



NEC3 Term Service

Short Contract (TSSC3)

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

and

for **OVERHAULING OF FUEL FORWARDING PUMPS
FOR ANKERLIG POWER STATION**

Contents: Compiled in accordance with CIDB Standard for Uniformity in
Construction Procurement (May 2010 amendments)

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Documentation prepared by: Francois Du Toit

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station**C1 Agreements & Contract Data****C1.1 Form of Offer and Acceptance****Offer**

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

**Overhauling of Fuel Forwarding Pumps for
ANKERLIG POWER STATION**

The tenderer, identified in the signature block below, having examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, 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.

| | |
|---|------|
| 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[•] |
| (in words) | |

This Offer may be accepted by the Employer 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 Contractor in the conditions of contract identified in the Contract Data.

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

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 1 Agreements and Contract Data, (which includes this Form of Offer and Acceptance)

Part 2 Pricing Data

Part 3 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 Tender 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, 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 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 copy of this document, including the Schedule of Deviations (if any) together with all the terms of the contract as listed above.

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station**Schedule of Deviations**

Note:

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

| No. | Subject | Details |
|-----|---------|---------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |

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

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

For the tenderer:**For the Employer**

Signature

Name

Capacity

On behalf
of*(Insert name and address of organisation)**(Insert name and address of organisation)*Name &
signature
of witness

Date

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

C1.2 Contract Data

Data provided by the *Employer*

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

1. Please read the relevant clauses in the NEC3 Term Service Short Contract (April 2013) (TSSC3)¹ before you enter data. The number of the principal clause is shown for most statements however other clauses may also use the same data.
2. Where the following symbol is used “**[•]**” - data is required to be inserted.]

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

| Clause | Statement | Data |
|----------------|--|--|
| General | | |
| 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 |
| | If the <i>Employer</i> appoints an <i>Employer's Agent</i> , the <i>Employer's Agent</i> is: | |
| 14.5 | Name | Francois Du Toit |
| | Address | Neil Hare Road Atlantis Industrial Western Cape Province |
| | Tel No. | 021 537 6167 |
| | E-mail address | dtoitfg@eskom.co.za |
| 11.2(5) | The <i>service</i> is | Overhauling of Fuel Forwarding Pumps at Ankerlig Power Station |
| 11.2(6) | The Service Information is in | the document called 'Service Information' in Part 3 of this contract. |
| 30.1 | The <i>starting date</i> is. | Ankerlig – January 2023 (Actual Start date to be confirmed) |
| 30.1 | The <i>service period</i> is. | 6 months |
| 13.2 | The <i>period for reply</i> is | 12 hours |
| 50.1 | The <i>assessment day</i> is the | 25th of each month. |
| 51.2 | The interest rate on late payment is | 0% |

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

| | | |
|---|---|--|
| 80.1 | The <i>Contractor</i> is not liable to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property in excess of | the amount of the deductibles relevant to the event |
| | Does the United Kingdom Housing Grants, Construction and Regeneration Act (1996) apply? | No |
| 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 London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body |
| 93.4 | The <i>tribunal</i> is: | arbitration. |
| | 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. |
| The <i>conditions of contract</i> are the NEC3 Term Service Short Contract (April 2013) ²³ and the following additional conditions Z1 to Z14 which 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.

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

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

- Z2.1 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.
- Z2.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Employer* within thirty days of the notification or as otherwise instructed by the *Employer*.
- Z2.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the *starting date* the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Service.
- Z2.4 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 those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the service.

Z3 Confidentiality

- Z3.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to others except where required by this contract. 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 where required by this contract the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z3.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Employer*.
- Z3.3 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.
- Z3.4 The taking of images (whether photographs, video footage or otherwise) of the *Employer's* 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 *Employer*. All rights in and to all such images vests exclusively in the *Employer*.
- Z3.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z4 Waiver and estoppel: Add to clause 12.2:

- Z4.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties or their delegates 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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Z5 Health, safety and the environment

- Z5.1 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*:
- 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 *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.
- Z5.2 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.

Z6 Provision of a Tax Invoice and interest. Add to clause 50

- Z6.1 The *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Service Information, showing the correctly assessed amount due for payment.
- Z6.2 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 clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z6.3 The *Contractor* 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.

Z7 Notifying compensation events

- Z7.1 Delete from the last sentence in clause 61.1, "unless the event arises from an instruction of the *Employer*."

Z8 *Employer's* limitation of liability; Add to clause 80.2

- Z8.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand).

