NEC3 Term Service Contract (TSC3)

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

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

for **Maintenance of Compressor Plant at Arnot Power Station for a Period of 4 Years**

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

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

PART C1: AGREEMENTS & CONTRACT DATA

Contents:

C1.1 Form of Offer & Acceptance

Offer

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

Maintenance of Compressor Plant at Arnot Power Station

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

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

Options A or C	The offered total of the Prices exclusive of VAT is	**R [●]**
Option E	The first forecast of the total Defined Cost plus the Fee exclusive of VAT is	**R [●]**
	Sub total	**R [●]**
	Value Added Tax @ 15% is	**R [●]**
	The offered total of the amount due inclusive of VAT is[1]	**R [●]**
	(in words) **[●]**	

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

Signature(s) .....

Name(s) .....

Capacity .....

For the tenderer:

.....

[Company Name]

Name & signature of witness .....

Date .....

Tenderer's CIDB registration number: .....

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

Signature(s) .....

Name(s) .....

Capacity .....

for the Employer

ESKOM HOLDINGS SOC LTD
ARNOT POWER STATION

Name & signature of witness .....

Date .....

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

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

Note:

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

No.	Subject	Details
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		*ESKOM HOLDINGS SOC LTD* *ARNOT POWER STATION*
Name & signature of witness		
Date		

C1.2 TSC3 Contract Data

Part one - Data provided by the *Employer*

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

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option:	
		A: Priced contract with price list
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X1: Price adjustment for inflation
		X2 Changes in the law
		X18: Limitation of liability
		X19: Task Order
		X20: Key performance indicators
		Z: *Additional conditions of contract*
	of the NEC3 Term Service Contract April 2013[1] (TSC3)	
10.1	The *Employer* is (name):	**Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
	Tel No.	**[●]**
	Fax No.	**[●]**
10.1	The *Service Manager* is (name):	
	Address	
	Tel	
	Fax	
	e-mail	
11.2(2)	The Affected Property is	**The control air and station air compressors and**

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

		plant associated and forming part of the compressor operating systems – mechanical and electrical
11.2(13)	The *service* is	**Arnot control air and station air compressor and related plant maintenance**
11.2(14)	The following matters will be included in the Risk Register	**Competency of Personnel, unavailability of Resources, replacement of personnel, Eskom/Contractor strikes, not adhering to SHEQ Policy, Poor quality of work and PSR Authorisation**
11.2(15)	The Service Information is in	**Part 3: Scope of Work and all documents and drawings to which it makes reference.**
12.2	The *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**one working week**
2	**The *Contractor*'s main responsibilities**	**Data required by this section of the core clauses is also provided by the *Contractor* in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data**
21.1	The *Contractor* submits a first plan for acceptance within	**2 weeks of the Contract Date**
3	**Time**	
30.1	The *starting date* is.	**TBC**
30.1	The *service period* is	**4 years**
4	**Testing and defects**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data**
5	**Payment**	
50.1	The *assessment interval* is	**between the 25th and the last day of each successive month.**
51.1	The *currency of this contract* is the	**South African Rand**
51.2	The period within which payments are made is	Thirty (30) Calendar days after the signed assessment by both Parties and a valid Tax Invoice**.** **ATTENTION:** Eskom's standard policy on payment term for all contracts valued above R50 000 0000 (Fifty Million Rand), including VAT, is 60 days. Bidders are requested to bear this payment term in mind when submitting bids and concluding contracts**.**
51.4	The *interest rate* is	**the publicly quoted prime rate of interest (calculated on a 365 day year) charged by from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any**

		dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands.
6	**Compensation events**	**Any unforeseen scope of work not covered by the contract but within the scope of compressor maintenance/services. Refer to 60.1 NEC TSC3**
7	**Use of Equipment Plant and Materials**	**No data is required for this section of the *conditions of contract***
8	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**1. Labour unrest (Strike Action)** **2. Low skill level on compressors – Eskom personnel**
9	**Termination**	**To be managed as per core clause 9 of the NEC3 TSC.**
10	**Data for main Option clause**	
A	**Priced contract with price list**	
20.5	The *Contractor* prepares forecasts of the final total of the Prices for the whole of the *service* at intervals no longer than	**[●] weeks.**
11	**Data for Option W1**	
W1.1	The *Adjudicator*	**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).**
	Address	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	e-mail	**[●]**
W1.2(3)	The *Adjudicator nominating body* is:	**the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the Institution of Civil Engineers (London) (see www.ice-sa.org.za) or its successor body.**
W1.4(2)	The *tribunal* is:	**arbitration**
W1.4(5)	The *arbitration procedure* 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 - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**

12 Data for secondary Option clauses

X1 Price adjustment for inflation

X1.1 The *base date* for indices is **[●].**

The proportions used to calculate the Price Adjustment Factor are:

proportion	**linked to index for**	**Index prepared by**
15%	**Fixed**	**Fixed Portion**
18%	**Labour**	**SEIFSA Table C3(a)**
2%	**CPI**	**SEIFSA Table D4**
30%	**Material**	**SEIFSA Table O 2 (General % Special Purpose Machinery)**
35%	**Foreign Currency**	**SEIFSA Table U 3(a)**
100%		

X2 Changes in the law

Becomes a Compensation Event only if the changes in the Law of the Republic of South Africa took place after the Contract Date**.**

X18 Limitation of liability

X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to	**R0.0 (zero Rand)**
X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to	**the amount of the deductibles relevant to the event**
X18.3	The *Contractor*'s liability for Defects due to his design of an item of Equipment is limited to	**The greater of** • **the total of the Prices at the Contract Date and** • **the amounts excluded and unrecoverable from the *Employer*'s insurance (other than the resulting physical damage to the *Employer*'s property which is not excluded) plus the applicable deductibles**
X18.4	The *Contractor*'s total liability to the *Employer*, for all matters arising under or in connection with this contract, other than the excluded matters, is limited to	**the total of the Prices other than for the additional excluded matters.** **The *Contractor's* total liability for the additional excluded matters is not limited.**

		The additional excluded matters are amounts for which the *Contractor* is liable under this contract for • **Defects due to his design, plan and specification,** • **Defects due to manufacture and fabrication outside the Affected Property,** • **loss of or damage to property (other than the *Employer*'s property, Plant and Materials),** • **death of or injury to a person and** • **infringement of an intellectual property right.**
X18.5	The *end of liability date* is	**12 months after the end of the *service period*.**
X19	**Task Order**	
X19.5	The *Contractor* submits a Task Order programme to the *Service Manager* within	**5 days of receiving the Task Order**
X20	**Key Performance Indicators (not used when Option X12 applies)**	
X20.2	A report of performance against each Key Performance Indicator is provided at intervals of	**[●] months**
Z	**The *additional conditions of contract* are**	**Z1 to Z14 always apply.**

Z1 Cession delegation and assignment

Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer.*

Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.

Z2 Joint ventures

Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this contract.

Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Service Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.

Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

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

Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor*'s B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.

Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Service Manager* within thirty days of the notification or as otherwise instructed by the *Service Manager*.

Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor*'s obligation to Provide the Service.

Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P4 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

Z4 Confidentiality

Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Service Manager*.

Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

Z4.4 The taking of images (whether photographs, video footage or otherwise) of the Affected Property or any portion thereof, in the course of Providing the Service and after the end of the *service period*, requires the prior written consent of the *Service Manager*. All rights in and to all such images vests exclusively in the *Employer*.

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

Z5 Waiver and estoppel: Add to core clause 12.3:

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

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

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

- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational

Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Affected Property;

- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of the *service*; and
- undertakes, in and about the execution of the *service*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

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

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

Z7.1 Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer*'s procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.

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

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

Z8 Notifying compensation events

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

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

Z9 *Employer's* limitation of liability

Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)

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

Z10 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

Z10.1 or had a business rescue order granted against it.

Z11 Ethics

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

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

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

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

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

Corrupt Action means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,

Fraudulent Action means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,

Obstructive Action means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and

Prohibited Action means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

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

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

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

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

Z12 Insurance

Z_12_.1 Replace core clause 83 with the following:

Insurance cover 83

83.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

83.2 The *Contractor* provides the insurances stated in the Insurance Table A from the *starting date* until the earlier of Completion and the date of the termination

certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage caused by the *Contractor* to the *Employer*'s property	The replacement cost where not covered by the *Employer*'s insurance. The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance.
Loss of or damage to Plant and Materials	The replacement cost where not covered by the *Employer*'s insurance. The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance.
Loss of or damage to Equipment	The replacement cost where not covered by the *Employer*'s insurance. The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance.
The *Contractor*'s liability for loss of or damage to property (except the *Employer*'s property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) arising from or in connection with the *Contractor*'s 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 *Contractor* arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

<u>Z 12.2 Replace core clause 86 with the following:</u>

Insurance by the *Employer*

86

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

INSURANCE TABLE B

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

Z13 Nuclear Liability

Z13.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z13.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.

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

Z14 Asbestos

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

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

AL means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions 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 *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

SANAS means the South African National Accreditation System.

TWA means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

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

Z14.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z14.3 The *Employer* manages asbestos and ACM according to the Standard.

Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.

Z14.5 The *Contractor*'s personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.

Z14.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including

the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer*'s expense, and conducted in line with South African legislation.

C1.2 Contract Data

Part two - Data provided by the *Contractor*

[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry) Whenever a cell is shaded in the left hand column it denotes this data is optional and would be required in relation to the option selected. In the event that the option is not required select and delete the whole row.]

Notes to a tendering contractor:

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

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

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

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

Responsibilities:

Qualifications:

Experience:

		CV's (and further key person's data including CVs) are in .
A	**Priced contract with price list**	
11.2(12)	The *price list* is in	
11.2(19)	The tendered total of the Prices is	**R**
C	**Target contract with price list**	
11.2(12)	The *price list* is in	
11.2(20)	The tendered total of the Prices is	**R**
E	**Cost reimbursable contract**	
11.2(12)	The *price list* is in	

PART 2: PRICING DATA

TSC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	2
C2.2	The *price list*	56

C2.1 Pricing assumptions: Option A

1. How work is priced and assessed for payment

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

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

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

2. Function of the Price List

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

3. Link to the *Contractor*’s plan

Clause 21.4 states “The *Contractor* provides information which shows how each item description on the Price List relates to the operations on each plan which he submits for acceptance”. Hence when compiling the *price list*, the tendering contractor needs to develop his first clause 21.2 plan in such a way that operations shown on it can be priced in the *price list* and result in a satisfactory cash flow in terms of clause 11.2(17).

4. Preparing the *price list*

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

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

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

4.1. Format of the *price list*

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

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

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

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

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

C2.2 the *price list*

Summary of 4 YR Compressor Maintenance Contract Price List
(Price List Quantities provided are the listed minimum but not limited to. OEM's can add additional costed items if so required when tendering)

Item nr	Description	Unit	Expected Quantity	Rate	Price
Preliminary & General					
1	Site Establishment	ea	1		
2	Site De-establishment	ea	1		
3	Accommodation				
3.1	Site Artisan				
3.2	Service Technician				
4	Travelling				
4.1	Site Artisan	km			
4.2	Service Technician	km			
5	Tools and Equipment	ea			
Health & Safety					
6	Health and Safety costs for 4 yr	ea			
Labour Rates					
7	Labour (Fixed rates)				
7.1	Site Artisan	hrs			
7.2	Service Technician	hrs			

8	Standby Allowance	days			
Maintenance Spares					
9	CompAir TA2000 Cameron Centrifugal Compressors	ea			
10	CompAir L-Series & Ingersoll-Rand ML110 Rotary Screw Compressors	ea			
11	CompAir AXS & AXN Series Heatless Absorption Dryers	ea			
12	CompAir "B" & "C" Inline Filters	ea			
13	EVAPCO Cooling Towers	ea			
14	BAOFN Inspections & Cleaning	ea			
15	BAOFN 7.5 Rotary Screw Compressors	ea			
Capital / Critical Spares (Spares for unforeseen failures)					
16	Centrifugal Compressors	ea			
17	Screw Compressors	ea			
New Items					

The total of the Prices

PREMILINARIES & GENERAL COST BREAK DOWNS

1. SITE ESTABLISHMENT DETAIL

Item nr	Description	Unit	Expected Quantity	Rate	Price
1.1					
1.2					
1.3					
				TOTAL	

2. SITE DESTABLISHMENT DETAIL

Item nr	Description	Unit	Expected Quantity	Rate	Price
2.1					
2.2					
2.3					
				TOTAL	

5. TOOLS & EQUIPMENT DETAIL

Item nr	Description	Unit	Expected Quantity	Rate	Price
5.1					
5.2					
5.3					
				TOTAL	

6. HEALTH AND SAFETY

Item nr	Description	Unit	Expected Quantity	Rate	Price
6.1					
6.2					
6.3					
6.4					
				TOTAL	

3.1, 4.1 & 7.1 SITE ARTISAN (Labour, Travelling & Accommodation)

Site Artisan Quantities (Labour Hrs, Travelling Km, Accommodation)									
Description	Labour Hours	QTY Weeks	HRS Sub Total	Travelling KM	QTY Weeks	KM Sub Total	Accom days	QTY Years	Accom. Days Sub Total
Normal Work Week 40 hrs	40	196	7 840			0			0
Normal travelling per week (94km per day)			0	470	196	92 120			0
Accommodation (days)			0			0	344	4	1 376
Breakdowns / unforeseen call outs (3 per month)	24	48	1 152	282	48	13 536			0
Planned overtime	8	72	576	94	72	6 768			0
Site Artisan Items: 3.1, 4.1 & 7.1 - Totals	**Total Site Hours**		**9 568**	**Total Site Kilometres**		**112 424**	**Total Site Accommodation Days**		**1 376**

3.2, 4.2 & 7.2 SERVICE TECHNICIAN (Labour, Travelling & Accommodation)

Service Technician Quantities (Labour Hrs, Travelling Km, Accommodation)									
Description	Labour Hours	EQUIP/ QTY	HRS Sub Total	Travelling KM	EQUIP/ QTY	KM Sub Total	Accom.	EQUIP/ QTY	Sub Accom. days

CompAir TA2000 Old & New Gen Cameron Minor Services	64	9	576	3520	9	31680	1	9	9
CompAir TA2000 Old & Gen Cameron Interim Services	160	9	1440	3520	9	31680	6	9	54
CompAir TA2000 Old & New Gen Cameron Major Services	240	9	2160	4440	9	39960	8	9	72
CompAir L-Series Screw compressors Minors Services	64	11	704	3520	11	38720			0
CompAir L-Series Screw compressors Interim Services	32	11	352	1760	11	19360			0
CompAir L-Series Screw compressors Major Services	32	11	352	1760	11	19360			0
CompAir L-Series Screw compressors Overhauls	40	11	440	440	11	4840			0
Ingersoll-Rand Screw ML110 Major services	32	1	32	440	1	440			0
A340XS Dryers Services	56	4	224	2640	4	10560			0
AXNS series Dryers Services	32	20	640	1760	20	35200	2	20	40
BAOFN Compressors Weekly Inspection & Monthly Clean	728	4	2912	77792	4	31 1168			0
BAOFN Rotary Screw Compressors Minor Services (2000hr)	24	4	96	2992	4	11 968			0
BAOFN Rotary Screw Compressors Major Services (4000hrs)	48	4	128	2992	4	11 968			0
BAOFN Rotary Screw Compressors Budget Overhaul	20	4	80	374	4	1 496			
Stand-in Hours/ Travelling & Accommodation for Site staff -21 days	8	21	168	110	21	2 310	21	4	84
Breakdowns / unforeseen call outs (2 per month)	16	48	768	880	48	42 240	0	0	0
Service Technician Items: 3.2, 4.2 & 7.2 - Totals		**Total Service Hours**	**11 136**		**Total Service Kilometres**	**612 950**		**Total Accom. Days**	**259**

