



## NEC3 Engineering & Construction Contract

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

and .....  
(Reg No. \_\_\_\_\_ )

for **REPLACEMENT OF AIRCONDITIONING UNITS AT  
SUNILAWS OPERATIONS DATA CENTRE – CAPE  
COASTAL CLUSTER - EC**

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**CONTRACT No. [.....]**

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# Part C1: Agreements & Contract Data

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[to be inserted from Returnable Documents at award stage]	
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[to be inserted from Returnable Documents at award stage]	

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# C1.1 Form of Offer & Acceptance

## Offer

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

**REPLACEMENT OF AIRCONDITIONING UNITS AT SUNILAWS OPERATIONS DATA CENTRE – CAPE COASTAL CLUSTER - EC**

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 B	The offered total of the Prices exclusive of VAT is	<b>R</b>
	Value Added Tax @ 15% is	<b>R</b>
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	<b>R</b>
	(in words)	

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

Signature(s)

Name(s)

Capacity

**For the tenderer:**

.....  
(Insert name and address of organisation)

Name & signature of witness

Date

Tenderer's CIDB registration number (if applicable)

<sup>1</sup> 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: Works Information
- Part C4            Site 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 original copy signed between them of this document, including the Schedule of Deviations (if any).

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

Signature(s)

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

**for the Employer**            **ESKOM HOLDINGS SOC LIMITED,  
Megawatt Park, Maxwell Drive,  
Sandton, Johannesburg**  
\_\_\_\_\_  
*(Insert name and address of organisation)*

Name & signature of witness \_\_\_\_\_ Date \_\_\_\_\_

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



# C1.2 ECC3 Contract Data

## Part one - Data provided by the *Employer*

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

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option and secondary Options	<b>A: Priced contract with activity schedule</b> <b>W1: Dispute resolution procedure</b>  <b>X2 Changes in the law</b> <b>X5: Sectional Completion</b> <b>X7: Delay damages</b> <b>X14: Advance payment to the Contractor</b> <b>X16: Retention</b> <b>X18: Limitation of liability</b> <b>Z: Additional conditions of contract</b>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	<b>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</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
10.1	The <i>Project Manager</i> is: (Name)	<b>Siphamandla Ndabana</b>
	Address	<b>Corner Bonza Bay Road &amp; Quenera Drive, Beacon Bay, East London, 5241</b>
	Tel	<b>(043) 703 5725</b>
	Fax	
	e-mail	<b>ndabans@eskom.co.za</b>
10.1	The <i>Supervisor</i> is: (Name)	<b>TBA</b>
	Address	

Tel No.

Fax No.

e-mail

11.2(13)	The <i>works</i> are	<b>REPLACEMENT OF AIRCONDITIONING UNITS AT SUNILAWS OPERATIONS DATA CENTRE – CAPE COASTAL CLUSTER - EC</b>	
11.2(14)	The following matters will be included in the Risk Register	<b>Part 5 – Annexures – Risks identified part of the Risk Assessment as per the Safety Health &amp; Environment Specification document and FDP Document.</b>	
11.2(15)	The <i>boundaries of the site</i> are	<b>WITHIN THE EAST LONDON ESKOM SUNILAWS OPERATIONS DATA CENTRE CAPE COASTAL CLUSTER - EC</b>	
11.2(16)	The Site Information is in	<b>Part 4: Site Information</b>	
11.2(19)	The Works Information is in	<b>Part 3: Scope of Work and all documents and drawings to which it makes reference.</b>	
12.2	The <i>law of the contract</i> is the law of	<b>the Republic of South Africa</b>	
13.1	The <i>language of this contract</i> is	<b>English</b>	
13.3	The <i>period for reply</i> is	<b>1 Week</b>	
<b>2</b>	<b>The Contractor's main responsibilities</b>	<b>Data required by this section of the core clauses is provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.</b>	
<b>3</b>	<b>Time</b>		
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	<b>28 February 2024</b>	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<b>Condition to be met</b>	<b>key date</b>
		1 Project Award Date	09 August 2024
		2 Site Access Date	05 August 2024
		3 Project Completion Date	28 February 2024
30.1	The <i>access dates</i> are:	<b>Part of the Site</b>	<b>Date</b>
		1 Complete Site	09 August 2024
		2 [•]	[•]
		3 [•]	[•]
31.1	The Contractor is to submit a first programme for acceptance within	<b>2 (two) weeks of the Contract Date.</b>	

31.2	The <i>starting date</i> is	<b>01 August 2024</b>
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32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	<b>2 (two) weeks.</b>
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35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	[No data needed if this statement is included]
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#### **4 Testing and Defects**

42.2	The <i>defects date</i> is	<b>52 (Fifty two) weeks after Completion of the whole of the works.</b>
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43.2	The <i>defect correction period</i> is	<b>2 (two) weeks</b>
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#### **5 Payment**

50.1	The <i>assessment interval</i> is	<b>Period agreed upon by <i>Project Manager</i> and <i>Contractor</i> from the <i>Starting Date</i>.</b>
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51.1	The <i>currency of this contract</i> is the	<b>South African Rand.</b>
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51.2	The period within which payments are made is	<b>Either 14 (fourteen) days or 30 (thirty) days depending on the <i>Contractor's</i> BBBEE status at the date of payment.</b>
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51.4	The <i>interest rate</i> is	the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and
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(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.

#### **6 Compensation events**

60.1(13)	The place where weather is to be recorded is:	<b>At the Site Camp/ Office Area</b>
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The *weather measurements* to be recorded for each calendar month are,

**the cumulative rainfall (mm)**

**the number of days with rainfall more than 10**

mm

the number of days with minimum air temperature less than 0 degrees Celsius

the number of days with snow lying at 09:00 hours South African Time

and these measurements: **are recorded within a calendar month**

The *weather measurements* are supplied by

SA Weather Bureau

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:

**SA Weather, Pretoria, 012-3676000  
East London, Eastern Cape Province**

and which are available from:

**the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer***

60.1(13)	Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	<b>As stated in Annexure A to this Contract Data provided by the <i>Employer</i>.</b>
<b>7</b>	<b>Title</b>	<b>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.</b>
<b>8</b>	<b>Risks and insurance</b>	
84.1	The <i>Employer</i> provides these additional insurances	<ol style="list-style-type: none"> <li>1. [•]</li> <li>2. [•]</li> <li>3. [•]</li> </ol>
<b>9</b>	<b>Termination</b>	<b>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.</b>
<b>10</b>	<b>Data for main Option clause</b>	
A	Priced contract with activity schedule	<b>There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.</b>
<b>11</b>	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i> is	<b>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 <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a>). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).</b>

Address [•]  
 Tel No. [•]  
 Fax No. [•]  
 e-mail [•]