Z9 Termination: Add to clause 90.2, after the words "or its equivalent":

- Z9.1 or had a business rescue order granted against it.

Z10 Addition to Clause 50.4

- Z10.1 If the amount due for the *Contractor's* payment of *delay damages* reaches the limits stated in a Task Order (if any), the *Employer* may terminate the *Contractor's* obligation to Provide the Service.

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Z10.2 If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the *service*.

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

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

Z11.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Services for this reason.

Z11.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z11.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

Z12 Insurance

Z __12.1 Replace condition of contract 82 with the following:

Insurance cover 82

- 82.1 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.
- 82.2 The *Contractor* provides the insurances in the Insurance Table A, from the *starting date* until the 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 equipment, 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 |
| The <i>Contractor's</i> liability for loss of or damage to property (except the <i>Employer's</i> property, equipment and other things used to Provide the Service) and 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>Loss of or damage to property</u> The replacement cost <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 |

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

82.3 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 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 |

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station**Data provided by the Contractor (the Contractor's Offer)**

The tendering contractor is advised to read both the NEC3 Term Service Short Contract (April 2013) and the relevant parts of its Guidance Notes (TSSC3-GN)⁴ 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 24 of the TSSC3 Guidance Notes.

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

| | | |
|---------|---|--|
| 10.1 | The <i>Contractor</i> is (Name): | [•] |
| | Address | [•] |
| | Tel No. | [•] |
| | Fax No. | [•] |
| | E-mail address | [•] |
| 63.2 | The percentage for overheads and profit added to the Defined Cost for people is | [•]% |
| 63.2 | The percentage for overheads and profit added to other Defined Cost is | [•]% |
| 11.2(4) | The Price List is in | the document called 'Price List' in Part 2 of this contract. |
| 11.2(4) | The offered total of the Prices for part of the <i>service</i> in Part 1 of the Price List is | R_____ excl VAT |
| | [Enter the total of the Prices from the Price List]: | [in words] _____ |
| | | _____ excl Vat |
| 11.2(4) | The offered total of the Prices for part of the <i>service</i> in Part 2 of the Price List is | R_____ excl VAT |
| | [Enter the total of the Prices from the Price List]: | [in words] _____ |
| | | _____ excl Vat |

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

C2 Pricing Data

C2.1 Pricing assumptions

The Price List is in two parts. Part 1 is for work described in the Service Information not requiring the *Employer* to issue a Task Order. Part 2 is for work to be carried out within a stated period of time on a task-by-task basis and instructed by Task Order. The *service* may comprise work under Part 1 only or Part 2 only or a mix of both.

Entries in the first four columns of Part 1 of the Price List are made either by the *Employer* or the tenderer. Entries in the first four columns of Part 2 of the Price List would normally be made by the *Employer* as the Party most likely to know the kind of work which will be instructed by the issue of Task Orders. The tenderer then enters a rate for each item and multiplies it by the Expected quantity to produce the Price to be entered in the final column.

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 tenderer 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 the item of work which is the rate for the work multiplied by the quantity completed, the tenderer enters a rate for each item and multiplies it by the Expected quantity to produce the Price, to be entered in the final column.

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.

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

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station**C2.2 Price List****Part 1**

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

Pumps – 136.69 KW (Ankerlig)

| Item | Description | Unit | Qty | Rate | Price |
|---------------------------------------|---|------|-----|------|-------|
| 1 | 8 Ton Truck with the Qualified Rigger | /Hr | | | |
| 2 | Transportation | km | | | |
| 3 | Labour (Split Motor and Pump Assembly) Normal Time | /Hr | | | |
| 4 | Labour (Assemble Motor and Pump Assembly) Normal Time | /Hr | | | |
| 5 | Labour (Assemble & De-Assembling) Normal Time | /Hr | | | |
| 6 | Labour (Assemble & De-Assembling) overtime and weekend | /Hr | | | |
| 7 | Inspect and record all strip down measurements | /Hr | | | |
| 8 | Ball Bearings (Replacement) | Ea | | | |
| 9 | Roller Bearings (Replacement) | Ea | | | |
| 10 | Wear ring (Replacement) | Ea | | | |
| 11 | Neck Bush (Replacement) | Ea | | | |
| 12 | Shaft(Replacement) | Ea | | | |
| 13 | Impeller (Replacement) | Ea | | | |
| 14 | Spacer shim and the circlips(Replacement) | Ea | | | |
| 15 | 1 mm topgraph gasket(Replacement) | Ea | | | |
| 16 | 2 mm topgraph gasket(Replacement) | Ea | | | |
| 17 | Pressure test to 700 kPA | Ea | | | |
| 18 | Mechanical Seal (Replacement) | Ea | | | |
| 19 | Sand Blast and Paint | Ea | | | |
| 20 | Check the axial float of the pump. Tolerance = 0,03 mm – 0,2 mm. | Ea | | | |
| 21 | Ceramic coat shaft sleeve or replace with new equivalent ceramic coated sleeve | Ea | | | |
| 22 | Check the condition of the impeller. Measure the outside diameter of the impeller wear ring and record (QC) | Ea | | | |
| 23 | Renew all gaskets and the mechanical seal | Ea | | | |
| 24 | Casing machining | Ea | | | |
| 25 | Check the alignment of the pump | Ea | 3 | | |
| 26 | Do Laser alignment test | | | | |
| Total of the Prices for Part 1 | | | | | |

