which shall be provided.
- Quality checks shall be done before and after delivery to site for all motors, i.e., for
 - Designed as per the approved design specification.
 - Electrical tests.
 - Vibrations.
- Each motor system must be provided with one, once off, equivalent spares also provided on the list.

Note:

- *The contractor who will be awarded this work shall come to site to verify all motors that needs to be supplied.*
- *Outline drawings and proposed list of these new motors to be approved by Camden Electrical Engineering before any procurement can commence.*

General Earthing Requirements

- All earthing in general conforms to requirements defined SANS 10198-13 and 10142-1.

Mechanical Requirements

Couplings:

- See attached list of all the couplings that needs to be supplied for each of the motors by the contractor and approved by Electrical/Turbine/Boiler Engineering before procured.
- Couplings shall be installed in accordance with the Eskom standards (240-56030558) by the employer.
- The couplings shall be of the correct type (Fenaflex, spider, bibby etc.) and size as indicated on the attached list.

Applicable standards

- [1] 240-109607332: Plant Labelling Standard
- [2] 240-56227443: Requirements for Control and Power Cables for Power Stations Standard
- [3] 240-56355815: Control & Instrumentation Field Enclosures and Cable Termination Standard
- [4] 240-76992014: Technical Document and Record Management Work Instruction
- [5] 240-66920003: Documentation Management Review and Handover Procedure for Gx Coal Projects
- [6] 240-65459834: Project Documentation Deliverable Requirement Specification
- [7] 240-54179170: Technical Documentation Classification and Designation Standard
- [8] 240-86973501: Engineering Drawing Standard- Common Requirements

- [9] 240-56227443: Requirements for Control and Power Cables for Power Stations Standard
- [10] 240-57617975: New Low Voltage Motors Procurement Standard
- [11] 240-240-56357424: MV and LV switchgear Protection Standard
- [12] 56227426: Management of Power Station MV and LV Protection and Settings Standard
- [13] 240-56356396: Earthing and Lightning Protection Standard
- [14] 240-89217674: Refurbishment and Repair of Power Station Electrical Motors Work Instruction
- [15] 240-100457684: Motor Commissioning Work Instruction
- [16] 240-56360387: Storage of Power Station Electric Motors
- [17] SANS 10142-1: The wiring of premises
- [18] 240-56030558 – Centrifugal Pumps Specification
- [19] 240-56364545: Structural Design and Engineering Standard
- [20] SANS 2001-BE1 Part BE1: Earthworks (general) [21] SANS 2001-BS1 Part BS1: Site clearance
- [22] SANS 2001-CC1 Part CC1: Concrete works (structural)
- [23] SANS 5861-2 Concrete tests - Sampling of freshly mixed concrete
- [24] SANS 5862-1 Concrete tests - Consistence of freshly mixed concrete - Slump test
- [25] SANS 5863 Concrete tests - Compressive strength of hardened concrete [26] SANS 5864 Concrete tests - Compressive strength of hardened concrete SANS 10400 The Application of the National Building Regulations

1. Description of the goods

LV Motor Replacement

2. Specifications

List the specifications that apply to this contract. Some typical headings have been provided as a minimum;
delete if not required or expand and include correct titles as applicable.

Title	Date or revision	Tick if publicly available
<u>General Specifications:</u>		
Health and Safety requirements		
Environmental requirements		
<u>Technical specifications:</u>		

In terms of core clause 50 the *Supplier* assesses the amount due and applies to the *Purchaser* for payment. The *Supplier* applies for payment with a tax invoice addressed to the *Purchaser* as follows:

- Name and address of the *Supplier*
- The contract number and title;
- *Supplier's* VAT registration number;
- The *Purchaser's* VAT registration number which is _____;
- The total of
 - The Price for each lump sum item in the Price Schedule or Batch Order which the *Supplier* has completed;
 - Where a quantity is stated for an item in the Price Schedule or Batch Order, an amount calculated by multiplying the quantity which the *Supplier* has completed by the rate,
- Other amounts to be paid to the *Supplier*;
- Less amounts to be paid by or retained from the *Supplier*;
- The invoiced amount - excluding VAT, the VAT and including VAT;
- (add other as required)

[illegible]

Batch Order

Batch Order form for use when the Contract Data states that, in terms of clause 23, the *Purchaser* requires the *Supplier* to supply the *goods* in batches.

Contract number [•]

Batch Order No. [•]

Date

To: [•].....
..... (*Supplier*)

I instruct you to supply the following *goods* selected from the Price Schedule:

Item no.	Description	Unit	Quantity	Rate	Price

Total of the Prices for the Batch Order

--

The start date is [•]

The *delivery date* is [•]

Signed:

Name (in print)

(for *Purchaser*)