W1.2(3)	The <i>Adjudicator nominating body</i> is:	<b>the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) or its successor body.</b>
W1.4(2)	The <i>tribunal</i> is:	<b>arbitration.</b>
W1.4(5)	The <i>arbitration procedure</i> is	<b>the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.</b>
	The place where arbitration is to be held is	<b>East London, Eastern Cape, South Africa.</b>
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	<b>the Chairman for the time being or his nominee</b>
	- if the arbitration procedure does not state who selects an arbitrator, is	<b>of the Association of Arbitrators (Southern Africa) or its successor body.</b>

**12 Data for secondary Option clauses**

<b>X2</b>	<b>Changes in the law</b>	<b>There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.</b>		
<b>X5 &amp; X7</b>	<b>Sectional Completion and delay damages used together</b>			
X7.1 X5.1	Delay damages for late Completion of the <i>sections</i> of the <i>works</i> are:	<i>section</i>	Description	Amount per day
		1	[•]	0.1% per day.
		2	[•]	0.1% per day.
		3	[•]	0.1% per day.
	Remainder of the <i>works</i>			R[•]
	The total delay damages payable by the <i>Contractor</i> does not exceed:	<b>Up to a limit not exceeding 10% of Contract Value</b>		
<b>X14</b>	<b>Advanced payment to the Contractor</b>			
X14.1	The amount of the advanced payment is	<b>R 700 000.00</b>		
X14.2	An advanced payment bond	<b>An advance payment will only be issued on</b>		

		condition that an advance payment bond (on the Eskom pro-forma) is provided by a financial institution approved by Eskom Treasury.
X14.3	The <i>Contractor</i> repays the instalments in assessments starting not less than	22 weeks after the Contract Date.
X14.3	The instalments are	R 175 000.00 (either an amount or a percentage of the payment otherwise due)
<b>X16</b>	<b>Retention (not used with Option F)</b>	
X16.1	The <i>retention free amount</i> is	NIL
	The <i>retention percentage</i> is	10%
<b>X18</b>	<b>Limitation of liability</b>	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	as stated in Part C1.1, Form of Offer & Acceptance.
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The greater of <ul style="list-style-type: none"> <li>the total of the Prices at the Contract Date and</li> <li>the amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.</li> </ul>
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p>the total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> <li>Defects due to his design which arise before the Defects Certificate is issued,</li> <li>Defects due to manufacture and fabrication outside the Site,</li> <li>loss of or damage to property (other than the <i>works</i>, Plant and Materials),</li> <li>death of or injury to a person and</li> <li>infringement of an intellectual property right.</li> </ul>
X18.5	The <i>end of liability date</i> is	<p>(i) Seven years after the <i>defects date</i> for latent Defects and</p> <p>(ii) the date on which the liability in question</p>

prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.

A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period. If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.

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**Z**      **The Additional conditions of contract are**

Z1 to Z12 always apply.

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**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 *Project 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 *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project 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 Works.

- 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 P3 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 *Project 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 *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project 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 *Project Manager*, the *Supervisor*, 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 *works*. 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 Site;
  - 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 *works*; and
  - undertakes, in and about the execution of the *works*, 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 *works*, 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 *Project 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 Works 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 from the last sentence in core clause 61.3, "unless the *Project Manager* should have notified the event to the *Contractor* but did not".

**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 83.1 is provided for in 60.1(14) and the *Employer's* liability under the indemnity is limited.

**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 Addition to secondary Option X7 Delay damages (if applicable in this contract)**

Z11.1 If the amount due for the *Contractor's* payment of delay damages reaches the limits stated in this Contract Data for Option X7 or Options X5 and X7 used together, the *Employer* may terminate the *Contractor's* obligation to Provide the Works using the same procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table.

**Z12 Ethics**

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

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

Z 12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z 12.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Works 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 Works for this reason.

Z 12.3 If the *Employer* terminates the *Contractor's* obligation to provide the Works for this reason, the procedures and amounts due on termination are respectively P1, P2 and P3, and A1 and A3.

Z 12.4 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.

**Z13 Insurance****Z 13.1 Replace core clause 84 with the following:**

**Insurance cover 84**

- 84.1** When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.
- 84.2** The *Contractor* provides the insurances stated in the Insurance Table A.
- 84.3** The insurances provide cover for events which are at the *Contractor's* risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

**INSURANCE TABLE A**

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

**Z 13.2**

**Replace core clause 87 with the following:**

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

**INSURANCE TABLE B**

<b>Insurance against or name of policy</b>	<b>Minimum amount of cover or minimum limit of indemnity</b>
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

## Z14 Nuclear Liability

- Z14.1 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.
- Z14.2 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*.
- Z14.3 Subject to clause Z14.4 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*.
- Z14.4 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.
- Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

## Z15 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.

<b>Compliance Monitoring</b>	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.
<b>OEL</b>	means occupational exposure limit.
<b>Parallel Measurements</b>	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
<b>Safe Levels</b>	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.
<b>Standard</b>	means the <i>Employer's</i> Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
<b>SANAS</b>	means the South African National Accreditation System.
<b>TWA</b>	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.

- Z15.1 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.
- Z15.2 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 Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z15.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z15.4 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.
- Z15.5 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.
- Z15.6 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.

- Z15.7 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.

## Annexure A: One-in-ten-year-return *weather data* obtained from SA Weather Bureau for [weather station]

If any one of these *weather measurements* recorded within a calendar month, before the Completion Date for the whole of the *works* and at the place stated in this Contract Data is shown to be more adverse than the amount stated below then the *Contractor* may notify a compensation event.

Date	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Weather											
Max	17 °c	25 °c	32 °c	18 °c	25 °c	18 °c	29 °c	25 °c	17 °c	25 °c	17 °c
Min	16 °c	17 °c	22 °c	14 °c	15 °c	13 °c	17 °c	15 °c	14 °c	19 °c	13 °c
Wind	24 km/h E	16 km/h SE	15 km/h WSW	28 km/h SW	13 km/h E	22 km/h S	37 km/h SE	25 km/h NE	16 km/h SSW	10 km/h SSW	19 km/h SSE
Cloud(%)	96%	36%	1%	71%	8%	76%	21%	22%	53%	41%	63%
Humidity	86%	80%	42%	80%	75%	73%	63%	59%	70%	81%	66%
Precip	0.8 mm	0.0 mm	0.0 mm	0.7 mm	0.0 mm	0.9 mm	0.0 mm	0.0 mm	0.0 mm	0.0 mm	0.6 mm
Pressure	1023 mb	1006 mb	1015 mb	1017 mb	1015 mb	1024 mb	1013 mb	1015 mb	1021 mb	1013 mb	1029 mb

Only the difference between the more adverse recorded weather and the equivalent measurement given above is taken into account in assessing a compensation event.

## Annexure B: Insurance provided by the Employer

These notes are provided as guidance to tendering contractors and the Contractor about the insurance provided by the Employer. The Contractor must obtain its own advice. Details of the insurance itself are available from the internet web link given below.