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

Pumps – 71.1 KW (Ankerlig)

| Item no. | Description | Unit | Quantity | Rate | Price |
|----------|---|------|----------|------|-------|
| 1 | Labour (Split Motor and Pump Assembly) Normal Time | /Hr | | | |
| 2 | Labour (Assemble Motor and Pump Assembly) Normal Time | /Hr | | | |
| 3 | Labour (Assemble & De-Assembling) Normal Time | /Hr | | | |
| 4 | Labour (Assemble & De-Assembling) overtime and weekend | /Hr | | | |
| 5 | Inspect and record all strip down measurements | /Hr | | | |
| 6 | Ball Bearings (Replacement) | Ea | | | |
| 7 | Roller Bearings (Replacement) | Ea | | | |
| 8 | Wear ring (Replacement) | Ea | | | |
| 9 | Neck Bush (Replacement) | Ea | | | |
| 10 | Shaft(Replacement) | Ea | | | |
| 11 | Impeller (Replacement) | Ea | | | |
| 12 | Spacer shim and the circlips(Replacement) | Ea | | | |
| 13 | 1 mm topgraph gasket(Replacement) | Ea | | | |
| 14 | 2 mm topgraph gasket(Replacement) | Ea | | | |
| 15 | Pressure test to 700 kPA | Ea | | | |
| 16 | Mechanical Seal (Replacement) | Ea | | | |
| 17 | Sand Blast and Paint | Ea | | | |
| 18 | Check the axial float of the pump. Tolerance = 0,03 mm – 0,2 mm. | Ea | | | |
| 19 | Ceramic coat shaft sleeve or replace with new equivalent ceramic coated sleeve | Ea | | | |
| 20 | Check the condition of the impeller. Measure the outside diameter of the impeller wear ring and record (QC) | Ea | | | |
| 21 | Renew all gaskets and the mechanical seal | Ea | | | |
| 22 | Casing machining | Ea | | | |
| 23 | Check the alignment of the pump | Ea | 3 | | |
| 24 | Do Laser alignment test | | | | |

Total of the Prices for Part 1

| |
|--|
| |
|--|

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

Pumps – 20 KW (Ankerlig)

| Item no. | Description | Unit | Quantity | Rate | Price |
|----------|---|------|----------|------|-------|
| 1 | Labour (Split Motor and Pump Assembly) Normal Time | /Hr | | | |
| 2 | Labour (Assemble Motor and Pump Assembly) Normal Time | /Hr | | | |
| 3 | Labour (Assemble & De-Assembling) Normal Time | /Hr | | | |
| 4 | Labour (Assemble & De-Assembling) overtime and weekend | /Hr | | | |
| 5 | Inspect and record all strip down measurements | /Hr | | | |
| 6 | Ball Bearings (Replacement) | Ea | | | |
| 7 | Roller Bearings (Replacement) | Ea | | | |
| 8 | Wear ring (Replacement) | Ea | | | |
| 9 | Neck Bush (Replacement) | Ea | | | |
| 10 | Shaft(Replacement) | Ea | | | |
| 11 | Impeller (Replacement) | Ea | | | |
| 12 | Spacer shim and the circlips(Replacement) | Ea | | | |
| 13 | 1 mm topgraph gasket(Replacement) | Ea | | | |
| 14 | 2 mm topgraph gasket(Replacement) | Ea | | | |
| 15 | Pressure test to 700 kPA | Ea | | | |
| 16 | Mechanical Seal (Replacement) | Ea | | | |
| 17 | Sand Blast and Paint | Ea | | | |
| 18 | Check the axial float of the pump. Tolerance = 0,03 mm – 0,2 mm. | Ea | | | |
| 19 | Ceramic coat shaft sleeve or replace with new equivalent ceramic coated sleeve | Ea | | | |
| 20 | Check the condition of the impeller. Measure the outside diameter of the impeller wear ring and record (QC) | Ea | | | |
| 21 | Renew all gaskets and the mechanical seal | Ea | | | |
| 22 | Casing machining | Ea | | | |
| 23 | Check the alignment of the pump | Ea | 3 | | |
| 24 | Do Laser alignment test | | | | |