8. STANDBY ALLOWANCE DAYS

Item nr	Description	Unit	1 Year QTY	4 Years QTY
8.1	**Standby days**	**days**	**365**	**1460**

MAINTENANCE SERVICES BREAKDOWN

9. CompAir TA2000 Cameron Centrifugal Compressors

Breakdown of TA2000 Centrifugal Services – Unit Control Air 1 & 3 Compressors - OLD Generation

3 Monthly – Minor Service (Total of 8 services over 4 years for 2 machines)

Serv.	Part Number	Description	Unit	Total QTY	Rates	Price

Item						
1	AAMB796039-00002	Oil filter element (Old) (For x2 Machines)	ea	16		
2	P14-5891	Inlet filter Element (Old)	ea	32		
3	AAP1404040-00201	Vent filter	ea	16		
4	AAP1405340-00289	Oil Pump & Main Drive Motor Grease	ea	16		
5	AAP1405340-00264	Coupling Grease	ea	16		
6	CONS-A	Consumables	ea	16		
7	Labour	Labour - Service Technician	hrs	128	-	-
8	Travel	Travel - Service Technician	km	7 040	-	-
9	Accommodation	Accommodation	days	16	-	-
					TOTAL	

6 Monthly- Interim service (Total of 4 services over 4 years for 2 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
10	P14-5891	Inlet Air Element Old Style	ea	16		
11	AAMB796039-00002	Oil filter element (Old)	ea	8		
12	AAMB795270-20005	Intercooler inspection kits	ea	8		
13	AAP1404040-00201	Vent filter	ea	8		
14	Oil Sample test	Oil Sample test	ea	8		
15	AAP1405340-00289	Oil Pump & Motor Grease	ea	8		
16	AAP1405340-00264	Coupling Grease	ea	8		
17	AAP1406064-04113	Gasket, Main drive coupling	ea	8		
18	AAP1406064-04005	O-Ring, Main drive coupling	ea	8		
19	CONS-B	Consumables	ea	8		

20	Labour	Labour - Service Technician	hrs	320	-	-
21	Travel	Travel - Service Technician	km	7 040	-	-
22	Accommodation	Accommodation	days	48	-	-
					TOTAL	

12 Monthly – Major Service (Total of 4 services over 4 years for 2 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
23	P14-5891	Inlet Air Element Old Style	ea	16		
24	AAMB796039-00002	Oil filter element (Old)	ea	8		
25	AAMB795270-20005	Intercooler inspection kits	ea	8		
26	AAP1404040-00201	Vent filter	ea	8		
27	Oil Sample test	Oil Sample test	ea	8		
28	AAP1405340-00289	Oil Pump & Motor Grease	ea	8		
29	AAP1405340-00264	Coupling Grease	ea	8		
30	AAP1406064-04113	Gasket, Main drive coupling	ea	8		
31	AAP1406064-04005	O-Ring, Main drive coupling	ea	8		
32	AAP0540010-07300	Re-Circulating Silencer	ea	8		
33	AAMB795270-20010	Inlet Inspection Kit	ea	8		
34	AAP1405340-00294	Oil Change (20 l Drum) TurboBlend	ea	56		
35	Intercooler cleaning	Cleaning of intercoolers	ea	8		
36	Consumables	Cleaning compressor / Consumables	ea	8		
37	Labour	Labour - Service Technician	hrs	480	-	-
38	Travel	Travel - Service Technician	km	8 880	-	-
39	Accommodation	Accommodation	days	64	-	-

	TOTAL	

Breakdown of TA2000 Centrifugal Services – Unit Control Air 2 Compressor - NEW Generation

3 Monthly – Minor Service (Total of 8 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
40	P0245245-00001	Primary Inlet Filter Element (New) - T60	ea	8		
41	AAP0245245-00003	Secondary Inlet Filter Element (New) - MX98	ea	16		
42	AAP1404040-00207	Oil filter Element New Gen	ea	8		
43	PS702P	ELEMENT (06E&06F) (New Gen) Regulator FLTR	ea	8		
44	AAP1404040-00201	Vent filter	ea	8		
45	AAP1405340-00289	Oil Pump & Main Drive Motor Grease	ea	8		
46	CONS-A	Consumables	ea	8		
47	Labour	Labour - Service Technician	hrs	64	-	**-**
48	Travel	Travel - Service Technician	km	3 520	-	**-**
49	Accommodation	Accommodation	days	8	-	**-**
					TOTAL	

6 Monthly- Interim Service (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
50	P0245245-00001	Primary Inlet Filter Element (New) - T60	ea	4		
51	AAP0245245-00003	Secondary Inlet Filter Element (New) - MX98	ea	8		
52	AAP1404040-00207	Oil filter Element New Gen	ea	4		
53	AAP1404040-00207	Oil filter Element New Gen	ea	4		
54	AAMB795270-20005	Intercooler inspection kits	ea	4		

55	AAP1404040-00201	Vent filter	ea	4		
56	Oil Sample test	Oil Sample test	ea	4		
57	AAP1405340-00289	Oil Pump & Motor Grease	ea	4		
58	CONS-B	Consumables	ea	4		
59	Labour	Labour - Service Technician	hrs	160	-	**-**
60	Travel	Travel - Service Technician	km	3 520	-	**-**
61	Accommodation	Accommodation	days	24	-	**-**
					TOTAL	

12 Monthly – Major Service (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
62	P0245245-00001	Primary Inlet Filter Element (New) - T60	ea	4		
63	AAP0245245-00003	Secondary Inlet Filter Element (New) - MX98	ea	4		
64	PS702P	ELEMENT (06E&06F) (New Gen) Regulator FLTR	ea	4		
65	AAP1404040-00207	Oil filter Element New Gen	ea	4		
66	AAMB795270-20005	Intercooler inspection kits	ea	4		
67	AAP1404040-00201	Vent filter	ea	4		
68	Oil Sample test	Oil Sample test	ea	4		
69	AAP1405340-00289	Oil Pump & Motor Grease	ea	4		
70	AAP0540010-07300	Re-Circulating Silencer	ea	4		
71	AAMB795270-20010	Inlet Inspection Kit	ea	4		
72	AAP1405340-00294	Oil Change (20 l Drum) TurboBlend	ea	28		
73	Intercooler cleaning	Cleaning of intercoolers	ea	4		
74	CONS-B	Consumables	ea	4		

75	Labour	Labour - Service Technician	hrs	240	-	**-**
76	Travel	Travel - Service Technician	km	4 440	-	**-**
77	Accommodation	Accommodation	hrs	32	-	**-**
					TOTAL	

Breakdown of TA2000 Centrifugal Services – Fabric Filter Compressors 4A, 5A & 6A - OLD Generation

3 Monthly – Minor Services (Total of 8 services over 4 years for 3 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rate	Price
78	P0245245-00001	Primary Inlet Filter Element (New) - T60	ea	24		
79	AAP0245245-00003	Secondary Inlet Filter Element (New) - MX98	ea	24		
80	AAMB796039-00002	Oil filter element (Old)	ea	24		
81	AAP1405340-00289	Oil Pump & Main Drive Motor Grease	ea	24		
82	AAP1404040-00201	Vent filter	ea	24		
83	AAP1405340-00264	Coupling Grease (Old Gen)	ea	24		
84	CONS-A	Consumables	ea	24		
85	Labour	Labour - Service Technician	hrs	192	**-**	**-**
86	Travel	Travel - Service Technician	Km	10 560	**-**	**-**
87	Accommodation	Accommodation	days	24	**-**	**-**
					TOTAL	

6 Monthly – Interim Services (Total of 4 services over 4 years for 3 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rate	Price
88	P0245245-00001	Air Inlet filter primary element	ea	12		
89	AAP0245245-00003	Air Inlet filter secondary element	ea	12		

90	AAMB796039-00002	Oil filter element (Old)	ea	12		
91	AAMB795270-20005	Intercooler inspection kits	ea	12		
92	AAP1404040-00201	Vent filter	ea	12		
93	Oil Sample test	Oil Sample test	ea	12		
94	AAP1405340-00289	Oil Pump & Motor Grease	ea	12		
95	AAP1405340-00264	Coupling Grease (Old Gen)	ea	12		
96	AAP1406064-04113	Gasket, Main drive coupling (Old Gen)	ea	12		
97	AAP1406064-04005	O-Ring, Main drive coupling (Old Gen)	ea	12		
98	CONS-B	Consumables	ea	12		
99	Labour	Labour - Service Technician	hrs	480	**-**	**-**
100	Travel	Travel - Service Technician	km	10 560	**-**	**-**
101	Accommodation	Accommodation	day	72	**-**	**-**
					TOTAL	

12 Monthly – Major Service (Total of 4 services over 4 years for 3 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
102	P0245245-00001	Air Inlet filter primary element	ea	12		
103	AAP0245245-00003	Air Inlet filter secondary element	ea	12		
104	AAMB796039-00002	Oil filter element (Old)	ea	12		
105	AAMB795270-20005	Intercooler inspection kits	ea	12		
106	AAP1404040-00201	Vent filter	ea	12		
107	Oil Sample test	Oil Sample test	ea	12		
108	AAP1405340-00289	Oil Pump & Motor Grease	ea	12		
109	AAP1405340-00264	Coupling Grease	ea	12		

110	AAP1406064-04113	Gasket, Main drive coupling	ea	12		
111	AAP1406064-04005	O-Ring, Main drive coupling	ea	12		
112	AAP0540010-07300	Re-Circulating Silencer	ea	12		
113	AAMB795270-20010	Inlet Inspection Kit	ea	12		
114	AAP1405340-00294	Oil Change (20 l Drum) TurboBlend	ea	84		
115	Intercooler cleaning	Cleaning of intercoolers	ea	12		
116	Consumables	Cleaning compressor / Consumables	ea	12		
117	Labour	Labour - Service Technician	hrs	720	-	-
118	Travel	Travel - Service Technician	km	13 320	-	-
119	Accommodation	Accommodation	days	96	-	-
					TOTAL	

Breakdown of TA2000 Centrifugal Services – Fabric Filter Compressors 4B, 5B & 6B - NEW Generation

3 Monthly – Minor Services (Total of 8 services over 4 years for 3 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
120	AC-606050-S3	Panel filter (Force vent) FFP New	ea	96		
121	P0245245-00001	Primary Inlet Filter Element (New) - T60	ea	24		
122	AAP0245245-00003	Secondary Inlet Filter Element (New) - MX98	ea	24		
123	AAP1404040-00207	Oil filter Element New Gen	ea	24		
124	AAP1404040-00201	Vent filter	ea	24		
125	PS702P	ELEMENT (06E&06F) (New Gen) Regulator FLTR	ea	24		
126	AAP1405340-00289	Oil Pump & Main Drive Motor Grease	ea	24		
127	CONS-A	Consumables	ea	24		

128	Labour	Labour - Service Technician	hrs	192	-	-
129	Travel	Travel - Service Technician	km	10 560	-	-
130	Accommodation	Accommodation	days	24	-	-
					TOTAL	

6 Monthly – Interim Service (Total of 4 services over 4 years for 3 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
131	AC-606050-S3	Panel filter (Force vent) FFP New	ea	48		
132	P0245245-00001	Air Inlet filter primary element	ea	12		
133	AAP0245245-00003	Air Inlet filter secondary element	ea	12		
134	AAP1404040-00207	Oil filter Element New Gen	ea	12		
135	PS702P	ELEMENT (06E&06F) (New Gen) Regulator FLTR	ea	12		
136	AAMB795270-20005	Intercooler inspection kits	ea	12		
137	AAP1404040-00201	Vent filter	ea	12		
138	Oil Sample test	Oil Sample test	ea	12		
139	AAP1405340-00289	Oil Pump & Motor Grease	ea	12		
140	CONS-B	Consumables	ea	12		
141	Labour	Labour - Service Technician	hrs	480	-	-
142	Travel	Travel - Service Technician	km	10 560	-	-
143	Accommodation	Accommodation	days	72	-	-
					TOTAL	

12 Monthly – Major Service (Total of 4 services over 4 years for 3 machines)

Serv.	Part Number	Description	Unit	Total QTY	Rates	Price

Item						
144	AC-606050-S3	Panel filter (Force vent) FFP New	ea	48		
145	P0245245-00001	Air Inlet filter primary element	ea	12		
146	AAP0245245-00003	Air Inlet filter secondary element	ea	12		
147	AAP1404040-00207	Oil filter Element New Gen	ea	12		
148	PS702P	ELEMENT (06E&06F) (New Gen) Regulator FLTR	ea	12		
149	AAMB795270-20005	Intercooler inspection kits	ea	12		
150	AAP1404040-00201	Vent filter	ea	12		
151	Oil Sample test	Oil Sample test	ea	12		
152	AAP1405340-00289	Oil Pump & Motor Grease	ea	12		
153	AAP0540010-07300	Re-Circulating Silencer	ea	12		
154	AAMB795270-20010	Inlet Inspection Kit	ea	12		
155	AAP1405340-00294	Oil Change (20 l Drum) TurboBlend	ea	84		
156	Intercooler cleaning	Cleaning of intercoolers	ea	12		
157	Consumables	Cleaning compressor / Consumables	ea	12		
158	Labour	Labour - Service Technician	hrs	720	-	-
159	Travel	Travel - Service Technician	km	13 320	-	-
160	Accommodation	Accommodation	days	96	-	-
					TOTAL	

10. CompAir L-Series & Ingersoll-Rand ML110 Rotary Screw Compressors

Breakdown of L55 V4. Rotary Screw Services- Unit Control Air 4 & 6, Standby 3 & 4 Compressors

L55 V4. Unit Control Air 4 – S/N: CD1007177001
L55 V4. Unit Control Air 6 – S/N: CD10072498001
L55 V4. Control Air Standby 3 – S/N: CD10072498002

L55 V4. Control Air Standby 4 – S/N: CD10071900001

L55 V4. Minor Service (Total of 8 services over 4 years for 4 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
161	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	32		
162	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	32		
163		OIL SAMPLE	ea	32		
164	Labour	Labour - Service Technician	hrs	256	-	-
165	Travel	Travel - Service Technician	km	14 080	-	-
					TOTAL	

L55 V4. Interim Service (Total of 4 services over 4 years for 4 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
166	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	16		
167	CK4GD6-1-N	Separator Kit	ea	16		
168	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	16		
169		OIL SAMPLE	ea	16		
170	Labour	Labour - Service Technician	hrs	128	-	-
171	Travel	Travel - Service Technician	km	7 040	-	-
					TOTAL	

L55 V4. Major Service (Total of 4 services over 4 years for 2 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
172	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	16		

173	CK4GD6-1-N	Separator Kit	ea	16		
174	CK8GD6-1-N	Major Kit	ea	16		
175	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	32		
176		OIL SAMPLE	ea	16		
177	Labour	Labour - Service Technician	hrs	128	-	-
178	Travel	Travel - Service Technician	km	7 040	-	-
					TOTAL	