1. For the purpose of works contracts, insurance provided by Eskom (the *Employer*) has been arranged on the basis of “project” or “contract” value, where the value is the total of the Prices at Completion of the whole of the works including VAT.

A “project” is a collection of contracts or work packages to be undertaken as part of a single identified capital expansion or refurbishment of a particular asset or facility.

A “contract” is a single contract not linked to or being part of a “project”.

2. For ECC3 there are three main “formats” of cover and deductible structure; Format A, Format B and Format Dx.

**Format A** is for a project or contract value less than or equal to R350M (three hundred and fifty million Rand) inclusive of VAT.

**Format B** is for a project or contract value greater than R350M (three hundred and fifty million Rand) inclusive of VAT.

In the case of contracts / packages within a project:

- For a contract / package of R50M which is part of a R400M project, Format B will apply
- For a contract / package of R250M which is part of a R6 billion project, Format B will apply;
- For a contract / package of R120M which is part of a R350M project Format A will apply;

For a contract which is not part of a project the same limits apply:

- For a contract of R50M, Format A will apply
- For a contract of R355M, Format B will apply.

**Format Dx** applies only to Distribution Division projects and contracts. If a Distribution Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover. Cover and deductibles for Distribution Division are per the relevant policy available on the internet web link given below.

**Format A generally applies to Transmission Division** projects and contracts. If a Transmission Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover.

3. Tendering contractors should note that cover provided by the *Employer* is only per the policies available on the internet web link listed below and may not be the cover required by the tendering contractor or as intended by each of the listed insurances in the left hand column of the Insurance Table in clause 84.2. In terms of clause 84.1 “the *Contractor* provides the insurances stated in the Insurance Table except any insurance which the *Employer* is to provide”. Hence the *Contractor* provides insurance which the *Employer* does not provide and in cases where the *Employer* does provide insurance the *Contractor* insures for the difference between what the Insurance Table requires and what the *Employer* provides.
4. When the Marine Insurance is required the *Contractor* needs to obtain a copy of the latest edition of Eskom’s Marine Policies Procedures found at internet website given below.
5. Further information and full details of all Eskom provided policies and procedures may be obtained from:

[http://www.eskom.co.za/live/content.php?Item\\_ID=9248](http://www.eskom.co.za/live/content.php?Item_ID=9248)

# C1.2 Contract Data

## Part two - Data provided by the Contractor

### Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)<sup>1</sup> in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 156 to 158 of the ECC3 (April 2013) Guidance Notes.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [       ] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	<b>CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .</b>

<sup>1</sup> Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see [www.ecs.co.za](http://www.ecs.co.za)

11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	
31.1	The programme identified in the Contract Data is	
<b>A</b>	<b>Priced contract with activity schedule</b>	
11.2(20)	The <i>activity schedule</i> is in	<b>(in figures)</b>  <b>(in words), excluding VAT</b>
11.2(30)	The tendered total of the Prices is	
	<b>Data for Schedules of Cost Components</b>	<i>Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).</i>
<b>A</b>	<b>Priced contract with activity schedule</b>	<b>Data for the Shorter Schedule of Cost Components</b>

## PART 2: PRICING DATA

### ECC3 Option B

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
C2.1	Pricing assumptions: Option B	[03]
C2.2	<i>The bill of quantities</i>	[10]

## C2.1 Pricing assumptions: Option B

### 1. How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract (ECC3) Option B states:

<b>Identified and defined terms</b>	11 11.2	<p>(21) The Bill of Quantities is the <i>bill of quantities</i> as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.</p> <p>(28) The Price for Work Done to Date is the total of</p> <ul style="list-style-type: none"> <li>• the quantity of the work which the <i>Contractor</i> has completed for each item in the Bill of Quantities multiplied by the rate and</li> <li>• a proportion of each lump sum which is the proportion of the work covered by the item which the <i>Contractor</i> has completed.</li> </ul> <p>Completed work is work without Defects which would either delay or be covered by immediately following work.</p> <p>(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.</p>
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This confirms that Option B is a re-measurement contract and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.

### 2. Function of the Bill of Quantities

Clause 55.1 in Option B states, “Information in the Bill of Quantities is not Works Information or Site Information”. This confirms that specifications and descriptions of the work or any constraints on how it is to be done are not included in the Bill, but in the Works Information. This is further confirmed by Clause 20.1 which states, “The *Contractor* Provides the Works in accordance with the Works Information”. Hence the *Contractor* does **not** provide the Works in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

### 3. Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

There is no general provision in Option B for payment for materials on Site before incorporation into the *works*. If secondary Option X14 Advanced payment has not been used then the tendering contractor may obtain the same effect by inserting appropriate items in the method related charges where the *method of measurement* allows, or alternatively making allowance in the rates of the *bill of quantities* for the financing of Plant and Materials until they are incorporated in the *works*.

When compensation events arise, the default position is that the Bill of Quantities is not used to calculate the cost effect of the event. Defined Cost and the resulting Fee is used and Defined Cost includes all components of cost which the *Contractor* is likely to incur, including so called P & G items. Rates and lump sums from the Bill of Quantities, or from any other source, may be used instead of Defined Cost and the Fee only if the *Contractor* and *Project Manager* agree. If they are unable to agree, then Defined Cost

plus Fee is used.

## 4. Measurement and payment

### 4.1. Symbols

The units of measurement described in the Bill of Quantities are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m <sup>2</sup>	square metre
m <sup>2</sup> -pass	square metre pass
m <sup>3</sup>	cubic metre
m <sup>3</sup> -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
sum	Lump sum
t	tonne (1000kg)

### 4.2. General assumptions

- 4.2.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 4.2.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.
- 4.2.3. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.
- 4.2.4. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.
- 4.2.5. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Works Information.

### 4.3. Departures from the *method of measurement*

4.3.1.

#### **4.4. Amplification of or assumptions about measurement items**

The following is provided to assist in the interpretation of descriptions given in the *method of measurement*. In the event of any ambiguity or inconsistency between the statements in the *method of measurement* and this section, the interpretation given in this section shall be used.

4.4.1.

## C2.2 the *bill of quantities*

Use this page as a summary page or as a cover page to the *bill of quantities*.

Item No.	Activity description	Price
	<p>In general, the work covered by this Contract includes: Turnkey solutions, Project scope of work is for the air conditioning currently installed in the Sunnilaws Operations Centre Server Room, in Beacon Bay, East London, and the scope of works is as follows:</p> <p>Provide reviews, finalise designs and construction for the replacement of Airconditioning Units at Sunilaws Operation Data Centre</p> <p>Procurement of four (4x) new 50kW Down flow Air Conditioner units,</p> <p>Pre-installation assessment of the copper piping. The existing copper piping may be reused, if the existing pipe is in good condition and matches the class and diameter required for the new installation. Replacement costs will need to be accounted for upfront, with the possibility of a monetary saving later.</p>	
1.1	Design	
1.2	Material supply for installation and maintenance	
1.3	Works installation	
1.4	Skills transfer to Eskom internal staff	
	<b>Total</b>	

## PART 3: SCOPE OF WORK

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C3.2	<i>Contractor's Works Information</i>	[01]
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## C3.1: EMPLOYER’S WORKS INFORMATION

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When the document is complete, insert a ‘Table of Contents’. To do this go to: Insert, → Reference, → Index and tables → Table of Contents. Three levels and the title (but not the subtitle) may be shown if the formats used in this template are retained.