Total of the Prices for Part 1

| |
|--|
| |
|--|

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Pumps – 20 KW (Ankerlig)

| Item no. | Description | Unit | Quantity | Rate | Price |
|---------------------------------------|--|------|----------|------|-------|
| 1 | Labour (Split Motor and Pump Assembly) Normal Time | /Hr | | | |
| 2 | Labour (Assemble Motor and Pump Assembly) Normal Time | /Hr | | | |
| 3 | Labour (Assemble & De-Assembling) Normal Time | /Hr | | | |
| 4 | Labour (Assemble & De-Assembling) overtime and weekend | /Hr | | | |
| 5 | Inspect and record all strip down measurements | /Hr | | | |
| 6 | Ball Bearings (Replacement) | Ea | | | |
| 7 | Roller Bearings (Replacement) | Ea | | | |
| 8 | Wear ring (Replacement) | Ea | | | |
| 9 | Neck Bush (Replacement) | Ea | | | |
| 10 | Shaft (Replacement) | Ea | | | |
| 11 | Impeller (Replacement) | Ea | | | |
| 12 | Spacer shim and the circlips (Replacement) | Ea | | | |
| 13 | 1 mm topgraph gasket (Replacement) | Ea | | | |
| 14 | 2 mm topgraph gasket (Replacement) | Ea | | | |
| 15 | Pressure test to 700 kPa | Ea | | | |
| 16 | Mechanical Seal (Replacement) | Ea | | | |
| 17 | Sand Blast and Paint | Ea | | | |
| 18 | Check the axial float of the pump. Tolerance = 0,03 mm – 0,2 mm. | Ea | | | |
| 19 | Ceramic coat shaft sleeve or replace with new equivalent ceramic coated sleeve | Ea | | | |
| 20 | Check the condition of the impeller. Measure the outside diameter of the impeller wear ring and record (QC) | Ea | | | |
| 21 | Renew all gaskets and the mechanical seal | Ea | | | |
| 22 | Casing machining | Ea | | | |
| 23 | Check the alignment of the pump | Ea | 3 | | |
| 24 | Do Laser alignment test | | | | |
| Total of the Prices for Part 1 | | | | | |

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

C3: Scope of Work

C3.1 Service Information

3.1. Description of the service

The *services* entail the overhauling of the Fuel Forwarding Pumps for Open Circle Gas Turbine (OCGT) plants namely, Ankerlig Power Stations. The service will include,

- Collect Pumps (Qty. 12) at Ankerlig Power Stations
- Split motor and Pump assembly on site
- Collect Pumps at site and move to workshop
- Send Quality control plan and method statement to Eskom for approval prior to commencing with work
- Inspect and record all strip down measurements. (Hold point for Eskom Representative)
- On Impeller Check and replace the following if needed
 - Wear ring
 - Neck bush
 - Ball bearing
 - Shaft.
 - Mechanical seal.
- Unscrew impeller fixing nut and recover the gasket
- Remove the impeller and recover gasket and key
- Remove the screws from the clamp plate, the fixing nuts from the mechanical seal cover and the fixing nut from the casing cover, then remove the casing cover.
- Remove the shaft sleeve together with the mechanical seal assembly with a bearing puller.
- Check the axial float of the pump. Tolerance = 0,03 mm – 0,2 mm.
- Remove the front and rear bearing housing end covers.
- Extract the shaft assembly to the coupling/impeller side.
- Extract the roller bearing outer ring from the bearing housing.
- Remove the circlips and the spacer and extract the ball bearings
- Remove the mechanical seal on the impeller and replace. (Witness Point) The mechanical seal must be replaced.
- Remove the clamp plate and the cover. Recover the O-ring gasket
- Clean the parts.
- Inspect/Replace the bearings along with the shaft. – Shaft – check surface condition of the shaft. Concentricity and deflection should not exceed 0,03mm. Bearing must be replaced. (QC)
- Check the condition of the shaft sleeve and special attention must be given to the “o” ring surfaces and the sleeve step for any burs.
- Ceramic coat shaft sleeve or replace with new equivalent ceramic coated sleeve
- Check the condition of the impeller. Measure the outside diameter of the impeller wear ring and record (QC)

NOTE 1: If any impellers are to be changed contact the Eskom Representative

- Check the dimensions of the shaft and the bearing housing.