L55 V4. Overhaul (Total of 1 service over 4 years for 4 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
179	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	4		
180	CK4GD6-1-N	Separator Kit	ea	4		
181	CK8GD6-1-N	Major Kit	ea	4		
182	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	8		
183		OIL SAMPLE	ea	4		
184	ZS1219104	SPIDER ROTEX 55 T-PUR 98ShA (violett)	ea	4		
185	100012145	FLEXIBLE COUPLING 75-VITON Typ-O D=76.1	ea	8		
186	A17414174	Check disc GD6	ea	4		
187	A93300200	COMPR. SPRING 17,0x129x1,1 (Da;Lo;d)	ea	4		
188	A11511974	CONTROLSET 70°C	ea	4		
189	ZS1222410	PRESSURE SENSOR -1...15BAR/4-20MA	ea	8		
190	ZS1143737	TEMPERATURE PROBE PT1000 Silc. free	ea	4		
191	ZS1212955	Intake Hose L55-75 DN-130	ea	4		
192	ZS1084068	Magnetic Coil HAKG 110 230V ~	ea	4		

193	ZS1218365	Cylinder Repair Kit HAG 110	ea	4		
194	ZS1084062	CONTROLLER REPAIR KIT HAKG110	ea	4		
195	ZS1091291	actuating cylinder PBED 40	ea	4		
196	A17421074	AIR END REPAIR KIT GD6 DIRECT SI	ea	4		
197		Overhaul Main Motor	ea	4		
198		Overhaul Fan Motor 1	ea	4		
199		Cooler Cleaning	ea	4		
200		Hose Set	ea	4		
201	Labour	Labour - Service Technician	hrs	160	-	-
202	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

Breakdown of L75 V4. Rotary Screw Services- Control Air 5 Compressor

L75 V4. Unit Control Air 5– S/N: CD10072093001

L75 V4. Minor Service (Total of 8 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
203	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	8		
204	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	8		
205		OIL SAMPLE	ea	8		
206	Labour	Labour - Service Technician	hrs	64	-	-
207	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

L75 V4. Interim Service (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
208	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	4		
209	CK4GD6-1-N	Separator Kit	ea	4		
210	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	4		
211		OIL SAMPLE	ea	4		
212	Labour	Labour - Service Technician	hrs	32	-	-
213	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

L75 V4. Major Service (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
214	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	4		
215	CK4GD6-1-N	Separator Kit	ea	4		
216	CK8GD6-1-N	Major Kit	ea	4		
217	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	8		
218		OIL SAMPLE	ea	4		
219	Labour	Labour - Service Technician	hrs	32	-	-
220	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

L75 V4. Overhaul (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
221	CK2GD6-1	Standard MINOR KIT (A) L55-75/RS	ea	1		

222	CK4GD6-1-N	Separator Kit	ea	1		
223	CK8GD6-1-N	Major Kit	ea	1		
224	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	2		
225		OIL SAMPLE	ea	1		
226	ZS1219104	SPIDER ROTEX 55 T-PUR 98ShA (violett)	ea	1		
227	100012145	FLEXIBLE COUPLING 75-VITON Typ-O D=76.1	ea	2		
228	A17414174	Check disc GD6	ea	1		
229	A93300200	COMPR. SPRING 17,0x129x1,1 (Da;Lo;d)		1		
230	A11511974	CONTROLSET 70°C		1		
231	ZS1222410	PRESSURE SENSOR -1...15BAR/4-20MA		2		
232	ZS1143737	TEMPERATURE PROBE PT1000 Silc. free		1		
233	ZS1212955	Intake Hose L55-75 DN-130		1		
234	ZS1084068	Magnetic Coil HAKG 110 230V ~		1		
235	ZS1218365	Cylinder Repair Kit HAG 110		1		
236	ZS1084062	CONTROLLER REPAIR KIT HAKG110		1		
237	ZS1091291	actuating cylinder PBED 40		1		
238	A17421274	AIR END REPAIR KIT GD6 G SI		1		
239		Overhaul Main Motor		1		
240		Overhaul Fan Motor 1		1		
241		Cooler Cleaning		1		
242		Hose Set		1		
243	Labour	Labour - Service Technician		40	-	-
244	Travel	Travel - Service Technician		440	-	-

	TOTAL	

Breakdown of L132 V4. Rotary Screw Services- Control Air Standby 1 Compressor

L132 V4. Control Air Standby 1-S/N: CD10072234001

L132 V4. Minor service (Total of 8 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
245	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	8		
246	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	8		
247		OIL SAMPLE	ea	8		
248	Labour	Labour - Service Technician	hrs	64		
249	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

L132 V4. Interim Service (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rate	Price
250	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	4		
251	CK4GD8-1-N	Standard Separator Kit	ea	4		
252	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	4		
253		OIL SAMPLE	ea	4		
254	Labour	Labour - Service Technician	hrs	32		
255	Travel	Travel - Service Technician	km	1 760		
					TOTAL	

L132 V4. Major Service (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
256	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	4		
257	CK4GD6-1-N	Separator Kit	ea	4		
258	CK8GD6-1-N	Major Kit	ea	4		
259	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	12		
260		OIL SAMPLE	ea	4		
261	Labour	Labour - Service Technician	hrs	32	-	-
262	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

L132 V4. Overhaul (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
263	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	1		
264	CK4GD8-1-N	Standard Separator Kit	ea	1		
265	CK8GD8-1-N	Major Kit	ea	1		
266	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	3		
267		OIL SAMPLE	ea	1		
268	100011733	COUPLING SPIDER 95Sh A ROTEX 65	ea	1		
269	ZS1181201	FLEXIBLE COUPLING 75-VITON Typ-O D=88,9	ea	1		
270	100012145	FLEXIBLE COUPLING 75-VITON Typ-O D=76.1	ea	1		
271	A11511974	CONTROLSET 70°C	ea	1		
272	A11910474	CHECK DISC NW 175 COMPL	ea	1		
273	A93301290	COMPR.SPRING 17,5 X 1,3	ea	1		

274	ZS1188918	Intake Hose FRAME 5 DN200	ea	1		
275	EK220-1	CONTROL KIT Frame5 (V3/V4); Frame6 A(V2)	ea	1		
276	ZS1187445	Bearing Kit	ea	2		
277		Overhaul Main Motor	ea	1		
278		Overhaul Fan Motor 1	ea	1		
279		Cooler Cleaning	ea	1		
280		Hose Set	ea	1		
281	Labour	Labour - Service Technician	hrs	40	-	-
282	Travel	Travel - Service Technician	km	440	-	-
					TOTAL	

Breakdown of L160 V3. Rotary Screw Services- Control Air Standby 2 Compressor & EXTRA L160 V3.

L160 V3. Control Air Standby 2 – SN: CD10068282001
L160 V3. Extra Unit – S/N: CD10072752001

L160 V3. Minor Service (Total of 8 services over 4 years for 2 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
283	ZS1191575	OIL FILTER PREMIUM	ea	32		
284	ZS1192229	Air Filter Element	ea	32		
285	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	16		
286		OIL SAMPLE	ea	16		
287	Labour	Labour - Service Technician	hrs	128	-	-
288	Travel	Travel - Service Technician	km	7 040	-	-
					TOTAL	

L160 V3. Interim Service (Total of 4 services over 4 years for 2 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
289	CK4GD10-1-N	Separator Kit	ea	8		
290	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	8		
291		OIL SAMPLE	ea	8		
292	Labour	Labour - Service Technician	hrs	64	-	-
293	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

L160 V3. Major Service (Total of 4 services over 4 years for 2 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
294	CK4GD10-1-N	Separator Kit	ea	8		
295	CK8GD10-1-N	Major Kit	ea	8		
296	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	56		
297		OIL SAMPLE	ea	8		
298	Labour	Labour - Service Technician	hrs	64	-	-
299	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

L160 V3. Overhaul (Total of 1 service over 4 years for 2 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
300	CK4GD10-1-N	Separator Kit	ea	2		
301	CK8GD10-1-N	Major Kit	ea	2		

302	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	14		
303		OIL SAMPLE	ea	2		
304	ZS1155550	Spider for coupling Rotex 75_64Sh-D GS	ea	2		
305	A11514174	Red-COUPLING 141.3 X 114.3 VITON	ea	2		
306	A11514074	FLEXIBLE COUPLING 75-VITON D=114.3	ea	2		
307	A11511974	CONTROLSET 70°C	ea	2		
308	A11910474	CHECK DISC NW 175 COMPL	ea	2		
309	A93301290	COMPR.SPRING 17,5 X 1,3	ea	2		
310	ZS1089251	INTAKE HOSE D75- D160 DN-200	ea	2		
311	EK220-1	CONTROL KIT Frame5 (V3/V4); Frame6 A(V2)	ea	2		
312	ZS1157223	AIR END REPAIR KIT EK290NG	ea	2		
313		Overhaul Main Motor	ea	2		
314		Fan Motor x 2	ea	4		
315		Cooler Cleaning	ea	2		
316		Hose Set	ea	2		
317	Labour	Labour - Service Technician	hrs	80	-	-
318	Travel	Travel - Service Technician	km	880	-	-
					TOTAL	

Breakdown of L250 V1. Rotary Screw Services- Control Air Standby 5 Compressor

L250 V1. Control Air Standby 5 – SN: CD100013922001

L250 V1. Minor Service (Total of 8 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price

319	CK2290-3	MINOR KIT C L132/250 OUTSIDE	ea	8		
320	04246874	DIAPHRAGM	ea	8		
321	IOC-020	20 LTR SCREW COMPRESSOR OIL (20L)	ea	56		
322	CE0600NBNT	ELEMENT (A51133374)	ea	48		
323	CE0600NCNT	ELEMENT (A51133474)	ea	24		
324	Labour	Labour - Service Technician	hrs	64	-	-
325	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

L250 V1. Interim Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
326	CK2290-3	MINOR KIT C L132/250 OUTSIDE	ea	4		
327	CK4290-274-LS	SEPERATOR KIT D	ea	4		
328	04246874	DIAPHRAGM	ea	4		
329	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	28		
330	Labour	Labour - Service Technician	hrs	32	-	-
331	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

L250 V1. Major Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
332	CK2290-3	MINOR KIT C L132/250 OUTSIDE		4		
333	04246874	DIAPHRAGM		4		
334	CK4290-274-LS	SEPERATOR KIT D		4		
335	CK8290-2	MAJOR KIT E L132/160		4		
336	IOC-020	20 LTR SCREW COMPRESSOR OIL		28		
337	Labour	Labour - Service Technician		32	-	-
338	Travel	Travel - Service Technician		1 760	-	-
					TOTAL	

L250 V1. V-Belt Change (Total of 2 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
339	11523274	XPB3000x10 | V-BELTS | L250 | V1	ea	2		
340	Labour	Labour - Service Technician	hrs	8	-	-
					TOTAL	

L250 V1. Overhaul (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
341	CK2290-3	MINOR KIT C L132/250 OUTSIDE	ea	1		
342	04246874	DIAPHRAGM	ea	1		
343	CK4290-274-LS	SEPERATOR KIT D	ea	1		
344	CK8290-2	MAJOR KIT E L132/160	ea	1		

345	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	7		
346	11523274	XPB3000x10 | V-BELTS | L250 | V1	ea	1		
347	11514074	FLEXIBLE COUPLING 75-VITON	ea	1		
348	11514174	Red-COUPLING 141.3 X 114.3 VITON	ea	1		
349	11976874	AIR END REPAIR KIT EK290NK	ea	1		
350	EK214-1	CONTROL KIT DELCOS 3100	ea	1		
351	EK414-1	OIL CIRCUIT KIT 70ºC L75S-L250	ea	1		
352	100007845	INTAKE CONTROLL COMP. FOR P2NE	ea	1		
353	100002200	HOSE LINE	ea	1		
354	98262-57	FILTER - AIRLINE MAN	ea	1		
355	FIREX30	BLK 50 X 2100 X 1000 SHEET	ea	12		
356		Overhaul Main Motor	ea	1		
357		Fan Motor	ea	2		
358		Cooler Cleaning	ea	1		
359		Hose Set	ea	1		
360	Labour	Labour - Service Technician	hrs	40	-	**-**
361	Travel	Travel - Service Technician	km	440	-	**-**
					Total	

Breakdown of L110 V4. Rotary Screw Services- Control Air Standby 6 Compressor

L110 V4. Control Air Standby 6 – SN: CD10071044001

L110 V4. Minor Service (Total of 8 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
362	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	**8**		
363	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	**8**		
364	CE0372GB	ELEMENT (ZS1087964)	ea	**8**		
365	CE0372GC	ELEMENT (ZS1087965)	ea	**8**		
366		OIL SAMPLE	ea	**8**		
367	Labour	Labour - Service Technician	hrs	**64**	**-**	**-**
368	Travel	Travel - Service Technician	km	**3 520**	**-**	**-**
					TOTAL	

L110 V4. Interim Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
369	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	4		
370	CK4GD8-1-N	Standard Separator Kit	ea	4		
371	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	4		
372		OIL SAMPLE	ea	4		
373	Labour	Labour - Service Technician	hrs	32	-	**-**
374	Travel	Travel - Service Technician	km	1 760	-	**-**
					TOTAL	

L110 V4. Major Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
375	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	4		
376	CK4GD8-1-N	Standard Separator Kit	ea	4		
377	CK8GD8-1-N	Major Kit	ea	4		
378	A92130520	AEON S SYNTH.SCREW COMPR.LUBR	ea	12		
379		OIL SAMPLE	**ea**	4		
380	Labour	Labour - Service Technician	hrs	32	**-**	**-**
381	Travel	Travel - Service Technician	km	1 760	**-**	**-**
					TOTAL	

L110 V4. Overhaul (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
382	CK2GD8-1	Standard Minor KIT (A) L90-132	ea	1		
383	CK4GD8-1-N	Standard Separator Kit	ea	1		
384	CK8GD8-1-N	Major Kit	ea	1		
385	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	3		
386		OIL SAMPLE	ea	1		
387	100011733	COUPLING SPIDER 95Sh A ROTEX 65	ea	1		
388	ZS1181201	FLEXIBLE COUPLING 75-VITON Typ-O D=88,9	ea	1		
389	100012145	FLEXIBLE COUPLING 75-VITON Typ-O D=76.1	ea	1		
390	A11511974	CONTROLSET 70°C	ea	1		
391	A11910474	CHECK DISC NW 175 COMPL	ea	1		
392	A93301290	COMPR.SPRING 17,5 X 1,3	ea	1		

393	ZS1188918	Intake Hose FRAME 5 DN200	ea	1		
394	EK220-1	CONTROL KIT Frame5 (V3/V4); Frame6 A(V2)	ea	1		
395	ZS1187446	AIR END REPAIR KIT GD8 GEAR	ea	2		
396		Overhaul Main Motor	ea	1		
397		Overhaul Fan Motor 1	ea	1		
398		Cooler Cleaning	ea	1		
399		Hose Set	ea	1		
400	Labour	Labour - Service Technician	hrs	40	-	**-**
401	Travel	Travel - Service Technician	km	440	-	**-**
					TOTAL	

Breakdown of L110 V3. Rotary Screw Services- Control Air Standby 7 Compressor

L110 V3. Control Air Standby 7 – SN: CD10014953002

L110 V3. Minor Service (Total of 8 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
402	CK2230-1	Minor Kit	ea	8		
403	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	24		
404	CE0372GB	ELEMENT (ZS1087964)	ea	8		
405	CE0372GC	ELEMENT (ZS1087965)	ea	8		
406	Labour	Labour - Service Technician	hrs	64	-	**-**
407	Travel	Travel - Service Technician	km	3 520	-	**-**
					TOTAL	

L110 V3. Interim Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
408	CK2230-1	Minor Kit	ea	4		
409	CK4230-1	SEPERATOR KIT D	ea	4		
410	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	12		
411	Labour	Labour - Service Technician	hrs	32	-	-
412	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