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# 1 Description of the works

## 1.1 Executive overview

The need originates from Eskom Real Estate. The Eskom Sunilaws Server Room Aircon unit has giving problems within the building because it has reached its lifetime circle and it is not repairable due to unavailability of parts/spares. Moreover, this system was designed for open space layout not the closed system. The installation comprises the supply, delivery, installation, testing and commissioning of the air conditioning systems serving the East London Sunnilaws Data Operations Centre Server Room.

## 1.2 Employer's objectives and purpose of the works

Project scope of work is for the air conditioning currently installed in the Sunnilaws Operations Centre Server Room, in Beacon Bay, East London, and the scope of works is as follows:

- Provide reviews, finalise designs and construction for the replacement of Airconditioning Units at Sunilaws Operation Data Centre.
- Procurement of four (4x) new 50kW Down flow Air Conditioner units,
- Pre-installation assessment of the copper piping. The existing copper piping may be reused, if the existing pipe is in good condition and matches the class and diameter required for the new installation. Replacement costs will need to be accounted for upfront, with the possibility of a monetary saving later.
- Decommissioning Unit 2, while keeping units 1, 3 and 4 still operational, this will entail:
  - Removal of unit 2,
  - Removal of the copper refrigerant piping to the ablutions,
  - Removal of the existing heat exchanger, located above the ablutions,
- Installation of new unit, including:
  - New copper refrigerant piping to the ablutions,
  - Installation of new heat exchanger, located above the ablutions,
  - Commissioning of new unit and bringing online,
- Decommissioning Unit 3 and above associated steps,
- Decommissioning Unit 4 and above associated steps,
- Decommissioning Unit 1 and above associated steps,

Decommissioning of the existing units and their subsequent replacement, must be done sequentially in a remove and replace methodology, until all four units are installed and operational, to ensure seamless overlap, whereby the supply of cooling to the servers is uninterrupted.

## 1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
PM	Project Manager
CPE	Contract Project Engineer
CPM	Contract Project Manager

EMP	Environmental Management Program
PE	Project Engineer
PES	Project Engineer Specialist

## 2 Management and start up.

### 2.1 Management meetings

Regular meetings of a general and Legal nature shall be convened and chaired by the *Project Manager/Project co-ordinator or representative so delegated by Eskom Holdings SOC Limited. As part of the contractor's responsibility with an objective of minimizing the adverse effects of risks and surprises for both Parties, meetings shall be held at reasonable times as defined OHS act as follows:*

Title and purpose	Approximate time & interval	Location	Attendance by
Kick-Off Meetings			
Risk register and compensation events			
Progress and Technical Feedback Meeting	Weekly on Monday at 10 am	Sunnilaws Operations Centre, Beacon Bay	<i>Employer, Principal Agent, Mechanical Engineers, and HVAC Contractor</i>
Technical Site Meetings			
Health, Safety & Environmental Meetings			
Community based Meetings			

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *works*. Records of these meetings shall be submitted to the *Project 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.

### 2.2 Documentation control

All contractual Documentation must have relevant contract number and Purchase Order Number as reference as per Eskom Holdings SOC Limited Standards (List). Contractual communications will be in the form of properly compiled letters, letters attached to emails, emails, NEC template and urgent contractor meetings can be in the form of sms and as outlined on core clause 13 of the NEC3 ECC.

The use of sms's, emails does not override the use of applicable and relevant NEC3 ECC standard templates, forms and Eskom Holdings SOC Limited procedures.

**Note: It is the contractor responsibility to acquire and familiarize themselves with the NEC3 ECC.**

### 2.3 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements contained in Annexure 32-136 to this Works Information.

The contractor SHE files should be submitted and approved within 5 working days. The contractor is given one opportunity to correct within one day of failing which Eskom reserves the right not to issue the task order.

The Contractors Project SHEQ File is to be updated on a continuous basis. The Contractor is to ensure that all relevant documentation and authorisations are contained in the file pertaining to the project. Upon completion of the project, the Contractor is to convert all documentation contained in the SHEQ file into electronic format and save it as a PDF File. The file name should contain the name of the Contractor and the project. The file should then be saved onto a disk or removal storage device and handed over to the *Project Manager* upon completion of the project.

## 2.4 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints contained in the FDP and attached in Annexure B to this Works Information and consist of the following documentation to comply with:

- Environmental Legal Compliance for Eskom Distribution Projects with DESD's signed
- DESD Process applicable to a particular Eskom OU
- 240-71555318 Distribution generic EMP for operations Maintenance Standard
- DPC\_34-926 doc incorporating Water use issues draft 1(3) (Repaired) draft 0A

### Notes and Requirements for Environmental Compliance

- Contractors must be aware of environmental specifications in contracts and comply with them;
- Contractors building new lines and substations, and performing maintenance on existing infrastructure to attend environmental law course;
- Legal contraventions involving contractors to be communicated to all other contractors to avoid recurrence;
- Contractors to follow and comply with EMP's provided;
- Contractors building new assets or maintaining existing assets to always have a copy of the EMP, EA and any other permits (tree, water, heritage) available on site where such documents exist;
- Contractors assisting with self-build projects for third parties to attend the DESD course;
- Contractors assisting with self-build projects for third parties to ensure that the relevant documentation including the DESD is handed over to and approved by the Land Development section. Such contractors take
- liability for the completion of the DESD;
- All environmental incidents to be brought under the attention of the Eskom Holdings SOC Limited representative within 24 hours;
- Contractors must demand/request a copy of the DESD for their projects);
- Read and understand the DESD and EMP;
- (K) Ensure all relevant staff are aware of the conditions of the DESD and EMP;
- Review DESD and EMP before tendering;
- Authorizations are only issued for specific projects after submissions of the Basic Assessment.

## 2.5 Quality assurance requirements

HVAC contractor's activities are to comply with the following relevant regulations:

- SANS,
- BSS,
- ASHRAE
- National Building Regulations and Building Standards Act No. 103 of 1977, as amended in 1984 and all amendments thereafter,
- SABS Code of Practice for the Wiring of Premises No. 0142 of 1981, as amended
- The Machinery and Occupational Health and Safety Act No. 85 of 1993.