NOTE: Inspect all bearing outer races and bearing housings for fretting. If no fretting observed, the pump can be re-assembled as is.

If there are any signs of bearing outer ring rotation or fretting observed, the bearing must be re-installed in the housing using an Approved Bearing Lock.

- Check the clearance between the impeller rear wear ring and the casing wear ring.

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- Check the clearance between volute casing wear ring and impeller suction wear ring.
- Check the condition of each mechanical seal part
- Clean the groove and lubricate it well.
- Clean the housing of the bearing and grease it adequately.

Assembly :

- Renew all gaskets and the mechanical seal.
- Install new wear rings on impeller neck and casing if required, with max clearance of 0.4mm. Casing machining may be required Contact Eskom representative Hold point (QC)
- Check that the circlips are in their grooves.
- Mount the roller bearing outer ring into its housing.
- Warm the ball bearings (507) and the roller bearing inner ring (508) with bearing heater to a temperature of 70°C and fit them onto the shaft, in an “O” arrangement.
- **NOTE:** Mount the ball bearings in opposition.
- Replace the spacer shim and the circlips.
- Install the shaft with its bearings from the impeller’s side.
- Install new mechanical seals, if needed.
- **NOTE:** The sliding surface of the mechanical seal must be free from dust or lubricant and an approved thread lock must be used on the drive collar
- if applicable.
- Slide the shaft sleeve assembly onto the shaft, replace the pump cover and secure it with the fixing nuts
- Replace the cover wear ring and the impeller wear ring and renew O-ring
- Renew the 1 mm topgraph gasket and replace the impeller and its key.
- Renew the 2 mm topgraph gasket and screw in the impeller nut.
- Fit the pump hydraulic unit into the dummy casing and pressure test to 700 kPA for 1 hour, then check for leaks.
- Install all removed washers.
- Replace removed nuts and washers and tighten them as needed.
- Check the alignment of the pump and box it.
- Balancing of rotating assembly required, as well as flow/performance testing
- All damage found must be recorded in a report which has to be sent to Eskom for recordkeeping purposes
- Paint Pump
- Transport to Site
- Assemble Pump and motor Assembly
- Do alignment test

Quality Requirements

- The *Contractor* complies with all quality requirements as set out in QM-58 Eskom Contract Quality Requirements Specification.
- Quality management for the works is in accordance with Eskom Supplier Management: Specification 240-105658000.
- The *Contractor* complies with the latest version of the ISO 9001 Quality Management System Requirements
- The *Contractor* defines the level of QA/QC or inspection imposed on his subcontractors and Contractor’s.
- The programming of inspections, hold and witness points are agreed between *Employer* and the *Contractor* prior to undertaking any work.
- The QCPs make provision for signatures indicating Completion by the *Contractor* and acceptance by the *Employer* at the end of each activity.
- The *Contractor* is made aware that all documents or designs are submitted for review to the *Employer* for acceptance, requires a process of review.

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- The QCPs make provision for signatures indicating Completion by the *Contractor* and acceptance by the *Employer* at the end of each activity.
- The quality requirements are as per Eskom Standard GGS 0462: QUALITY REQUIREMENTS FOR ENGINEERING AND CONSTRUCTION WORKS.
- The *Contractor* defines the level of QA/QC or inspection imposed on his Sub-Contractors and suppliers

3.2. Specifications

| Title | Date or revision | Tick if publicly available |
|--|------------------|----------------------------|
| <u>General Specifications:</u> | | |
| Life Saving Rules | | X |
| Health and Safety requirements OHSA No 85 of 1993 | | X |
| Environmental requirements: National Environmental Management Act of 1988 | | X |
| Site regulations and access control | | |
| Plant Safety Regulations (240-150642762) | | X |
| Eskom Procurement and Supply Chain Management Procedure 32-1034 | | X |

3.3. Constraints on how the *Contractor* Provides the Service

3.3.1 Meetings

Before any work can commence on site *Contractor* and all staff to attend site induction
 All personal to submit copies of their identity documents
Contractor will be required to sign on the workers register each morning and out in the afternoon
 Pre job briefs to be attended before any work can commence
 Safety Meeting in Table format or general comment
 Safety File discussion and Toolbox talk
 Condition of motors discussion with Contracts Manager

3.3.2 Use of standard forms

Standard forms to be used by the *Contractor* in the administration of the contract, for example the following,
 Early Warning
 Compensation Event Notifications
 Communication will be thru templates, forms and letters and if the contractor does not have, he/she should indicate so that the employer could provide

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

3.3.3 Invoicing and payment

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

The *Service Manager* assesses payments with the *Contractor* on completion of the works and prior to submission of the invoices for payment.