L110 V3. Major Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
413	CK2230-1	MINOR KIT C L132/250 OUTSIDE	ea	4		
414	CK4230-1	SEPERATOR KIT D	ea	4		
415	CK8230-3	SERVICE PACKAGE E L90-L132	ea	4		
416	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	12		
417	Labour	Labour - Service Technician	**hrs**	32	-	-
418	Travel	Travel - Service Technician	**km**	1 760	-	-
					TOTAL	

L110 V3. Hose Replacement (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
419		Hose Set	**ea**	**1**		

420	Labour	Labour - Service Technician	**hrs**	**2**	**-**	**-**
					TOTAL	

L110 V3. Overhaul (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
421	CK2230-1	MINOR KIT C L132/250 OUTSIDE	ea	1		
422	CK4230-1	SEPERATOR KIT D	ea	1		
423	CK8230-3	SERVICE PACKAGE E L90-L132	ea	1		
424	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	7		
425	100011733	COUPLING SPIDER	ea	1		
426	EK212-1	DELCOS XL CONTACT KIT	ea	1		
427	EK431-1	OIL CIRCUIT KIT 70 DEG	ea	1		
428	A11949674	AIR END REPAIR KIT EK230NG	ea	1		
429		Hose Set	ea	1		
430	EK614-1	Mounting Kit	ea	1		
431	ZS1091291	BOOSTER CYLINDER PBED 40	ea	1		
432	ZS1083731	INTAKE VALVE (L90-132RS)	ea	1		
433	ZS1077839	SUCTION HOSE - L250	ea	1		
434		Overhaul Main Motor	ea	1		
435		Fan Motor	ea	2		
436		Hose Set	ea	1		
437	Labour	Labour - Service Technician	hrs	40	-	**-**
438	Travel	Travel - Service Technician	km	440	-	**-**
					TOTAL	

Breakdown of L250 V3. Rotary Screw Services- Station Air 1 Compressor

L250 V3. Station Air 1 – SN: CD10072577001

L250 V3. Minor Service (Total of 8 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
439	ZS1191575	OIL FILTER PREMIUM	ea	16		
440	ZS1192229	Air Filter Element	ea	16		
441	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	8		
442		OIL SAMPLE	ea	8		
443	Labour	Labour - Service Technician	hrs	64	-	-
444	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

L250 V3. Interim Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
445	CK4GD10-1-N	Separator Kit	ea	4		
446	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	**4**		
447		OIL SAMPLE	ea	4		
448	Labour	Labour - Service Technician	hrs	32	-	-
449	Travel	Travel - Service Technician	km	1760	-	-
					TOTAL	

L250 V3. Major Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price

450	CK4GD10-1-N	Separator Kit	ea	4		
451	CK8GD10-1-N	Major Kit	ea	4		
452	A92130520	AEON S SYNTH.SCREW COMPR.LUBR (20L)	ea	28		
453		OIL SAMPLE	ea	4		
454	Labour	Labour - Service Technician	hrs	32	-	-
455	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

L250 V3. Overhaul (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
456	CK4GD10-1-N	Separator Kit	ea	1		
457	CK8GD10-1-N	Major Kit	ea	1		
458	A92130520	AEON S SYNTH.SCREW COMPR.LUBR	ea	7		
459		OIL SAMPLE	ea	1		
460	ZS1155550	Spider for coupling Rotex 75_64Sh-D GS	ea	1		
461	A11514174	Red-COUPLING 141.3 X 114.3 VITON	ea	1		
462	A11514074	FLEXIBLE COUPLING 75-VITON D=114.3	ea	1		
463	A11511974	CONTROLSET 70°C	ea	1		
464	A11910474	CHECK DISC NW 175 COMPL	ea	1		
465	A93301290	COMPR.SPRING 17,5 X 1,3	ea	1		
466	ZS1089251	INTAKE HOSE D75- D160 DN-200	ea	1		
467	EK220-1	CONTROL KIT Frame5 (V3/V4); Frame6 A(V2)	ea	1		
468	ZS1157223	AIR END REPAIR KIT EK290NG	ea	1		
469		Overhaul Main Motor	ea	1		

470		Fan Motor x 2	ea	2		
471		Cooler Cleaning	ea	1		
472		Hose Set	ea	1		
473	Labour	Labour - Service Technician	hrs	40	-	**-**
474	Travel	Travel - Service Technician	km	440	-	**-**
					TOTAL	

Breakdown of L250 Rotary Screw Services- Station Air 2 Compressor

L250 Station Air 2 – SN: 349031-0447

L250 Minor service (Total of 8 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
475	04425274	OIL FILTER HC 34	ea	16		
476	P182002	SUCTION FILTER ELEMENT - L250	ea	16		
477	04246874	DIAPHRAGM	ea	8		
478	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	56		
479	Labour	Labour - Service Technician	hrs	64	**-**	**-**
480	Travel	Travel - Service Technician	km	3 520	**-**	**-**
					TOTAL	

L250 Interim Services (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
481	04425274	OIL FILTER HC 34	**ea**	8		
482	P119372	FILTER SAFETY - L250	ea	8		

483	P182002	SUCTION FILTER ELEMENT - L250	ea	2		
484	CK4290-274-LS	SEPERATOR KIT D	ea	4		
485	04246874	DIAPHRAGM	ea	4		
486	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	28		
487	Labour	Labour - Service Technician	hrs	32	-	-
488	Travel	Travel - Service Technician	km	1760	-	-
					TOTAL	

L250 Major Service (Total of 4 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
489	A04425274*	OIL FILTER HC 34	ea	8		
490	P119372	FILTER SAFETY - L250	ea	8		
491	P182002	SUCTION FILTER ELEMENT - L250	ea	8		
492	04246874	DIAPHRAGM	ea	4		
493	CK4290-274-LS	SEPERATOR KIT D	ea	4		
494	CK8290-2	MAJOR KIT E L132/160	ea	4		
495	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	28		
496	Labour	Labour - Service Technician	hrs	32	-	-
497	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

L250 V-Belt Change (Total of 2 services over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
498	11523274	XPB3000x10 | V-BELTS | L250 | V1	**ea**	2		

499	Labour	Labour - Service Technician	**hrs**	8	**-**	**-**
					TOTAL	

L250 Overhaul (Total of 1 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
500	A04425274*	OIL FILTER HC 34	ea	2		
501	P119372	FILTER SAFETY - L250	ea	2		
502	P182002	SUCTION FILTER ELEMENT - L250	ea	2		
503	04246874	DIAPHRAGM	ea	1		
504	CK4290-274-LS	SEPERATOR KIT D	ea	1		
505	CK8290-2	MAJOR KIT E L132/160	ea	1		
506	IOC-020	20 LTR SCREW COMPRESSOR OIL	ea	7		
507	11523274	XPB3000x10 | V-BELTS | L250 | V1	ea	1		
508	11514074	FLEXIBLE COUPLING 75-VITON	ea	1		
509	11514174	Red-COUPLING 141.3 X 114.3 VITON	ea	1		
510	11976874	AIR END REPAIR KIT EK290NK	ea	1		
511	EK214-1	CONTROL KIT DELCOS 3100	ea	1		
512	EK414-1	OIL CIRCUIT KIT 70ºC L75S-L250	ea	1		
513	100007845	INTAKE CONTROLL COMP. FOR P2NE	ea	1		
514	100002200	HOSE LINE	ea	1		
515	98262-57	FILTER - AIRLINE MAN	ea	1		
516	FIREX30	BLK 50 X 2100 X 1000 SHEET	ea	12		
517		Overhaul Main Motor	ea	1		
518	KW3-400V	Fan Motor	ea	2		

519		Cooler Cleaning	ea	1		
520		Hose Set	ea	1		
521	Labour	Labour - Service Technician	hr	40	-	-
522	Travel	Travel - Service Technician	km	440	-	-
					TOTAL	

Breakdown of ML110 Rotary Screw Services- Turbine Forced Cooling Compressor

ML110 Major Service (Total of 4 service over 4 years for 1 machine)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
523	39708466	Air Filter	ea	8		
524	92740943	Oil Filter	ea	8		
525	92692284	Coolant 5lt	ea	8		
526	38459582	Coolant 20lt	ea	20		
527	92765783	Separator	ea	4		
528	92774165	MPV	ea	4		
529	92999812	Blow Down Valve	ea	4		
530	92917012	Oil Stop Valve	ea	4		
531	91184630	Auto Drain	ea	8		
532	Labour	Labour - Service Technician	hrs	32	-	-
533	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

11. CompAir AXS & AXN Series Heatless Absorption Dryers

Breakdown of A340XS Dryers Services

A340XS Dryers 6, 18 & 30 Months services (Total of 3 services over 4 years for 4 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
534	DK1001-1*	EXHAUST SILENCER KIT - Set	ea	36		
535	DK2000-1	Dewpoint Transmitter	ea	12		
536	Labour	Labour - Service Technician	hrs	96	-	-
537	Travel	Travel - Service Technician	km	5 280	-	-
					TOTAL	

A340XS Dryers 12 & 36 Months services (Total of 2 services over 4 years for 4 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
538	DK1001-1*	EXHAUST SILENCER KIT - Set	ea	24		
539	DK2000-1	Dewpoint Transmitter	ea	8		
540	DK3001-1	VALVE OVERHAUL <9BAR	ea	8		
541	Labour	Labour - Service Technician	hrs	64	-	-
542	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

A340XS Dryers 24 Months Service (Total of 1 service over 4 years for 4 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
543	DK1001-1*	EXHAUST SILENCER KIT - Set	ea	12		
544	DK2000-1	Dewpoint Transmitter	ea	4		
545	DK3001-1	VALVE OVERHAUL <9BAR	ea	4		
546	DK9004*	DRYFILL AA DESICCANT PACK 11.2L	ea	48		

547	DK9002*	MS 11.2 LITRE	ea	32		
548	DK4001-1*	SEALS	ea	4		
549	Labour	Labour - Service Technician	hrs	64	-	-
550	Travel	Travel - Service Technician	km	1 760	-	-
					TOTAL	

Breakdown of AX113NS Dryers Services

AX113NS (4) – 12 & 36 Month's Dryer Service (Total of 2 services over 4 years for 4 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
551	31-100-0146	Dewpoint Sensor	ea	8		
552	31-100-5102 (2core)	Exhaust Silencer Kit	ea	8		
553	Labour	Labour - Service Technician	hrs	64	-	-
554	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

AX113NS (4) – 24 & 48 Month's Dryer Service (Total of 2 services over 4 years for 4 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
555	31-100-0146	Dewpoint Sensor	ea	8		
556	31-100-5102 (2core)	Exhaust Silencer Kit	ea	8		
557	31-100-3222	Desiccant kit	ea	8		
558	31-100-0615	Valve Service Kit	ea	8		
559	Labour	Labour - Service Technician	hrs	64	-	-
560	Travel	Travel - Service Technician	km	3 520	-	-
561	Accommodation	Accommodation	days	8	-	-

	TOTAL	

Breakdown of AX159NS Dryers Services

AX159NS – 12 & 36 Month's Dryer Service (Total of 2 services over 4 years for 1 dryer)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
562	31-100-0146	Dewpoint Sensor	ea	2		
563	31-100-5103 (3core)	Exhaust Silencer Kit	ea	2		
564	Labour	Labour - Service Technician	hrs	16	-	-
565	Travel	Travel - Service Technician	km	880	-	-
					TOTAL	

AX159NS – 24 & 48 Month's Dryer Service (Total of 2 service over 4 years for 1 dryer)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
566	31-100-0146	Dewpoint Sensor	ea	2		
567	31-100-5103 (3core)	Exhaust Silencer Kit	ea	2		
568	31-100-3223	Desiccant kit	ea	2		
569	31-100-0615	Valve Service Kit	ea	2		
570	Labour	Labour - Service Technician	hrs	16	-	-
571	Travel	Travel - Service Technician	km	880	-	-
572	Accommodation	Accommodation	days	2	-	-
					TOTAL	

Breakdown of AX212NS Dryers Services

AX212NS (4) – 12 & 36 Month's Dryer Service (Total of 2 services over 4 years for 4 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
573	31-100-0146	Dewpoint Sensor	ea	8		
574	31-100-5103 (3core)	Exhaust Silencer Kit	ea	8		
575	Labour	Labour - Service Technician	hrs	64	-	-
576	Travel	Travel - Service Technician	km	3 520	-	-
					TOTAL	

AX212NS (4) – 24 & 48 Month's Dryer Service (Total of 2 services over 4 years for 4 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
577	31-100-0146	Dewpiont Sensor	ea	8		
578	31-100-5103 (3core)	Exhaust Silencer Kit	ea	8		
579	31-100-3224	Desiccant kit	ea	8		
580	31-100-0615	Valve Service Kit	ea	8		
581	Labour	Labour - Service Technician	hrs	64	-	-
582	Travel	Travel - Service Technician	km	3520	-	-
583	Accommodation	Accommodation	days	8	-	-
					TOTAL	

Breakdown of AX235NS Dryers Services

AX235NS (2) – 12 & 36 Month's Dryer Service (Total of 2 services over 4 years for 2 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
584	31-100-0146	Dewpiont Sensor	ea	4		
585	31-100-5103 (3core)	Exhaust Silencer Kit	ea	4		

586	Labour	Labour - Service Technician	hrs	32	-	-
587	Travel	Travel - Service Technician	km	1760	-	-
					TOTAL	

AX235NS (2) – 24 & 48 Month's Dryer Service (Total of 2 services over 4 years for 2 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
588	31-100-0146	Dewpiont Sensor	ea	4		
589	31-100-5103 (3core)	Exhaust Silencer Kit	ea	4		
590	31-100-3225	Desiccant kit	ea	4		
591	31-100-0615	Valve Service Kit	ea	4		
592	Labour	Labour - Service Technician	hrs	32		
593	Travel	Travel - Service Technician	km	1760		
594	Accommodation	Accommodation	days	4		
					TOTAL	

Breakdown of AX314NS Dryers Services

AX314NS – 12 & 36 Month's Dryer Service (Total of 2 services over 4 years for 9 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
595	31-100-0146	Dewpoint Sensor	ea	18		
596	31-100-5104 (4core)	Exhaust Silencer Kit	ea	18		
597	Labour	Labour - Service Technician	hrs	144	-	-
598	Travel	Travel - Service Technician	km	7920	-	-
					TOTAL	

AX314NS – 24 & 48 Month's Dryer Service (Total of 2 services over 4 years for 9 dryers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
599	31-100-0146	Dewpoint Sensor	ea	18		
600	31-100-5104 (4core)	Exhaust Silencer Kit	ea	18		
601	31-100-3226	Desiccant kit	ea	18		
602	31-100-0615	Valve Service Kit	ea	18		
603	Labour	Labour - Service Technician	hrs	144	-	-
604	Travel	Travel - Service Technician	km	7920	-	-
605	Accommodation	Accommodation	days	18	-	-
					TOTAL	

12. "B" & "C" Inline filters New Equipment : L55 V4, L75 V4, L132 V4, L160 V3, L250 V3 & TA2000.