HVAC contractor's activities are to comply with generally accepted industry standards that apply to project quality and control, when not otherwise specified by technical specifications, and or approved drawings, these include but not limited to:

- ASME A13.1 Identification of Piping Systems,
- ASME B31.3 Process Piping (Field welding joints)
- AWS B2.2/B2.2M Brazing procedure and performance qualification,
- ASME B31.5 Refrigeration piping and heat transfer components,

HVAC Contractor is to:

- Identify and ensure all materials and equipment affecting quality are identified and controlled,
- Specified processes are adhered to and met,
- Ensure all materials used are SANS/Industry approved, traceable and identifiable,
- Ensure any and all measuring devices are correct and calibrated for testing and measurement,
- Ensure the level of equipment and material specification is met,
- Coordinate on-site technical meetings are held with contractors' staff and where necessary the principal agent and mechanical engineer,
- Conduct preparatory site inspections are conducted by HVAC site agent and team leader,
- Conduct weekly planning meetings,
- Control material and access to material on site,
- Submit weekly progress and quality report,

## 2.6 Programming constraints

The contractor shall submit his construction program in terms of the conditions of contract. This program shall be submitted according to Part one – Data provided by the *Employer* (Time).

Every activity on the programme will be clearly linked to a **labour** resources and **equipment** required to perform the specific activity.

**Weather delays** based on the rainfall data supplied under Part 2 (C1.2 Annexure A), must be included in the programme. Only weather delays over and above the specified number of rain days will qualify for evaluation as delays.

**Completion and hand-over dates** for formal inspection by the site supervisor must be indicated.

**Project expenditure (cash flow projection)** on a monthly basis for the entire duration of the contract must be indicated.

The Contract Program will be on display in the *Contractors Site Offices* and will be updated weekly.

In addition to the maintaining of this programme, the Contractor will report progress to the Project Manager on a weekly basis.

Should any deviations to the program be found, the *Contractor* shall submit a revised program to the *Project Manager* within one week.

The *Project Manager* retains the right to alter the Accepted Program should circumstances on *site* necessitate such a change.

The following Statutory non-working days are included within the contract period:

- All Public Holidays for the duration of the contract.
- The programme must clearly indicate the working days for the entire construction period or alternatively all the non-working days within the construction period.

## 2.7 Contractor's management, supervision and key people

The *Contractor* shall also provide a detailed organization chart showing the personnel to be employed for the *works*, along with Training certificates of all key personnel. Contractors to submit proof to Eskom that their Contracts manager or delegated employee representative has NEC ECC training. A full definition of ONE

team shall form part of the organization chart per project and identity number shall form part of this document.

## 2.8 Invoicing and payment

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

The *Contractor* shall address the tax invoice to Eskom Holdings SOC Ltd and include on each invoice the following information:

- Name and address of the *Contractor* and the *Project 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)

Financial records are to be kept by the Contractor on any additional items not included in the original Scope of Works/Activity List.

An **EPWP (Expanded Public Works Programme)** report must accompany each invoice as part of the approval and acceptance process of the monthly assessment and reporting stage.

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

## 2.9 Insurance provided by the *Employer*

The insurance provided by the *Employer*, is addressed under the contract data by the *Employer* under Annexure B "Insurance provided by the Employer". In this case Format Dx is applicable for this contract.

## 2.10 Contract change management

For any compensation event relating to changes to scope and additions to scope which were not part of the original scope, such changes shall be treated under compensation event core clause section 6 of the NEC3. The contractor shall notify the Project Manager of any changes to Site Personnel within 5 (Five) working day

## 2.11 Training workshops and technology transfer

Technological requirements and standards that are applicable at this stage of contract establishment may change and contractors are required to comply with latest standards. In the event that this results in a cost implication, this will be dealt with according to section 6 of the NEC/ECC Contract.

Contractor shall comply with all SD&L requirements relating to training, workshops and any technology transfer obligations.

### 3 Engineering and the *Contractor's* design

The contractor shall execute the works as per the Employer's Final Design Package (FDP)/ Detailed Design Package (DDP). (PCR to advise)

#### 3.1 *Employer's* design

The Employer will supply Contractor with a final design document compiled by the Project Engineer detailing the scope of work to be executed on the project as well as Project Drawings.

#### 3.2 Equipment required to be included in the *works*

The Contractor shall propose at the start of the project and Project Manager/ Engineer to approve.

#### 3.3 As-built drawings, operating manuals and maintenance schedules

HVAC contractor will be responsible for the supply of operating manuals and maintenance schedules, which shall include:

- HVAC Contractor information and contact numbers,
- Installation and completion certifications,
- Description of completed scope of works,
- Equipment Specifications,
- Confirmation of warranties,
- Spare parts lists,
- OEM equipment manuals, booklets, drawings and schematics,
- Operation of equipment,
- Maintenance schedules,
- Breakdown procedures,
- Record drawings,

Should there be conflict between the specification and drawings, then documentation shall be considered in the order of priority set out below:

- Tender Correspondence/Minutes/Site Instructions
- Approved Sample Line
- Works Information & Final Design Package
- Drawings
- Power Delivery Engineering Standard
- Should the Contractor note any inconsistency between the specification and drawings he shall notify the Project Manager and obtain clarification or instructions prior to collecting and installing materials and plant for the work.

## 4 Procurement

### 4.1 People

#### 4.1.1 Minimum requirements of people employed on the Site

HVAC Contractor shall provide:

- Certified or deemed to satisfy project manager,
- South African Refrigeration & Air Conditioning Contractors Association certified technician(s) or equivalent SAQCC qualification,

#### 4.1.2 BBBEE and preferencing scheme

The “PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2011” is applicable as described under the “Invitation to Tender” section.

### 4.2 Subcontracting

#### 4.2.1 Preferred subcontractors

Any appointment of a subcontractor by the *Contractor* is to be approved by the *Project Manager*. The *Sub Contractor* must be CIDB registered. A maximum of 25% of the Works may be sub-contracted subject to Project Managers approval.

#### 4.2.2 Subcontract documentation, and assessment of subcontract tenders

The use of the NEC3 - ECSC is required.

#### 4.2.3 Limitations on subcontracting

A maximum of 25% (unless otherwise agreed) of the Works may be sub-contracted subject to *Project Managers* approval.

#### 4.2.4 Attendance on subcontractors

The *Contractor* is responsible for performing on the provided scope of work as if he had not subcontracted. The appointed *Contractor* will also be liable to the *Subcontractors'* employees, as he legally and liable to this contract.

### 4.3 Plant and Materials

#### 4.3.1 Quality

The *Contractor* shall control his activities and processes in accordance with Eskom's Quality Requirements for Procurement of Assets, Goods & Services, QM-58 and ISO-9001.

All materials shall be new and of the best quality and shall conform to the requirements of the Eskom Buyers Guide (Eskom Distribution Standard Part 9). With regards to the material supply chain, the approved materials manufacturer and marking requirements shall be set out on a schedule and approved before construction.