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

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

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

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

The *Contractor* includes the following on the *Contractor's* Tax Invoice:

- Name and address of *Contractor's*
- *Contractor's* VAT registration number if applicable
- *Contractor's* company registration number if applicable
- *Contractor's* banking details
- Name and address of recipient
- Tax invoice number and date of issue,
- Description of goods/service provided,
- Relevant Goods Receipt/ Service Entry number,
- Quantity or volume of goods/services
- Period time for which the Tax Invoice is being rendered,
- *Contract* Number (commencing with a 46 prefix),
- Relevant Task Order Number (commencing with a 45 prefix),
- Relevant line item number,
- Statement whether value added tax is included or excluded.
- *Employer's* VAT registration no. 4740 101 508
- Invoices to be made out to Eskom Holdings SOC Ltd

The *Contractor's* Tax Invoices comply with the requirements as stated in clause Z6 of the *Contract* Data

The *Contractor* attaches the detail assessment of all work done for each item in the Price List to each tax invoice showing

- The Price for each lump sum item in the Price List or Task Order which the *Contractor* has completed and
- Where a quantity is stated for an item in the Price List or Task Order, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate.

3.3.4 Records of Defined Cost

In order to substantiate the *Defined Cost* of compensation events, the *Employer* requires that the *Contractor* to keep the following,

- Record of Labour charges
- Record of material charges
- Record of Equipment Charges

These records need to be available on a spreadsheet in cases of a compensation event is agreed on.

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3.3.5 BBBEE and Preferencing scheme

Refer to Z2 of the contract data.

3.3.6 Cataloguing requirements by the *Contractor*

Not applicable

4. Requirements for the plan

Contractor to submit a plan in Primavera format or MS Project as well as PDF format detailing work execution within the stipulated dates including Public holidays and weekends. Plan should include the following

- Duration to complete each activity as per the scope of work
- Site induction and access
- Quality verification and testing activities
- Milestone dates for the activities to be provided from the date when the motors are collected until they are delivered back on site

Plan needs to be updated on a daily basis and be available to the *employer* when required. The *contractor* issues an early warning whenever there is a delay of any activity on the critical path. Any changes to the plan have to be submitted to the *Employer* for acceptance.

5. Services and other things provided by the *Employer*

5.1 Electrical Supply

- Supply will be provided
- The *Employer* indicates which supply points may be used
- Note The *Contractor* provides his own extension leads

5.2 Potable water supply

- All points of supply are provided in terms of availability and location
- The *Employer* indicates which supply points may be used

5.3 Lightning

- *Contractor* to provide own lightning for work

5.4 Designated smoking areas

- Personnel to smoke only at designated smoking areas.

5.5 Ablution facilities

- Ablution facilities will be made available by the *Employer* in designated areas

6. Property affected by the *service*

Not applicable

Overhauling of Fuel Forwarding Pumps – Ankerlig Power Station

PART 4: SITE INFORMATION**1. Description****History**

The name Ankerlig is derived from an Afrikaans expression “Om die anker te lig”, which is symbolic of a community that rises above the chains of poverty to experience growth and prosperity.

General

Construction of the first phase commenced in January 2006 and comprised of 4 x 148 MW units which was completed and handed over for commercial operation by June 2007. The second phase comprising of 5 x 147MW units was declared commercial during February 2009.

Technical Details

- Type: Open Cycle Gas Turbines (OCGT)
- Number of Units: (Nine) 9
- Output per unit: 148MW
- Installed Capacity: 1327 MW

Role

The OCGT units are powered by Fuel oil (Diesel). It is intended to supply electricity into the National Grid during peak hours and emergency situations. In addition to its generating capabilities the units are also used to regulate network voltage fluctuations (SCO – Synchronous Condenser Operation)

Where is Ankerlig

In Neil Hare Road, in the industrial area of Atlantis in the Western Cape.

Task Order

(for *Employer*)