Changed during Minor Services (8 services over 4 years)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
606	47699072001	ELEMENT CF0260L3"B (L132/160/250)	ea	48		
607	47699073001	ELEMENT CF0260L3"C (L132/160/250)	ea	48		
608	47699060001	ELEMENT CF0133L2"B (L55)	ea	32		
609	47699061001	ELEMENT CF0133L2"C (L55)	ea	32		
610	47699064001	ELEMENT CF0167L2"B (L55&75)	ea	8		
611		ELEMENT CF0167L2"C (L55&75)	ea	8		
612		TA2000 ELEMENT CE0450B	ea	48		
613		TA2000 ELEMENT CE0450C	ea	48		
614		TA2000 ELEMENT CE0700B	ea	72		

615		TA2000 ELEMENT CE0700C	ea	72		
					TOTAL	

13. Breakdown of Maintenance - Evapco Induced Draft Cooling Towers (9 Units)

Initial Major Descaling Service of Cooling Towers

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
616	Descale S/N: 23-9616	North Compressor/H Cooling Tower S/N: 23-9616	ea	1		
617	Descale S/N: 12-7243	North Compressor/H Cooling Tower S/N: 12-7243	ea	1		
618	Descale S/N: 16-8084	North Compressor/H Cooling Tower S/N: 16-8084	ea	1		
619	Descale S/N: 16-7847	Fabric Filter Comp Cooling Tower S/N: 16-7847	ea	1		
620	Descale S/N: 16-8096	Fabric Filter Comp Cooling Tower S/N: 16-8096	ea	1		
621	Descale S/N: 2-7244	Fabric Filter Comp Cooling Tower S/N: 12-7244	ea	1		
622	Descale S/N: 12-7249	Fabric Filter Comp Cooling Tower S/N: 12-7249	ea	1		
623	Descale S/N: 16-8097	Fabric Filter Comp Cooling Tower S/N: 16-8097	ea	1		
624	Descale S/N: 12-7246	Fabric Filter Comp Cooling Tower S/N: 12-7246	ea	1		
					TOTAL	

Supply & Install New EVAPCO Cooling Towers

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
625	ATW 24-3G-2	Closed Loop Cooling Tower	**ea**	**6**		

Servicing of Cooling Towers (8 services over 4 years for 9 cooling towers)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price

626	C/T Service	Service, Labour & Travelling per Cooling	**ea**	**72**		

14. BAOFN Inspections and Cleaning

BAOFN Weekly Inspections & Monthly Cleaning (once a week over 4 years)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
627		Monthly Cleaning kits	ea	**1 248**		
628		Labour	hrs	**728**	**-**	**-**
629		Travelling	km	**77 792**	**-**	**-**
					TOTAL	

15. Breakdown of BAOFN Rotary Screw 7.5VSDFF compressor Services

RS7.5VSDFF Minor Service (2000hrs) (8 services over 4 years for 4 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
630	AFKP51602003	Air Filter	ea	32		
631	OF51607002	Oil Filter	ea	32		
632	51607999K	Semi Synthetic OIL (L)	L	160		
633		CONSUMABLES	ea	32		
634	Labour	Labour - Service Technician	hrs	96	**-**	**-**
635	Travel	Travel - Service Technician	km	11 968	**-**	**-**

	TOTAL	

RS7.5VSDFF Major Service (4000hrs) (8 services over 4 years for 4 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
636	AFKP51602003	Air Filter	ea	32		
637	OF51607002	Oil Filter	ea	32		
638	SEP51607003	Separator	ea	32		
639	51607999K	Semi Synthetic OIL (L)	L	320		
640		CONSUMABLES	ea	32		
641	Labour	Labour - Service Technician	hrs	192	-	-
642	Travel	Travel - Service Technician	km	11 968	-	-
					TOTAL	

RS7.5VSDFF Budget Overhaul (1 services over 4 years for 4 machines)

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
643	AFKP51602003	Air Filter	ea	4		
644	OF51607002	Oil Filter	ea	4		
645	SEP51607003	Separator	ea	4		
646	51607999K	Semi Synthetic OIL (L)	L	80		
647	25KY	MPV	ea	4		
648	AIV25YK	Intake Valve	ea	4		
649	3004M101501	Temp Sensor	ea	4		
650	3005G023001	Pressure Sensor	ea	4		
651		Oil Level Guage 135MM	ea	4		

652	ZAED40	Actuator	ea	4		
653	KT130AV30-A	Solenoid Valve	ea	4		
654		Motor Refurb	ea	4		
655		Airend Refurb	ea	4		
656		Coolers Chemical Clean	ea	4		
657		Consumables	ea	4		
658	Labour	Labour - Service Technician	hrs	80	-	-
659	Travel	Travel - Service Technician	km	1 496	-	-
					TOTAL	

16. Critical Spares Centrifugal Compressors

TA2000 Cameron Centrifugal Compressor

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
660	AAA3793923-02020	I/C baffle assembly	ea	24		
661	AAMB795270-20005	Kit, intercoolers	ea	2		
662	AAMB793835-06322	Rotor TA 2000 1 End 1st stage	ea	3		
663	AAMB793835-07312	Rotor TA 2000 2 End 2nd & 3rd stage	ea	3		
664	AAA3793822-00154	Bullgear assembly	ea	2		
665	AAP1408226-00312	Bullgear bearing, Angular	ea	6		
666	AAP1408226-06211	Bullgear bearing, Plain	ea	6		
667	AAP1793863-50103	Inlet, 1st stage	ea	1		
668	AAP1793862-50103	Inlet, 2nd stage	ea	1		
669	AAP1793861-51103	Inlet, 3rd stage	ea	1		

670	AAP1793884-00103	Diffuser, Vained stage 1	ea	1		
671	AAP1793883-00103	Diffuser, Vained stage 2	ea	1		
672	AAP1793882-00107	Diffuser, Vainless	ea	1		
673	AAA3409950-22355	Kit, Upgrade, Bearing	ea	1		
674	AAP0540008-00823	Auto Block Valve	ea	6		
675	AAP0540024-02140	Check Valve	ea	2		
676	AAP0540061-00199	Switch, Oil Reservoir Level	ea	1		
677	AAP0540089-00210	Pressure Transmitter	ea	5		
678	AAP0540089-00216	System Pressure Transmitter	ea	5		
679	AAP0540090-00829	Relay - SPDT	ea	10		
680	AAP0540090-00830	Relay - DPDT	ea	10		
681	AAP0540101-00047	24 V DC Power Supply	ea	3		
682	AAP1401428-00537	Oil pump	ea	1		
683	AAP1401428-00338	Oil Pump, Auxiliary	ea	1		
684	AAP1401428-01499	Oil Pump, Main (shaft-driven)	ea	1		
685	AAP1401429-00809	Oil Cooler New Type	ea	5		
686	AAP1401429-01047	Cooler, Oil-to-Water (New)	ea	1		
687	AAP1401581-01303	Check Valve	ea	2		
688	AAP1401581-01484	Pressure Relief Valve	ea	3		
689	AAP1401581-01687	Pressure Regulator Valve(New)	ea	3		
690	AAP1401581-01905	Inlet Throttle Valve, 4-inch	ea	1		
691	AAP1401581-01906	Modulating Actuator	ea	5		
692	AAP1402068-00795	Motor, Auxiliary Oil Pump 400 volt /50Hz	ea	1		

693	AAP1407030-02001	Vibration probe	ea	3		
694	AAP1407030-02006	Vibration probe (New)	ea	3		
695	AAP1797145-00000	Liquidator Drain Trap	ea	6		
696	AAP3403629-01585	Temperature Probe	ea	3		
697	AAP3403893-00351	Vibration Transmitters	ea	9		
698	AAP3408596-02201	Valve Actuator	ea	5		
699	AAP3798102-00140	Maestro Universal Controller	ea	2		
700	AAP3798102-00131	Maestro Universal I/O Module	ea	3		
701	06E22A13AC1	Filter/ Regulator Valve 3/8"	ea	9		
702	Cooling Tower 01	Pump Assembly	ea	9		
703	AAP1406065-00026	HUB, DRY COUPLING - New Gen	ea	1		
704	AAP1406065-00025	DRIVER HUB, DRY COUPLING	ea	3		
705	AAP1406065-00130	5" SPACER.ASSEMBLY.COUPLING	ea	1		
706	AAMB406064-04125	HUB.ASSEMBLY.COUPLING - Old Gen	ea	1		
707	AAMB406064-04118	HUB.ASSEMBLY.COUPLING	ea	3		
708	AAMB406064-04135	SPACER.ASSEMBLY.COUPLING	ea	1		
					TOTAL	

17. Critical Spares Screw Compressors

CompAir L110 V3.

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
709	EK212-1	Control Kit Delcos XL	ea	1		
710	100011733*	Coupling Spider	ea	1		

711	ZS1177186	Hose Line	ea	1		
712	ZS1177185	Hose Line	ea	1		
713	ZS1177187	Hose Line	ea	1		
714	EK431-1	Thermostat Valve	ea	2		
715	ZS1231309	Delcos XL	ea	1		
716	100008872*	Spare Membrane	ea	1		
717	ZS1050642	Transducer	ea	2		
718	ZS1171610	Temp probe	ea	2		
719	ZS1091291	Positioning Cylinder	ea	2		
720	ZS1136317	Lubricator Complete	ea	2		
					TOTAL	

Ingersoll-Rand ML110

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
721	39708466	Air Filter (2 per use)	ea	8		
722	92740943	Oil Filter (2 per use)	ea	4		
723	92692284	Coolant 5lt (2 per use)	ea	4		
724	38459582	Coolant 20lt (5 per use)	ea	10		
					TOTAL	

CompAir L250 Old & V1.

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price

725	100005506*	Delcos 3100 Controller	ea	1		
726	11523274*	V -Belt Set	ea	1		
727	100015577*	Oil Cooler Hose Kit	ea	0		
728	11511974	Thermostat	ea	2		
729	11514174	Coupling	ea	2		
730	11514074	Coupling	ea	2		
731	ZS1136317	Lubricator Complete	ea	2		
732	ZS1050642	Transducer	ea	2		
733	100007845*	Intake Controller	ea	2		
734	ZS1163400	3/2 Solenoid Valve	ea	2		
735	ZS1201605	2/2 Solenoid Valve	ea	2		
736	ZS1171610	Temp probe	ea	2		
					TOTAL	

CompAir L55 & L75 V4.

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
737	ZS1222410	Pressure Sensor	ea	3		
738	ZS1212955	Intake Hose	ea	2		
739	ZS1143737	Temp Probe	ea	4		
740	100005483	Flex Coupling	ea	2		
741	100012145	Flex Coupling	ea	2		
742	ZS1219104	Spider Rotex	ea	2		
743	ZS1091291	Booster Cylinder	ea	2		

744	ZS1084065	Cylinder Repair Kit	ea	2		
745	ZS1213086	Suction Control Valve	ea	2		
746	ZS1084068	Magnetic Coil	ea	2		
747	ZS1084062	Control HAKG	ea	2		
748	A17414174	Repair Kit	ea	2		
749	A11910474	Check Disc	ea	2		
750	ZS1215011	Lubrication Unit	ea	2		
751	SCWG4000-60	MLS Cartridge	ea	10		
752	ZS1218235	Control Set	ea	2		
753	93301290	Comp Spring	ea	5		
754	11511974	Thermostat	ea	2		
					TOTAL	

CompAir L110-132 V4.

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
755	ZS1231309	Delcos XL (SE)	ea	2		
756	ZS1188918	Intake Hose	ea	2		
757	ZS1050642	Pressure Sensor	ea	3		
758	100012145	Flex Coupling	ea	2		
759	ZS1181201	Flex Coupling	ea	2		
760	11949574	Shaft Seal Kit	ea	2		

761	11511974	Thermostat	ea	2		
762	A11910474	Check Disc	ea	2		
763	ZS1215007	Lubrication Unit	ea	6		
764	100011733	Coupling Spider	ea	2		
765	ZS1165102	3/2 Solenoid Valve	ea	2		
766	ZS1202655	2/2 Solenoid Valve	ea	2		
767	11910274	Regulator	ea	2		
					TOTAL	

CompAir L160-L250 V3.

Serv. Item	Part Number	Description	Unit	Total QTY	Rates	Price
768	ZS1089251	Intake Hose	ea	2		
769	ZS115550	Coupling	ea	2		
770	A11514074	Flex Coupling	ea	2		
771	11514174	Red Coupling	ea	2		
772	11511974	Thermostat	ea	2		
773	A11910474	Check Disc	ea	2		
774	ZS1225938	Shaft Seal kit	ea	2		
					TOTAL	

PART 3: SCOPE OF WORK

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

C3.1: EMPLOYER'S SERVICE INFORMATION

Contents

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Otherwise insert list of contents manually.

1 Description of the *service*

1.1 Executive overview

Put yourself in the position of the *Contractor*'s senior management who need a high level overview of what is involved – the scope of work - so that they can decide when tendering whether they have the resources and capability to undertake the work. Include a description of the different services and disciplines of work involved within the *service* and the location where most of the work will be carried out.

The *Works* for this *Contract* is for the maintenance of the compressor plant at Arnot Power Station. These include the following Compressors and their auxiliary equipment but not limited to, up to the receiver inlets for a period of four years.

- TA 2000 Cameron Centrifugal compressors & all auxiliary equipment
- CompAir L-Series Rotary Screw Compressors & all auxiliary equipment
- Ingersoll-Rand ML110 Turbine Forced Cooling Compressor
- BAOFN RS7.5VSDFF full feature rotary screw compressors
- Diesel compressors & auxiliary equipment

The scope is an all-inclusive maintenance agreement where the *Contractor* will maintain the compressor trains from daily inspections, Minor-; Interim- and Major routine services, repairs, day to day frontline maintenance, minor and major repairs, and overhauls. The *Contractor* will be required to have trained artisans/technicians on site to cover the daily front line and routine maintenance, call outs, fault finding and the specialised technicians for the servicing, maintenance and overhauling of the three types of compressors and related equipment (Centrifugal-; Rotary Screw- and Diesel Rotary Screw Compressors).

A permanent qualified artisan/technician is required on site to monitor, do day to day frontline maintenance, fault finding and maintain the compressors to ensure compressor availability and reliability. The *Contractor* will be required to ensure that the artisan/technician is available for breakdowns after hours and weekends including public holidays to address any defect or problem on the compressors as they arise. Specialised work to be done as per schedule or breakdown by the trained and qualified technicians as the work arises or where the specialised technical expertise is required.

The Contract is not limited to a maintenance agreement only but also including the procurement, installation and commissioning of compressors, driers, cooling towers, control, and condition monitoring system or equipment thereof when required, ensuring the availability and reliability for the Compressed Air Plants.

The *Contractor* is required to compile a service and maintenance schedule, breakdowns and maintenance requirements of the compressors and as listed in the Pricing Schedule.

The *Contractor* is to take reasonable care at all times to protect the Compressed Air Plant and all items on site, belonging to the *Employer* from damage while providing the *Service.*

Corrective Maintenance: Unscheduled or scheduled repairs to correct deficiencies.

Preventative maintenance: Scheduled servicing, repairs, inspections, adjustments and replacement of parts that result in fewer breakdowns and fewer premature replacements and achieve the expected life of compressors and related plant.

Recurring maintenance: Preventative maintenance activities that recur on a periodic and scheduled cycle with a frequency of 1 year but less than 10 years.

Emergency maintenance: Maintenance activities that are unscheduled repair, to include call outs, to correct an emergency to prevent injury, loss of property, or return asset to service. These repairs are initiated within a very short time period from which the need is identified and usually within hours.

1.2 *Employer*'s requirements for the *service*

Either
Describe in detail what the *Employer* requires the *Contractor* to do and how he is to do it if the *Contractor* is mainly providing labour and tools to carry out the *Employer*'s requirements
Or
Provide the *Employer*'s operating philosophy / user requirement specification (URS) / performance specification giving deliverables and constraints for the *service* from which the *Contractor* is to plan in detail how he is to achieve the required deliverables.

Reference could be made to an Annexure for a detailed classification of services or to the Price List in the case of Option A or C and if the Price List descriptions are complete.