#### 4.3.2 Plant & Materials provided “free issue” by the *Employer*

Container will be supplied by Eskom, for the storage of tools and equipment, HVAC contractor is to secure the container, all other Plant and Materials are to be provided by the HVAC contractor.

#### 4.3.3 *Contractor's* procurement of Plant and Materials

Tenderers are to note that under no circumstances may materials be installed other than offered in the above materials schedule, which has been approved and accepted by the Contractor.

Should the successful tenderer wish to supply materials other than those originally offered, prior written approval must be obtained from the Contractor before any orders are placed.

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities.

The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

The *Contractor* will be required to arrange a material sample inspection on site according to the requirements supplied by the PE. At this inspection materials will be recorded and approved per item by the PE, the Eskom PES and the T&Q Department.

#### 4.3.4 Spares and consumables

As per the bills of quantities, **Bill 5**.

#### 4.3.5 Title to site materials

On completion of the site establishment, materials supplied by the contractor must be delivered to site, recorded in the material management system, and neatly and safely stacked and stored by the contractor. Once the material components are inspected and approved, and accepted by the Project Manager and *Employer* Design representatives, the material value can be certified for payment by the Employer. The Contractor claims for the material value and supply invoices as proof of the Contractors title to the materials in support of the claim.

### 4.4 Tests and inspections before delivery

Tests and inspections are to be carried out by HVAC Contractor, in the presence of the mechanical engineer. The following test will be conducted, but not limited to:

- Unit air flow rate,
- Flow rate through floor grills,
- Determination of proper refrigerant charge, target superheat requirements,
- Target Evaporator Exit Temperature and across the coil of the evaporator,

### 4.5 Marking Plant and Materials outside the Working Areas

Where applicable. Subject to approval of the Clerk of Works.

### 4.6 *Contractor's* Equipment (including temporary works).

The *Contractor* is to provide the necessary equipment to complete the *Works* safely and by the *completion date*. (Refer to item 5.9)

## 5 Construction

### 5.1 Temporary works, Site services & construction constraints

#### 5.1.1 *Employer's* Site entry and security control, permits, and Site regulations

The *Employer* is to provide a 24 hour, 7 days a week, access and perimeter control unarmed security service from a reputable security firm. The security firm shall be registered with PSIRA and shall have a Grade D classification. At least one guard during the day and 2 x guards during night time is required for the duration of this contract. The *Contractor* must provide a suitable guard house for the security guards and to be priced as under item 1.2.5 in the Bill of Quantities.

#### Site Establishment Costs

The *Contractor* shall take note that the total cost involved in establishing site services, facilities, and temporary works shall be incorporated in the Fixed and Time Related Preliminary & General costs part of the Bill of Quantity.

The Contractor should adhere to the Life Saving Rules at all times.

Due to the importance to safe life's and apparatus of Eskom it is recommended that if a contractor abuse any Life Saving Rules, all work allocated to the contractor will immediately put on hold until final outcome with investigation. Safety is the combined responsibility of the team and therefore team leader or team **will** be punished together. There are five cardinal rules that may not be broken by the Team Leader and his/her team.

#### 5.1.2 Restrictions to access on Site, roads, walkways and barricades

Where possible, access along the power line must be established by utilizing existing tracks. Access roads shall only be constructed and maintained where necessary at watercourses, steep slopes or where boulders and rocks prohibit vehicular traffic. No access roads shall be constructed in and/or outside the power line servitude without the written instructions from the *Project Manager*.

#### 5.1.3 People restrictions on Site; hours of work, conduct and records

Restrictions and hours of work will apply on Site. It is very important that the *Contractor* keeps records of his people on Site, including those of his Subcontractors which the *Project Manager* or *Supervisor* have access to at any time. These records will be needed when assessing compensation events.

#### 5.1.4 Health and safety facilities on Site

The *Contractor* shall at all times adhere to the **Safety Health & Environmental Specification** attached in the Annexure of the contract document.

A Health & Safety Plan as well as the Health & Safety File as specified in the **Safety Health & Environmental Specification** must be kept on site and updated on a regular basis. Daily safety tailgate talks with task risk analysis shall be held and recorded to discuss the safety aspects and risks involved in the day's work to ensure safe operation throughout the contract period.

Health & Safety meetings shall be held at least once a month and records of minutes kept in the H&S file on site. The following items on the agenda to be discussed as a minimum requirement:

- Eskom Monthly Safety Theme – inform staff.
- Eskom Incident Case Studies and Recommendations
- OHS Act appointments – Updates, Validity, Expiry dates etc.

- PPE – issued and required.
- Safe Work procedures (Method Statements) – updates/changes
- Equipment – Inspection records updated
- Training requirements
- Staff Medicals
- Environmental issues

The *Contractor* shall not **be allowed to work on any “live” structures. All live structures are to be identified beforehand and shown to all the contractor’s staff – notification to be official recorded and kept in the SHE file on site.**

The *Contractor* shall not be **allowed to leave any excavation open** without supervision. If foundations cannot be planted on the same day of the excavation, holes are to be closed over the night period or full time security guard to be arranged.

Machinery that can encroach on the safe working clearances with regard to live lines and equipment, are not to be operated within nine metres of live reticulation lines, without the direct supervision of a qualified supervisor under the *Employer’s* HV Regulations and the OHS Act.

### **Precautions against Damage**

The *Contractor* shall take precautions for the protection of life and property on, or about, or in connection with the contract. The *Contractor* shall be held liable for any damage arising from negligence on the part of himself and his employees. The *Contractor* will ensure that excavations are done carefully as per the construction drawings. The damages occurring during any required excavations will be for the contractor’s risk, and must therefore be repaired by the contractor.

Protection of the environment should at all times be adhered to.

### **Customer & Client liaison**

The contractor will ensure that all required outages be communicated to the *Project Manager* and that the necessary outage requests are tabled for approval at the Monthly Outage meetings of the applicable area.

#### **5.1.5 Environmental controls, fauna & flora, dealing with objects of historical interest**

The *Contractor* shall at all times adhere to the **Environmental Management Programme (EMP) and all referenced documents referred to in Section 2.4.**

No fences, gates or locks may be damaged to obtain access onto a line route. Arrangements must be made in advance to obtain permission for access.

Use of private roads must be arranged in advance. Any damage to private roads must be repaired at the contractor’s expense and to the satisfaction of the landowner.

No fires may be lit on private property. If fires are lit on Eskom’s property or in the construction camp, provision must be made that no accidental fires are started. No firewood may be collected in the veld.

No trees may be cut or removed without prior permission from the landowner. Permits shall be obtained for protected trees (protected trees shall be dealt with in special conditions)

#### **5.1.6 Title to materials from demolition and excavation**

The *Contractor* has no such title. All equipment and materials dismantled to be stored inside the *Contractor’s* site camp. Disposal of this equipment and materials to be liaise with the Officer Investment Recovery – Mr Roelof Venter at 043-7032290.

### 5.1.7 Cooperating with and obtaining acceptance of Others

The *Contractor* is responsible to ensure that the landowners and/or local authority have been informed before any work is carried out on site. It is also the *Contractor's* responsibility to maintain a good relationship with the landowners and to ensure that the following procedures are in place:

- 1) Access arrangements to the property
- 2) Allowable construction times on the property to be agreed and documented

### 5.1.8 Publicity and progress photographs

Photographs can be captured to provide evidence with supporting documentation where applicable. These photographs shall have date and time stamps to be eligible for use.

### 5.1.9 *Contractor's* Equipment

The *Contractor* is to provide equipment necessary to complete the *Works* safely and by the *completion date*. An equipment asset register are to be kept on Site records including whether it is owned or hired. Include any constraints about scaffolding, rigs, heavy lifts and cranes, including removal from the Working Areas.

On completion of the contract, the contractor removes the site camp and offices, and the area will be left in its original state to the satisfaction of the employer's representative and the Environmental Officer.

### 5.1.10 Equipment provided by the *Employer*

None

### 5.1.11 Site services and facilities

The *Contractor* shall provide on *Site* a minimum of one well illuminated, insulated and ventilated *site* office for utilisation by the *Employer / Project Manager* or their representatives. This *site* office shall have as a minimum the following:

- A Suitable water supply and sanitary facilities (chemical toilet).
- First aid facilities
- Telecommunication facilities (down loading of electronic communications and printing of it)
- Access to Eskom website to download latest information.
- 1 x Table, 10 x chairs required and a suitable office required to hold a site meeting.
- Site diary.

### 5.1.12 Facilities provided by the *Contractor*

#### Site Establishment

The contractor provides a secure and accessible area for the Site Camp, which includes secure storage facilities and areas, etc. The location of the site camp shall be determined in consultation with the Project Manager, local communities, and the relevant authorities.

The *Contractor* shall provide a secure fenced-in yard for the whole of the contract period. Storage facilities must be of such a nature that all the *Contractors* materials, including free issue materials (Employers materials) are safe from theft, fire hazards and vandalism. Fire breaks around the storage area, and fire-fighting equipment must be in accordance with the OHS Act, and of sufficient capacity to ensure the security of stored materials.

### 5.1.13 Existing premises, inspection of adjoining properties and checking work of others

*Contractor* together with *Project Manager* to liaise Eskom Real Estate representative for the inspection of buildings and properties before commencing with the *works* that have the potential to damage surrounding buildings and property.

*Contractor* is required to inspect the work of others to which he is required to connect and if so by when to avoid delays to his work.

### 5.1.14 Survey control and setting out of the *works*

Not applicable

### 5.1.15 Excavations and associated water control

Not applicable

### 5.1.16 Underground services, other existing services, cable and pipe trenches and covers

The *Contractor* shall be held liable for any damages caused during construction to existing services such as, underground water pipes, electrical cables, telecommunication cables, overhead lines, storm water pipes and existing roads.

Known services:

- Four (4x) existing Hiross M50UA downdraft air conditioning units,
- Eight (8x) external air-cooled condensers,
- Existing gas and liquid refrigerant copper pipes,
- Unistrut supports, on a box gutter between buildings,
- Existing power cables, breakers etc.
- Existing copper condensate pipes,
- Existing smoke detection system,

It is the responsibility of the *Contractor* to contact the landowner and/or local authority to determine the position of such services to prevent any damages.

### 5.1.17 Control of noise, dust, water and waste

The *Contractor* shall within reason try and keep noise levels, dust and wastage to a minimum.

### 5.1.18 Sequences of construction or installation

Phased decommission and new installation, described in detailed specification.

### 5.1.19 Giving notice of work to be covered up

The Project Manager/Clerk of Works shall always be notified.

### 5.1.20 Hook ups to existing works

- Existing power cables, breakers etc.
- Existing copper condensate pipes,
- Existing smoke detection system,

## 5.2 Completion, testing, commissioning and correction of Defects

### 5.2.1 Work to be done by the Completion Date

Upon practical completion of this Sub Contract the Sub Contractor shall allow for providing the Engineer with a complete commissioning schedule indicating the actual test results and measurement of all the design or specified data/variables.

Tests to demonstrate the capacity specified and general operating characteristics of all plant shall be made under the direction of the Engineer at any time before the practical completion inspection under conditions imposed by him.

The Contractor shall be responsible for supplying test equipment which is to the Engineer's satisfaction; any costs incurred by the Sub Contractor in supplying adequate instrumentation will be entirely for his account. Test instruments shall be tested for accuracy by an approved laboratory or by the manufacturer and certificates showing the degree of accuracy shall be furnished to the Engineer if required.

On satisfactory completion of all tests and after the completed installation has been inspected and passed as satisfactory by the Engineer, the installation will be accepted as being practically complete and be handed over to the Employer.

The Sub-Contractor shall be responsible for supplying an itemised set of test results for the Engineer's approval; the Engineer may at his discretion request the Sub-Contractor to re run at the Sub Contractor's expense any test which he has not witnessed or with which he feels not satisfied.

The following shall be recorded/measured for each separate installation as specified and installed under this contract:

Performance Testing Procedures including Test Report

- Date and time of test;
- Ambient temperature conditions (measured in the shade):
- Dry bulb temperature
- Wet bulb temperature
- % RH
- Testing and commissioning of all air-conditioning and ventilation system equipment in conjunction with the Fire Detection and Alarm Evacuation Systems Sub-contractor.
- This Contract also includes all electrical work for the installations, but excludes the power supply to the isolator provided by others.

### 5.2.2 Use of the *works* before Completion has been certified

Not applicable

### 5.2.3 Materials facilities and samples for tests and inspections

Not applicable

### 5.2.4 Commissioning

Contractor shall commission the installation in terms of the following codes:

- SANS 0173 Code of Practice for the installation,
- testing and balancing of air conditioning ductwork.
- Refrigeration system CIBS Commissioning Code: Series R: refrigeration Systems.
- Control systems: CIBS Commissioning Code: Series C: Automatic Controls.

- Water distribution systems: Commissioning Code: Series W: Water Distribution Systems.

Commissioning / Test sheet should prescribe to the following:

- Outdoor ambient temperature at condenser,
- Return-side air temperature inside duct near evaporator, during cooling mode
- Liquid line pressure,
- Liquid line temperature,
- Suction line pressure,
- Suction line temperature,
- Condenser saturation temperature,
- Sub cooling value,
- OEM sub cooling goal,
- Sub cooling deviation,
- Evaporator saturation temperature,
- Superheat value,
- OEM superheat goal,
- Superheat deviation,
- OEM test procedure as defined by manufacturer,
- Measured HVAC fan airflow,

#### 5.2.5 Start-up procedures required to put the *works* into operation

*Contractor* to Provide testing and commissioning sheet per unit.