1.2.1 Description of the works

The *works* describe the **"Maintenance"** requirements on the control air and station air system. All auxiliaries related to the compressors are applicable to the contract, the auxiliaries inclusive of the pipework, valves, gauges, control panels, solenoids, all related measuring devices, vessels, cooling towers, heatless absorption desiccant dryers, water cyclonic separators, general purpose protection particulate filters, high efficiency oil removal coalescing filters, bag-filter house forced draught cooling fans, ducting's, filters and condensate drains.

The installed compressors are tabled below.

CONTROL AIR COMPRESSORS					
Located At	**Type**	**Known As**	**Nominal Flow rate**	**Dryers**	**Filters**
North comp. house	Centrifugal (TA2000)	U1 Control Air	32 m^3/min (1100 cfm)	AX314NS	B+C
North comp. house	Centrifugal (TA2000)	U2 Control Air	32 m^3/min (1100 cfm)	AX314NS	B+C
North comp. house	Centrifugal (TA2000)	U3 Control Air	32 m^3/min (1100 cfm)	AX314NS	B+C
South comp. house	Screw Comp. L55 V4. CompAir	U4 Control Air	10.67 m^3/min (376 cfm)	AX113NS	B+C
South comp. house	Screw Comp. L75 V4. CompAir	U5 Control Air	13.72 m^3/min (484 cfm)	AX159NS	B+C
South comp. house	Screw Comp. L55 V4. CompAir	U6 Control Air	10.67 m^3/min (376 cfm)	AX113NS	B+C
North comp. house	Screw Comp. L132 V4. CompAir	Standby 1	24.71 m^3/min (872 cfm)	AX235NS	B+C
North comp. house	Screw Comp. L160 V3. CompAir	Standby 2	32.06 m^3/min (1135 cfm)	AX235NS	B+C
South comp. house	Screw Comp. L55 V4. CompAir	Standby 3	10.67 m^3/min (376 cfm)	AX113NS	B+C
South comp. house	Screw Comp. L55 V4. CompAir	Standby 4	10.67 m^3/min (376 cfm)	AX113NS	B+C
Outside FFP area unit 2	Screw Comp. L250 V1 CompAir	Standby 5	42 m^3/min (1483 cfm)	(x2) A340XS (Parallel)	B+C
Outside FFP area unit 5	Screw Comp. L110 V4. CompAir	Standby 6	21.58 m^3/min (764 cfm)	A340XS	B+C

Outside FFP area unit 6	Screw Comp. L110 V3. CompAir	Standby 7	21.58 m^3/min (764 cfm)	A340XS	B+C
FFP unit 4 comp. house	Centrifugal (TA2000)	FFP 4A	32 m^3/min (1100 cfm)	AX314NS	B+C
FFP unit 4 comp. house	Centrifugal (TA2000)	FFP 4B	32 m^3/min (1100 cfm)	AX314NS	B+C
FFP unit 5 comp. house	Centrifugal (TA2000)	FFP 5A	32 m^3/min (1100 cfm)	AX314NS	B+C
FFP unit 5 comp. house	Centrifugal (TA2000)	FFP 5B	32 m^3/min (1100 cfm)	AX314NS	B+C
FFP unit 6 comp. house	Centrifugal (TA2000)	FFP 6A	32 m^3/min (1100 cfm)	AX314NS	B+C
FFP unit 6 comp. house	Centrifugal (TA2000)	FFP 6B	32 m^3/min; (1100 cfm)	AX314NS	B+C
Extra L160	Screw Comp. L160 V3. CompAir	Extra L160	32.06 m^3/min (1135 cfm)		
Outside South Comp. House	Diesel Compressors		TBC		
Outside South Comp. House	Diesel Compressors		TBC		
SERVICE AIR COMPRESSORS					
Located At	**Type**	**Known As**	**Nominal Flow rate**	**Dryers**	
North comp. house	Screw Comp. L250 V3. CompAir	Station Air 1 (service air)	42 m^3/min (1483 cfm)	(x2) AX212NS	B+C
North comp. house	Screw Comp. L250 Old CompAir	Station Air 2 (Service air)	42 m^3/min (1483 cfm)	(x2) AX212NS	B+C
ANCILLARY COMPRESSORS					
Located At	**Type**	**Known As**	**Nominal Flow rate**	**Dryers**	
45 ft Level Turbine Floor	Screw Comp. ML110 Ingersoll-Rand	Forced Cooling Comp	750 cfm	Packaged dryer (integrated)	
Unit 3 Turbine Ground Floor Fire Protection	Screw Comp. RS7.5VSDFF BAOFN	Emulsifier Compressor	13.72 m^3/min	Packaged dryer (integrated)	
North Sedimentation Plant	Screw Comp. RS7.5VSDFF BAOFN	North Lime Plant Compressor	13.72 m^3/min	Packaged dryer (integrated)	
South Sedimentation Plant	Screw Comp. RS7.5VSDFF BAOFN	South Lime Plant Compressor	13.72 m^3/min	Packaged dryer (integrated)	
Back up Compressor	Screw Comp. RS7.5VSDFF BAOFN	Back up Compressor	13.72 m^3/min	Packaged dryer (integrated)	

Table 1: Installed Compressor Plant Specifications

The *Contractor* to have access to the OEM spares, tolerance, specifications as well as maintenance and commissioning procedures required to perform the required maintenance on all Arnot compressors. To also have the necessary special tools and equipment to service the specific make and models of Arnot compressors. The *Contractor* to provide plan of the spares that will be required for break downs and general maintenance.

Performance test for each compressor machine i.e humidity, due point temperature, flow rate, pressure to be conducted by the *Employer* prior the machine taken out for major services and after service done, inclusive of the dryers.

Prior to the compressor machine taken out of the system for service, the *Contractor* shall supply a mobile compressor machine at their cost to supplement the shortfall to accommodate the situation until the isolated compressor machine is returned back to service after the services are done.

The *Contractor* draws up a maintenance schedule for running hours of each machine and planning for defects found in the plant for all compressor maintenance interfaces for the 4-year period with forward planning of six months intervals, ensuring the relevant services and any major or minor overhauls or part replacements are planned. This will also be the basis of ensuring the required spares and consumables are available and the maintaining of the stock levels for the Arnot compressors.

The control air system at Arnot Power Station consists of 24 compressors. Constant system pressure of 590 kPa is maintained

The following indication applies for the control air system:

- Control air press high = 640 kPa (to prevent surging of Centrifugal Turbo Compressors at 6.5 bar)
- Control air normal = 590 kPa
- Control air press low = 480 kPa at Units DCS
- Control air lock-out = 420 kPa

1.2.2 Scope Of work

The works is the Maintenance to repair/service, unscheduled and scheduled deficiencies during the time period in which they occur on the station air and control air compressors and related plant as stated in the works information for the duration of the contract period. The scope also covers:

- TA 2000 Cameron Centrifugal compressors & all auxiliary equipment
- CompAir L-Series Rotary Screw Compressor & all auxiliary equipment
- Ingersoll-Rand ML110 Turbine Forced Cooling Compressor
- BAOFN RS7.5VSDFF full feature rotary screw compressors
- Evapco Cooling Towers
- CompAir Heatless absorption desiccant dryers
- Filter banks (water cyclonic separators, general purpose protection particulate filters, high efficiency oil removal coalescing filters)
- Bagfilter compressor house forced draught cooling fans
- Air ducts and intake filters
- Condensate drains
- All other auxiliary equipment
- Diesel compressors & auxiliary equipment

The *Contractor* supplies trained manpower for the execution of the works on a daily basis and a qualified trained technicians/artisans for the servicing major/minor work scopes. The permanent site staff provided by the *Contractor* will be to monitor and do the day to day front line maintenance, fault finding and maintenance of the compressed air system which will be required to be executed by a competent artisan who has a knowledge of the compressor plant and electrical skills to do effective fault finding and maintenance where it is required. The *Contractor* to provide certificates of competency for all the employees that will be executing works on all the different types of Arnot compressor machines and its auxiliary equipment.

Contract Manager

- 5-10 years' maintenance experience on Centrifugal-; Rotary Screw- and Diesel Rotary Screw Compressors

Service Technician

- Qualified Electrical and Mechanical Artisan (known as a Millwright)
- Qualified Diesel Mechanic
- 5 – 10 years' maintenance experience on the following Compressors: Centrifugal-; Rotary Screw Compressors
- 5-10 years' maintenance experience on the following Compressors: Diesel Rotary Screw Compressors
- Factory certified: TA2000 Cameron Centrifugal machine by Ingersoll Rand, Vignate, Italy.
- Trained and in possession of a CompAir L-series Rotary Screw Compressor certificate of competency
- Service Technician (cover breakdowns and maintenance activities and on standby when Site Technician is not available)

Site Artisan

- Qualified Electrical and Mechanical Artisan (or known as a Millwright)
- 3+ years' maintenance experience on the following Compressors: TA2000 Cameron Centrifugal- & CompAir L-series Rotary Screw Compressors.
- Trained and in possession of a CompAir Rotary L-series Screw Compressor certificate of competency
- Daily on site in the Plant inspecting and maintain the Compressor Plant
- Familiar with Eskom Policies and Procedures
- On standby 24/7 for Plant coverage
- Located within 55km radius from Arnot Power Station

The *Contractor* shall ensure that no plant defects are evident. The *Contractor* shall conduct plant walk downs for the common supplied compressed air system identifying and reporting air leaks on common supplied compressed air system.

Maximum compressor availability and reliability be 100% must be maintained. This will be achieved by daily plant walks and availability and reliability indicators done per compressor and auxiliaries per day. The following strategy is applicable and must be adhered to.

1.2.3 Availability

The objective of the *Employer* is to provide a reliable and effective control air supply for the power station to use, with due consideration of the cost effectiveness and long term maintainability of such system.

System minimum pressure of 5.9 bar gauge must be maintained at all times measured in the common range system reflected in the DCS system 100% availability to all the units 92%. Planned maintenance = 5% and Breakdowns = 3% in the main control room. Maintenance must not impact the lower system pressure limit of 5.9 bar.

It is the *Contractors* responsibility to determine the impact of control air system variation not surpassing the lowest limit. Based on the system performance of the machines and. 5.9 bar should always be maintained.

The *Contractor* during his daily duties walks the plant and identifies air leaks or any deviations which affects the loss of control air to the system.

The *Contractor* will adhere to the permit to work system when any maintenance activity is performed. Safety rules and regulation will be adhered to.

The compressor system, all compressor components and auxiliaries will be maintained on a plant maintenance schedule for servicing, overhauling and replacement at end of life or exceeded hours in service. The *Contracto*r evaluates the state of plant and reports to the *Service Manager* the requirements

and schedules that will be required at intervals of six months ahead for planning of spares and labour as required.

All maintenance and services performed, in terms of this agreement, shall take place during normal working hours, Monday to Thursday between the hours of 07h00 and 16h15 and Friday between the hours of 07h00 and 12h00 or as dictated by the plant conditions which may require weekend work to be carried out. The *Contractor* ensures availability of staff for breakdown or emergency work after hours, weekends and public holidays and to do the fault finding to determine what intervention from the Service Technicians is required or direction required to do the necessary repairs to place the compressor back in service.

For any emergency condition the *Contractor* will react to the request within 45 minutes, any condition on the compressors that could cause load losses on the units due to low control air will be addressed on a HIGH PRIORITY basis and the *Contractor* ensures the load loss threat has been cleared before going off site.

Spares for the works is to be managed by the *Contractor* for the servicing, maintenance, overhauls and breakdowns requirements and a total list of spares for all compressors as per the pricing list which is in Section C2 Pricing Data Option A. The *Contractor* shall do audit of spares bi-annualy to check all the required spares (mins & max) are available at the storage containers located at Arnot Power Station South Contractor's Yard and *Contractor's* Warehouse. The container is for temporary storage of service spares as and when the equipment routine services become due.

Compressor spares will be utilised at intervals as listed in the maintenance and servicing schedule supplied by the *Contractor* for each compressor during the Contract period.

All defects, routine servicing, PM's & CM's will be captured by the Planning Department and all work will be carried out based on Eskom SAP works management system. The *Service Manager* will arrange the planner which will be responsible for the scheduling of work based on a 14 day window.

The *Contractor* gives a daily report on condition, operation and deviations that are or need to be addressed and where additional hours are to be worked notifies the *Service Manager* for approval. The *Contractor* as part of this service also investigates and submits proposals for improving or suggesting better practices which could improve operation on the compressor plant.

Where callouts or breakdowns are to be attended to after-hours the *Contractor* notifies the *Service Manager* of the incident and attends to the incident accordingly.

1.2.4 Scope of work Boundaries

The scope of maintenance covers all equipment and components within the following physical boundaries:

The compressor inlet suction filter through to the discharge outlet isolating valve to the equipment on the plant and the suction ducts and filters external to the buildings.

All equipment that interfaces with the compressors, controllers, drains, coolers, condensate drain solenoids, drain piping, valves, cooling towers, cooling water pipework, air discharge pipework, valves, filters, filter ducting, heatless absorption desiccant dryers, electrical systems on the compressors and dryers.

The CW Boundaries limit on the TA2000 Cameron Centrifugal compressor is inclusive from the inlet strainer to the cooling towers. This includes the north compressor house and bag filter houses.

The following components are considered OSBL but require monitoring and reporting of any deviations to the *Employer:*

- The electrical supply to motors.
- TA2000 Cameron Centrifugal compressor motors (Eskom stock and RF item)
- Compressor electrical supply form boards to the isolating control panels.
- Statutory inspection, testing, and repairs of receivers in accordance with pressure vessel regulations
- Electrical control panels situated in Eskom boards.
- Electrical Supply line feeding dryers and cooling towers up to local panels.

The *Contractor* will monitor and do day to day routine inspections and maintenance of the compressors with daily communication with the *Service Manager*, main control room and outside plant shift supervisors.

1.2.5 Performance Criteria

An average system pressure must be maintained at all times of 590 kPa. Measured at the North and South Compressor House gauge pressures.

KPI	Explanation of performance Criteria	Penalties
• Individual Compressor Availability	Each compressor must maintain an annual average availability of **≥92%**. Availability below this threshold will incur penalties.	R10,000 per compressor per annum for availability < 92%.
• Individual Compressor Performance	Each compressor must maintain an average annual discharge pressure between **600 kPa and 620 kPa**. Pressures below 600 kPa will incur penalties.	R10 000 per Compressor less than 600Kpa.
• Compliance to Schedule Maintenance (Compressor and Dryers)	All scheduled maintenance tasks, including daily check sheets and services at 3-monthly, 6-monthly, and 12-monthly intervals, must be completed at 100% compliance.	R10 000 per Compressor and or Dryer not serviced per service schedule per annum

Objectives:

- Performance criteria evaluation to kick in at the beginning of the second year of the contract.
- Prevent moisture in the control air system discharge points.
- Elimination of all oil and water and air leaks on the control air system.
- The *Contractor* is responsible for establishing the maintenance activities in ensuring that the system average pressure does not reached bottom limit of 540 kPa. Should the risk prevail the responsibility is with the *contractor* to supplement the shortfall by supplying mobile compressors to accommodate the required service. Supplementary compressors to be supplied at the *Contractor's* cost to ensure the services are up to date.
- The following plant availability and reliability strategy will be followed to ensure maximum compressor reliability: 92% availability, 5% plant maintenance and 3% plant breakdown.
- The *Contractor* must ensure that all auxiliary equipment performs as specified per design documentation.

1.2.6 Scheduled Maintenance Routines

The *Contractor* to adhere to the following maintenance schedules of the Compressed Air Plant

Daily Site inspections, Corrective –, Preventative Maintenance and Standby by Site staff

Listed Services to include all Spares, Labour, Travelling & Accommodation

Centrifugal Compressor: (x2) TA 2000 Cameron Old Generation (Unit 1 & 3 Control Air) over 4 years

- 3 monthly (Minor) Service QTY: 8 per compressor

- 6 monthly (Interim) Service QTY: 4 per compressor
- 12 monthly (Major) Service QTY: 4 per compressor

Centrifugal Compressor: (x1) TA 2000 Cameron New Generation (Unit 2 Control Air) over 4 years
- 3 monthly (Minor) Service QTY: 8 per compressor
- 6 monthly (Interim) Service QTY: 4 per compressor
- 12 monthly (Major) Service QTY: 4 per compressor

Centrifugal Compressor: (x3) TA 2000 Cameron Old Generation (Bagfilter 4A, 5A& 6A) over 4 years
- 3 monthly (Minor) Service QTY: 8 per compressor
- 6 monthly (Interim) Service QTY: 4 per compressor
- 12 monthly (Major) Service QTY: 4 per compressor

Centrifugal Compressor: (x3) TA 2000 Cameron New Generation (Bagfilter 4B, 5B& 6B) over 4 years
- 3 monthly (Minor) Service QTY: 8 per compressor
- 6 monthly (Interim) Service QTY: 4 per compressor
- 12 monthly (Major) Service QTY: 4 per compressor

Evapco Induced Draft Cooling Towers (x9) over 4 years
- Initial major descaling services per cooling tower
- Supply and install (x6) New Cooling towers
- 6 monthly Service QTY: 8 per cooling tower

List all TA2000 Cameron (Old & New Generation) Centrifugal Compressors' Critical Spares over 4 years

Screw Compressors: (x1) L132 V4 (Standby 1) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressors: (x4) L55 V4 (Unit 4 Control Air, Unit 6 Control Air, Standby 3 & Standby 4) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressors: (x1) L75 V4 (Unit 5 Control Air) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressors: (x1) L132 V4 (Standby 1) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressors: (x2) L160 V3 (Standby 2 & Extra Standby Unit) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressor: (x1) L250 V1 (Standby 5) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor

- Major Service QTY: 4 per compressor
- V belt change QTY: 2 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressors: (x1) L110 V4 (Standby 6) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressor: (x1) L110 V3 (Standby 7) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Hose replacement
- Overhaul QTY: 1 per compressor

Screw Compressors: Station Air 1 (L250 V3) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressor: Station Air 2 (Old L250) over 4 years
- Minor Service QTY: 8 per compressor
- Interim Service QTY: 4 per compressor
- Major Service QTY: 4 per compressor
- V belt change QTY: 2 per compressor
- Overhaul QTY: 1 per compressor

Screw Compressor: (x1) ML110 (Turbine Forced Cooling) over 4 years
- Major services QTY: 4 per compressor

List all CompAir L-Series Rotary Screw Compressors' Critical Spares over 4 years

Desiccant Dryers services: (x4) A340XS (L110 V3 & V4, L250 V1 Screw compressors) over 4 years
- 6, 18 & 30 months (Minor) Service QTY: 3 per dryer
- 12 & 36 months (Interim) Service QTY: 2 per dryer
- 24 months (Major) Service QTY: 1 per dryer

Desiccant Dryer services: (x4) AX113NS (L55 V4 Screw Compressors) over 4 years
- 12 & 36 month's Service QTY: 2 per desiccant dryer
- 24 & 48 month's Service QTY: 2 per desiccant dryer

Desiccant Dryer services: (x1) AX159NS (L75 V4 Screw Compressor) over 4 years
- 12 & 36 month's Service QTY: 2 per desiccant dryer
- 24 & 48 month's Service QTY: 2 per desiccant dryer

Desiccant Dryer services: (x4) AX212NS (L250 Old & V3) over 4 years
- 12 & 36 month's Service QTY: 2 per desiccant dryer
- 24 & 48 month's Service QTY: 2 per desiccant dryer

Desiccant Dryer services: (x2) AX235NS (L132 V4 & L160 V3) over 4 years
- 12 & 36 month's Service QTY: 2 per desiccant dryer
- 24 & 48 month's Service QTY: 2 per desiccant dryer

Desiccant Dryer services: (x9) AX314NS Dryers (All TA2000 Camerons) over 4 years

- 12 & 36 month's Service QTY: 2 per desiccant dryer
- 24 & 48 month's Service QTY: 2 per desiccant dryer

Inline Filter elements on all new L55, L75, L132, L160 & L250 and TA2000 compressors over 4 years
6 monthly filter changes:

- ELEMENT CF0260L3"B (L132/160/250) QTY: 48
- ELEMENT CF0260L3"C (L132/160/250) QTY: 48
- ELEMENT CF0133L2"B (L55) QTY: 32
- ELEMENT CF0133L2"C (L55) QTY: 32
- ELEMENT CF0167L2"B (L55&75) QTY: 8
- ELEMENT CF0167L2"C (L55&75) QTY: 8
- ELEMENT CE0450B (TA2000) QTY: 48
- ELEMENT CE0450C (TA2000) QTY: 48
- ELEMENT CE0700B (TA2000) QTY: 72
- ELEMENT CE0700C (TA2000) QTY: 72

Screw Compressor: (x4) RS7.5VSDFF compressors

- Minor Service QTY: 8 per compressor
- Major Service QTY: 8 per compressor
- Overhaul QTY: 1 per compressor

Diesel Compressors and auxiliary equipment
Note: the scope will be added to the maintenance contract once the equipment is purchased.

1.3 Interpretation and terminology

If required include here definitions additional to those used in the *conditions of contract* which are required only for the purpose of making the Service Information easier to draft and read. Also list abbreviations used and provide a full interpretation of each one, for example:

The following abbreviations are used in this Service Information:

Abbreviation	**Meaning given to the abbreviation**
bar	Bar, a metric unit of pressure, equivalent to 100,000 Pascals (Pa) or 100 kilopascals (kPa)
CFM	Cubic feet per minute, the unit of volumetric flow rate in cubic feet for each minute it moves.
CM	Corrective Maintenance schedule, outlines planned repairs or replacements of malfunctioning assets, addressing issues identified through inspections or breakdowns, aiming to restore equipment to full operational capacity.
CT	Cooling Tower, an induced draft cooling tower mounted with a fan at the top of the cooling tower.
CW	Cooling water, water used to remove heat from industrial processes, equipment, or systems, acting as a coolant and preventing overheating, through heat exchangers and cooling towers.
comp.	Compressor, a machine used to compress air or other gases by reducing its volume to a pressures higher than atmospheric pressure.
DCS	Distributed Control System, a computerized system that manages and controls complex industrial processes by distributing control functions across multiple, interconnected controllers.

EOD	Electrical Operating Desk, a specialized desk or workstation designed for handling and managing electrical equipment and installations in an operating room.
FFP	Fabric Filter Plant, is an air pollution control plant that uses fabric in the form of bags, to capture and remove suspended dust particles from the industrial gas streams before they are released into the atmosphere.
kPA	Kilopascal, unit of pressure measurement.
kW	Kilowatt, which is a unit of power, specifically 1,000 watts, often used to measure the power consumption of equipment or the output of electrical systems.
m^3/min	Cubic meter per minute, the unit of volumetric flow rate in cubic meter for each minute it moves.
OSBL	Outside battery limits, refers to the area and infrastructure outside the physical boundary of the plant that supports the primary process (production of compressed air), including storage, and it is not part of the area of responsibility.
PM	Preventative Maintenance schedule, is a planned approach to regularly maintaining equipment and facilities to prevent breakdowns and optimize performance, reducing unexpected downtime and extending asset lifespans.
QTY	Quantity, the amount or number of something, often used to describe the measure or extent of a thing
V	Volt, the SI unit of electromotive force, the difference of potential that would carry one ampere of current against one ohm resistance.

2 Management strategy and start up.

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

In the TSC3 the *Contractor*'s plan is his "design" for performing the *service* throughout the *service period*. Section 2 of the *conditions of contract* describes what the *Contractor* is to show in his plan both in the core clauses and some additional requirements in each of the main Options.

The extent of the *Contractor*'s plan will depend on whether the *Contractor* is required to develop a plan in accordance with the *Employer*'s broad outline of the *service* or whether the *Employer* has provided a plan for the *Contractor* to follow. Read the TSC3 Guidance Notes pages 21 and 22 for more information on the *Contractor*'s plan.

Use this section to describe any particulars which must be taken into account by the *Contractor* in developing his plan as required by clause 21.2. For example information about the order and timing or method of carrying out particular items of work.

List technical reporting and scheduling requirements which are to be incorporated into the *Contractor*'s plan.

The *Contractor* supplies the *Employer* with their *Contractor's* plan. The *Contractor* must submit the *Contractor's* plan at the inception of this contract. The *Contractor* compiles a service schedule based on running hours and defects and plan for the various types of servicing and maintenance interactions throughout the contract duration including management of the spares and consumables that will be required for each intervention. The plan will be based on the hours run or time based as agreed by both parties and the plan to be submitted to the *Service Manager*.

The *Contractor's* plan must include but is not limited to the following:

- Quality management system implementation programme.
- A Quality Control Plan (QCP) for each Interim and Major service performed on all (x23) Compressors with hold, witness and verification points for the *Employer* to check and monitor progress.

2.2 Management meetings

The *conditions of contract* (e.g. Clause 16.2) and other sections of the Service Information (e.g. safety risk management) may require that a meeting shall be held. However the intention of all NEC contracts is that the Parties and their agents use the techniques of partnering to manage the contract by holding meetings designed to pro actively and jointly manage the administration of the contract with the objective of minimising the adverse effects of risks and surprises for both Parties.
Depending on the size and complexity of the *service*, it is probably beneficial for the *Service Manager* to hold a weekly risk register meeting (Clause 16.2). This could be used to discuss safety, compensation events, subcontracting, overall co-ordination and other matters of a general nature. Separate meetings for specialist activities such as planning and activities of a technical nature may also be warranted.
Describe here the general meetings and their purpose. Provide particulars of approximate times, days, location, and attendance requirements, stipulating that attendees shall have the necessary delegated authority to make decisions in respect of matters discussed at such meetings.
The following text could be used as a model for this section:

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

Title and purpose	**Approximate time & interval**	**Location**	**Attendance by:**
Overall contract progress, costing, risk management, financial, and feedback.	Monthly on last Tuesday of the month.	Arnot Power Station or virtual meetings via MS Teams.	*Employer*, *Contractor* and any relevant invited persons.

Meetings of a specialist nature may be convened as specified elsewhere in this Service Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *service*. Records of these meetings shall be submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.

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

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

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

The *Contractor* supplies all the contact details and responsibilities of each person involved with this contract and indicate the line of authority on an organogram. He indicates the methodology of work execution and responsibilities of each person involved with the Compressor maintenance.

Where the *Contractors* site representative worked through the night, sick leave, annual leave or any other reason for not being on site, *contractor* will be required to ensure that a replacement or cover is available for the site activities and manages these periods and informs the *Service Manager* of his plans.

2.4 Documentation control

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

The standard forms to be used by the *Contractor* in the administration of the contract, such as early warning and compensation event notifications are to be submitted to the *Employer* and shall be on the NEC document format which shall be made available to the *Contractor* by the *Employer*.

2.5 Invoicing and payment

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

Within two working days of receiving a payment certificate from the *Employer* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Employer's* payment certificate.

The *Contractor* shall address the tax invoice to:

Finance Department (Accounts Payable Section)
Arnot Power Station
P/Bag X2
Rietkuil
1097

and include on each invoice the following information:

- Name and address of the *Contractor* and the *Service Manager;*

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

Invoices can be submitted using emails sent to:
E-mail: invoiceseskomlocal@eskom.co.za

Details on how to submit invoices and additional information:

- Ensure that the Eskom order number is clearly indicated on your invoice together with the line number on the order you are billing for.
- All Electronic invoices must be sent in PDF format only.
- Each PDF file should contain one invoice; or one debit note; or one credit note only as Eskom's SAP system does not support more than one PDF being linked into workflow at a time.
- Your E-mail may contain more than one PDF file (e.g. 2 invoices on 2 separate PDF files in one e-mail)
- If there is Cost Price Adjustment (CPA) on your invoice we recommend that you issue a separate invoice for CPA so that if there are any issues on the CPA the rest of the invoice can be paid while resolving the CPA issues.
- Introduction of electronic invoicing does not guarantee payment but will ensure visibility of all invoices and ensure that no invoices get lost. If the goods receipt is not done the invoice will be parked and the system will automatically send an e-mail to the end user to do the goods receipt. This is also tracked by Eskom through the park invoice report.
- Your company can request a park invoice report from the Finance Shared Services (FSS) contact center which can then be followed up and corrected. You are welcome to forward the details of invoices corrected to the FSS contact center.
- All queries and follow up on invoice payments should made by contacting the FSS Contact Centre:
  Tel: 011 800 5060
  E-mail: fss@eskom.co.za

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

2.6.1 Equipment

Any equipment and spares that was purchased through this *Contract* for the operations or maintenance of the plant will remain the *Employers* property and all the records and documentation pertaining to the maintenance and compressor management, services and operations.

2.6.2 Information and other things

The *Contractor* uses the data collected as on plant operations and history, to motivate changes, replacements and modifications to the plant. All modifications to the plant are done in consultation with *Employer* Engineering department.

On completion of the Contract, the system including all information and data collected on the planning system by the *Contractor* is handed over to the *Service Manager* on software.

2.7 Training workshops and technology transfer

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

The *Contractor* is to provide training when deemed necessary by the *Employer* to the *Employer's* Operators and Maintenance employees on the following topics but not limited to:

- Routine inspections
- Equipment operations

- Basic routine maintenance
- Basic fault finding

The training material to be made available by the *Contractor* to the *Employer* for further training interventions.

2.8 Services and other things provided by the Employer

The *Employer* shall ensure that the plant is isolated, the permit is issued and accepted before the work commence.

2.9 Management of work done by Task Order

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

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

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

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

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

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

- Work is to be done in accordance with the written Task Order issued by the *Employer.*
- All work done is valued in accordance with the Price List unless otherwise specified. Actual quantities will be determined where applicable based on the requirements of each Task Order. The *Contractor* provides all necessary information required by the *Employer* to determine the cost at the assessment date for monthly costs and for each Task Order.