#### 5.2.6 Take over procedures

The *Contractor* to Provide:

- Testing and commissioning sheet per unit.
- Visual inspection and demonstration.

#### 5.2.7 Access given by the *Employer* for correction of Defects

The *Project Manager* arranges access for the *Contractor* to use a part of the *works*, which has been taken over if needed to correct any Defects. After the *works* have been put into operation, the *Employer* may require the *Contractor* to undertake certain procedures before such access can be granted. The *Contractor* will be responsible for ensuring that the area to be worked in is barricaded before correcting any defects.

#### 5.2.8 Performance tests after Completion

As per 5.2.4 Commissioning.

#### 5.2.9 Training and technology transfer

Basic operation training and fault identification.

#### 5.2.10 Operational maintenance after Completion

12-month service contract, including 3 minor services and annual service before 12-month period.

## **6 Plant and Materials standards and workmanship**

### **6.1 Electrical & mechanical engineering works**

See attached annexures:

- Standard Specification,
- Detailed Specification,
- Electrical Specification,



## C3.2 *CONTRACTORS* WORKS INFORMATION

This section of the Works Information will always be contract specific depending on the nature of the *works*. It is most likely to be required for design and construct contracts where the tendering contractor will have proposed specifications and schedules for items of Plant and Materials and workmanship, which once accepted by the *Employer* prior to award of contract now become obligations of the *Contractor* per core clause 20.1.

Typical sub headings could be

- a) *Contractor's* design
- b) Plant and Materials specifications and schedules
- c) Other

This section could also be compiled as a separate file.

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## PART 4: SITE INFORMATION

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
C4	This cover page	[1]
	Site Information	[1]
	Total number of pages	[2]

## PART 4: SITE INFORMATION

Core clause 11.2(16) states

“Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in.”

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

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### 1. General description

SUNILAWS OPERATIONS DATA CENTRE

### 2. Existing buildings, structures, and plant & machinery on the Site

The existing infrastructure is indicated on the drawings provided. Though it is the Contractor's responsibility, to familiarise himself with all existing infrastructure in and around the working place.

### 3. Subsoil information

Not applicable

### 4. Hidden services

In the event of a discrepancy between physical condition and the information on a drawing, the *Contractor* shall notify the *Project Manager* immediately if the physical condition found on *site* is such that the deviation from the drawing requires a change in the design of the *works*.

## **PART 5: ANNEXURES**

### **C5 Annexures**

## GENERAL SPECIFICATIONS

NO	REFERENCE NUMBER	R E V.	TITLE	TYPE *SPEC/PF	ATTACHED YES/NO
A1	PFMA 1 of 1999		Public Finance Management Act		No
			<b><u>Integrated Risk Management - Safety</u></b>		
A2	OHS Act. 85 of 1993		Occupational Health and Safety Act	SPEC	No
A3	COID 130 of 1993		Compensation Health and Safety Act		
A4	SCSAMAAE4	0	Safety Risk Management Process Manual	Manual	No
A5	SCSPVABM9	0	Co-Ordination of safety on capital projects	Procedure	No
A6	SCSASAAW8	4	Standards applicable for Contractors working in close proximity to live apparatus	Standard	No
A7	32-136	0	Contractor Health and Safety Requirements	SPEC	YES
A8	SCSPVACK0	0	Identifying, analyzing, documenting and observing dangerous/hazardous tasks.	Procedure	No
A9	SCSPVACU1	1	Pres-Task Planning and Feedback process	Procedure	No
A10	SCSPVABP6	1	Procedure for refusal to work on the grounds of health, safety and environmental concerns.	Procedure	No
A11	34-350	0	Reporting, recording, investigating, costing and follow-up of incident/accidents.	Procedure	No
A12	34-332	0	First Aid Standard	Standard	No
A13	ESKPVAEY6	0	Operating Regulations for High Voltage Systems	Procedure	No
A14	34-163	1	Portfolio of evidence for Authorisation	Guide	No
A15	NWS 1494		Fire Prevention and Protection of Contractor's Premises on New Work Sites	SPEC	No
			<b><u>Operational</u></b>		
A16	ESKARAAG4	6	Operating Regulations for High Voltage Systems	Procedure	No
A17	SCSPVABN2	0	Training, Testing and Authorization of persons for the operating and maintenance of the Power System	SPEC	No
A18	SCSAMAAE5	1	The training logbooks for Authorization of persons working on high voltage systems.	SPEC	No
A19	SCSAAAR0		GUIDE FOR THE STORAGE, TRANSPORT AND HANDLING OF COMPOSITE INSULATORS	Guide	No
A20	ESKASAAU7	0	Quality Requirements for the procurement of Assets, Goods and Services.	Standard	No
A21	SCSAGAAW2	0	Building line restrictions, servitudes widths, line separations and clearances from power lines	Guide	No
A22	DISPVABY3	0	Procedure for handling Auditing and stacking of new wooden poles	Procedure	No.
A23	DISPVAB17	1	Procedure for manual handling of rural line poles.	Standard	No
A24	ESKASABG3	1	Standards for bush clearance and maintenance within overhead powerline servitudes	Standard	No
A25	SCSSCAAY5	2	Specifications for phase conductor for distribution lines (See 4.6 Conductor markings)	SPEC	No
A26	DISADABQ9		Access to farms	Guide	No.
			<b><u>Contractor Site Requirements</u></b>		
A27	STR103/2006 10 TI-012		Transporting person on back of vehicles Prohibition of transportation of employees in crew cabs mounted on the back of trucks	Technical Instr.	No
A28	Work Instruction		Expanded Public Works Report – Divisional Capital Programme & Manhour Report		No
A29			Eskom Distribution Standard including all Technical Bulletins issued till Tender Issue date	SPEC	No
A30			Electrical Clearances and Safe Working Clearances	SPEC	No
A31			Tax Declaration and Tax Clearance	SPEC	No
A32			Section 28 of the National Environmental Management Act 10 of 1998	SPEC	No

			<b>Project Specific Documentation:</b>		
<b>A33</b>		<b>0</b>	<b>Final Design Package &amp; drawings – will be provided electronically at tender clarification meeting</b>	<b>FDP</b>	<b>Yes</b>
<b>A34</b>		<b>0</b>	<b>Environmental Documents:</b> <ul style="list-style-type: none"> <li>• <b>ENVIRONMENTAL MANAGEMENT PLAN</b></li> </ul>	<b>SPEC</b>	<b>Yes</b>
<b>A35</b>		<b>0</b>	<b>SHE SPECIFICATION FOR SUBSTATION PROJECTS</b>	<b>SPEC</b>	<b>Yes</b>

Eskom Holdings Limited's Standard and Specifications are available at [www.eskom.co.za](http://www.eskom.co.za) and all Procurement offices.