3 Health and safety, the environment and quality assurance

3.1 Health and safety risk management

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

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

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

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

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

- Cost of *Contractor*'s medical examination, safety induction are for the *Contractor*'s account. All employees on the list must undergo medical examination periodically as required by the Employers Helath and Safety risk management systems.
- The *Contractor* is responsible for procurement of Personal Protective Equipment (PPE) and equipment in accordance with the Occupational Health and Safety Act (OHSACT) and site specific requirements, including the use thereof as necessary.
- The *Contractor* to submit material safety data sheets (MSDS) on all hazardous chemical substances to be used on site at the inception of this contract. The *Contractor* will not be allowed to use any hazardous chemical substances on site without permission by the *Employer.* All the chemical substances used in the power station must be in line with Specification for Chemical Products and Material used in a Power Plant (GGSS1181)
- The *Contractor* must familiarise themselves with the waste management policies and procedures at the start of this contract.
- The *Contractor* to ensure that all work performed is according to applicable standards, including, Safety, Health and Environmental Specifications for Contractors which will be supplied by the *Employer.*
- The *Contractor* must submit a safety policy and maintains the safety system until the completion of the whole *works*. The safety policy will as a minimum, contain PPE information, written safe work procedures, job specific risk assessments, safety meetings, etc. This safety policy must comply to safe working procedures and it must be approved by the *Employer's Representative* prior to the commencement of any work.
- The *Contractor* will be subject to periodic audits by the *Employe*r in order to ensure compliance with the policy. Any deviations will be corrected to the *Employer's* satisfaction.
- The *Employer's Representative* has the right to stop the *Contractor's* work activities which, in the opinion of the *Employer's Representative*, is unsafe. The *Contractor* may only continue with work activities when all safety deficiencies have been corrected to the *Employer's Representative's* satisfaction. The *Contractor* shall have no claim against the *Employer* in respect of delay due to the above.
- *Contractor* to conduct job observation to monitor work practices.
  The *Contractor* ensures safety awareness at all times through continuous training.
- The *Contractor* will be the *Employer* in terms of the Occupational Health and Safety Act (OHSA) 85 of 1993.
- All of the *Contractor*'s staff complies with the Arnot Site health and safety requirements titled "*Contractors'* Health and Safety Requirements.
- In carrying out its obligations to the *Employer* in terms of this contract; in Providing the *works;* in using Plant, Materials and Equipment; and while at the Site for any reason, the *Contractor* complies and procures and ensure the compliance by its employees, agents, Subcontractors and mandataries with:

    - the provisions of the Occupational Health and Safety Act 85 of 1993 (as amended) and all regulations in force from time to time in terms of that Act ("the OHSA"); and

    - The health and safety plan prepared by the *Contractor* in accordance with the SHEQ Requirements.

  (The OHSA and Eskom Regulations are collectively referred to as the "SHEQ Requirements".)

- The *Contractor*, at all times, consider itself to be the "*Employer*" for the purposes of the OHSA and shall not consider itself under the supervision or management of the *Employer* with regard to compliance with the SHEQ Requirements, the *Contractor* shall furthermore not consider itself to be a

subordinate or under the supervision of the *Employer* in respect of these matters. The *Contractor* shall at all times be responsible for the supervision of its employees, agents, Subcontractors and mandatories and shall take full responsibility and accountability for ensuring they are competent, aware of the SHEQ Requirements and execute the *works* in accordance with the SHEQ Requirements.

- The *Contractor* ensures that all statutory appointments and appointments required by any Eskom Regulations are made and that all appointees fully understand their responsibilities and are trained and competent to execute their duties. The *Contractor* supervises the execution of their duties by all such appointees.

- The *Employer*, or any person appointed by the *Employer*, may, at any stage during the currency of this contract:

    - conduct health and safety audits regarding all aspects of compliance with the SHEQ Requirements, at any off-site place of work, or the site establishment of the *Contractor*;
    - refuse any employee, Subcontractor or agent of the *Contractor* access to the premises if such person has been found to commit an unsafe act or any unsafe working practice or is found not to be qualified or authorised in terms of the SHEQ Requirements;
    - Issue the *Contractor* with a stop order should the *Employer* become aware of any unsafe working procedure or condition or any non-compliance with any provision of the SHEQ Requirements.

- The *Contractor* immediately reports any incident and/or disabling injury as well as any threat to health or safety of which it becomes aware of on the Site to the *Service Manager.*

- The *Contractor* appoints a person, qualified in accordance with the SHEQ Requirements, as the liaison with the Eskom Safety Officer for all matters related to health and safety, this person shall be contactable 24 hours a day.

- The *Contractor* confirms that provided with sufficient written information regarding the health and safety arrangements and procedures applicable to the *service* to ensure compliance by it and all employees, agents, Subcontractors or mandatories with the SHEQ Requirements while providing the *service* in terms of this contract. As such, the *Contractor* confirms that this contract and the relevant Eskom Regulations referred to in this contract constitute written arrangements and procedures between the *Contractor* and the *Employer* regarding health and safety for the purposes of section 37(2) of the OHSA.
- The *Contractor* agrees that the *Employer* is relieved of any and all of its responsibilities and liabilities in terms of Section 37(1) of OHSA in respect of any acts or omissions of the *Contractor*, and the *Contractor's* employees, agents or Subcontractors, to the extent permitted by the OHSA.

The *Contractor* hereby indemnifies the *Employer* and holds the *Employer* harmless in respect of any and all loss, costs, claims, demands, liabilities, damage, penalties or expense that may be made against the *Employer* and/or suffered or incurred by the *Employer* (as the case may be) as a result of, any failure of the Contractor, its employees, agents, Subcontractors and/or mandatories to comply with their obligations in terms of Section 37(1) of OHSA, and/or the failure of the *Employer* to procure the compliance by the *Contractor* , its employees, agents, Subcontractors and/or mandatories with their responsibilities and/or obligations in terms of or arising from the OHSA

3.2 Environmental constraints and management

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

- The *Contractor* will implement an Environmental Management System (EMS) and will maintain the EMS until the completion of the whole of the works. The EMS will be to the *Employer's* satisfaction and will be accepted prior to the commencement of any work on site.

- The *Contractor* will be subject to periodic audits by the *Employer* in order to ensure compliance with the EMS. Any deviations will be corrected to the *Employer's* satisfaction.
- Furthermore, the *Contractor* will be familiar with and comply with Arnot Power Station's environmental management policies and procedures. In particular, attention is drawn to Arnot Power Station's environmental non-conformance procedure, waste management procedure and spill clean-up procedure.
- The *Contractor* meets the following environmental requirements:

a) Storm water
The *Contractor* ensures that clean and polluted storm water is and remains separated. All drains are cleaned on a scheduled basis to ensure the drains working at all times

b) Contaminated soil
All contaminated soil outside the contained stock yard is removed and dumped at an approved and demarcated area.

c) Redundant Plant and Materials
Redundant Plant and Materials is removed from Site to the reclamation yard using the appropriate procedures. The *Employer's Representative* provides approval for all material to be removed from site to the reclamation yard.

d) General Control of Site Activities
The site is controlled in an environmentally responsible manner. Note the following: Noise and pollution levels for all construction equipment is monitored and managed. Equipment with oil leaks, excessive emission, or unacceptable noise levels are repaired or removed from site. Temporary services are maintained in a good and proper manner.

e) Plant and material wash-down facilities, wash down of plant and material can only be done in areas designated by the *Employer's Representative.*

3.3 Quality assurance requirements

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

- The *supplier* implements a quality system and maintains the quality system until the completion of the whole of the *Works.* The system, will as a minimum, comply with the provisions of the ISO9001:2008 standard and Contract Quality Management The system will be to the *Employer's* satisfaction and will be accepted prior to the commencement of any work on site.
- The *Contractor* is responsible for defining the level of Quality Control Plan (QCP) or inspections to be imposed. The level should be based on criticality of plant and material and must be submitted to the *Employer's Representative* for acceptance prior to the commencement of any work activities.
- The *Contractor* compiles a data package of relevant drawings, test certificates, design checks and other technical information for each section of work or Task Order which is to be reviewed and signed off by the *Employer's Representative*
- The *Contractor* will be subject to periodic audits by the *Employer* in order to ensure compliance with the system. Any deviations will be corrected to the *Employer's* satisfaction.
- The *Employer's Representative* has the right to stop the *Contractor's* work activities which, in the opinion of *Employer's Representative*, does not meet the requirements of the system and will have a detrimental effect on plant performance.
- The *Contractor* may only continue with work activities when all deficiencies have been corrected to the applicable standard. The *Contractor* shall have no claim against the *Employer* in respect of delay due to the above.
- The *Contractor* ensures that all plant and materials for the *service* are to the standard and quality accepted by the *Employer* and ensures that they are suitable for the purpose intended by the manufacturer. **If the job fails while job still under guarantee, the *Contractor* will be liable for the repairs with no cost from *Employer.***
- Testing of belt strength to be done on all cold and hot splices by the *Contractor* and certificate issued to *Employer*

- The *Contractor* will work according to the *Employer's* standards, specifications, guidelines and procedures. Where no standards, specifications, guidelines and procedures are available, the C*ontractor* will work according to the Generation Quality manual and professional guidelines. Where possible, standards will be reflected in the Task Order.

4 Procurement

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

4.1 People

4.1.1 Minimum requirements of people employed

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

4.1.2 BBBEE and preferencing scheme

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

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

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

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

.

[Insert the agreed ASGI-SA Compliance Schedule here]

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

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

4.2 Subcontracting

4.2.1 Preferred subcontractors

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

The *Contractor* submits a detailed list and proposed contract data of sub - contractors to be used, including labour hire and closed corporations with their tender for approval.
If new sub-contractors are going to be used during the contract duration their details need to be supplied to the *Service Manager* for approval before they are used.

The *Contractor* ensures that Sub-contractors do not interrupt the said Works in any way. The Works is defined as Essential Services and all contingencies should be taken to ensure a continuous, uninterrupted service to the *Employer*.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

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

The *Contractor* submits details of proposed subcontracts and or leasing or hiring or supply companies to the *Employer* for approval in the following format:

a. Name and address of proposed subcontractor, supplier, leasing or supply company.
b. Description of hiring, leasing and supply of products or services of works to be done.
c. Conditions of contract to be used, NEC Subcontract or Suppliers hiring, leasing or supply agreement.
d. Name and address of alternative subcontractor or supplier.
e. Back-up services to be received from Subcontractor or Supplier in case of an emergency.

4.2.3 Limitations on subcontracting

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

The utilisation of labour and sub-contractors of the local community is recommended.
Take note that no labour is to be hired at Arnot Power Station entrances.

Whenever possible all sub-contracting work shall be allocated to B-BBEE/ B-O's, BWO's, SMM's and BEE's.

4.2.4 Attendance on subcontractors

State requirements for attendance on Subcontractors, if any

The *Principal Contractor* takes full responsibility of any Sub-Contractor and manages them accordingly.

4.3 Plant and Materials

4.3.1 Specifications

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

The Spares and Equipment utilised in the contract are for TA 2000 Cameron Centrifugal- and CompAir L-Series Rotary Screw Compressor compressors will be as specified by the OEM of the specific compressors.

4.3.2 Correction of defects

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

The *Contractor* repairs / replaces any deviation on the plant or machinery. He informs the *Service Manager* of the deviation.

The *Contractors* obligation to prevent defects is as follows;

A. good workmanship - includes competent management and supervising workmen, suppliers, selecting and inspecting materials. He has an obligation to exercise reasonable skill and care and skills as well as achieving a particular standard of workmanship as stipulated and agreed in the contract
B. adequate materials – must be as per specified standards, inspected before delivery.

4.3.3 *Contractor*'s procurement of Plant and Materials

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

The *Contractors* responsibility is to supply all the necessary plant or materials to ensure the work is carried out in accordance with the work scope.

4.3.4 Tests and inspections before delivery

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

All spares, consumables, oil and equipment utilised for the contract is inspected before leaving the contractors premises for quality and correctness.

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

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

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

The *Employer* does not supply any free issue plant or materials.

5 Working on the Affected Property

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

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

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

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

The *Contractor* complies with the Site Regulations and complies with the Security Access Control Procedure ASSE 0002.

Only Authorised Persons are granted admission to the security-controlled areas of Arnot Power Station. An Authorised Person is a person in possession of either a photo- or day visitor permits. The *Contractor* applies for access permits (*Contractor's* Permit) through the *Service Manager*. The *Contractor's* personnel shall be required to always be in the possession of a *Contractor's* Permit. It is the responsibility of the *Service Manager* or delegated person by the *Contractor* to complete applications for all new contact worker. The responsible person must bring the new contract workers to Security, Fitness of duty certificates, proof of Eskom SHE full induction attended and a valid (not older than three months) South African Police Clearance certificate upon application of a *Contractor's* Permit. The responsible person must return all permits to Security when the contract expires.

The *Contractor* applies for a *Contractor* Vehicle Access permit through the *Service Manager* for the transportation of tools, equipment and spares required to perform work only.

All persons and vehicles, objects, articles or containers are subjected to being searched when entering or leaving the security area of Arnot Power Station. Any person who refuses to allow his vehicle, object, or any container to be searched, will be refused admission or exit in terms of any applicable Act or Regulation.

The *Contractor* must compile detailed lists of all tools and equipment to be taken on Site before arriving at the Power Station Security gate. A special tool and equipment list form is available at Protective Services. An authorised copy of this list must be retained and used again when the tools and Equipment is removed from Site during or after completion of the works. Any item on site without this approved list will be deemed to belong to the *Employer.*

5.2 People restrictions, hours of work, conduct and records

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

There are no restrictions on the working hours. The *Contractor* will be required to supply a service that covers a 24 hours per day 7 days a week for the compressor plant.

For any overtime requirements on the maintenance of plant and machinery approval must be granted by the *Service Manager* prior to work commencing. Where callouts are concerned and emergency overtime is required, it is reported first thing the following morning to the *Service Manager*. The *Contractor* must manage the overtime to ensure no unnecessary overtime is worked and abused.

The *Employer's* normal working hours are as follows (for information only):

Mondays – Thursdays: 07h00 – 16h15
Fridays: 07h00 – 12h00
Lunch breaks are 30 minutes from 12h00

5.3 Health and safety facilities on the Affected Property

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

The *Contractor* ensures full compliance with the Occupational, Health and Safety Act (Act 85 of 1993) and all relevant environmental legislation.

Ambulance, Fire and Rescue Services, Safety Risk Management, and Medical Centre's first aid facilities (during normal working hours only) are available on the Main Station Terrace.

Arnot Emergency Response Team and Safety Risk Management can be activated for on-site Emergencies through the following contacts:

- Telephone number: 013 297 9222 (Internal Pax no: 5222)
- Local Control Officer: 013 297 9035 (Internal Pax no: 5035)

5.4 Cooperating with and obtaining acceptance of Others

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

During the Contract period other *Contractors,* Eskom employees will be carrying out duties for various reasons in the *Contractor's* area of responsibility. The *Contractor* is to schedule his activities so as to give access to others as required. Where necessary, the *Contractor* informs the *Service Manager* of any special requirements applicable and the *Service Manager* informs the parties as required.

5.5 Records of *Contractor*'s Equipment

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

5.6 Equipment provided by the *Employer*

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

If Forklift, Cranage, Rigging services or Scaffolding is required to carry out specific tasks the *Contractor* informs the *Service Manager* to provide or arrange as required. 48 hours' notice must be allowed for this requirement.

5.7 Site services and facilities

5.7.1 Provided by the *Employer*

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

The *Employer* will make available for the *Contractors* use:
a. A lay down area in the *Contractors* yard for his site.
b. 220Volt 15 amp and 380 volt 64 amps power supplies
d. toilet facilities available on site

5.7.2 Provided by the *Contractor*

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

The *Contractor* supplies all tools, equipment, plant, consumables, labour, Personal Protective equipment, arc protection clothing, transport, accommodation, communications (cell phones) offices, office equipment, testing apparatus, additional storage and any other item required to carry out the works.

6 List of drawings

6.1 Drawings issued by the *Employer*

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

Drawing number	Revision	Title
0.41/12246	2	COMPRESSOR HOUSE SOUTH PLANT ARRANGEMENT PLAN
0.41/12301	1	COMPRESSOR HOUSE SOUTH PLAN
0.41/7944	4	COMPRESSOR HOUSE NORTH PLANT ARRANGEMENT
0.41/7945	3	COMPRESSOR PLANT NORTH ARRANGEMENT AND SECTIONS
0.41/13685	2	COMPRESSOR PLANT NORTH ARRANGEMENT OF COMPRESSED AIR PIPING TO BOILER HOUSE
0.41/11396	6	COMPRESSOR PLANT NORTH SCHEMATIC DIAGRAM AND OPERATING INSTRUCTIONS