NEC3 Professional Services Contract (PSC3)

Contract between **Eskom Holdings SOC Ltd**
(Reg No. 2002/015527/30)

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

for **Design of Training Facility, Security Control Room, and Induction Facility at Kusile Power Station for the Period of 9 Months**

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

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

PART C1: AGREEMENTS & CONTRACT DATA

Document reference	Title	No of pages
C1.1	**Form of Offer & Acceptance**	**[●]**
	[to be inserted from Returnable Documents at award stage]	
C1.2a	**Contract Data provided by the *Employer***	**[●]**
C1.2b	**Contract Data provided by the *Consultant***	**[●]**
	[to be inserted from Returnable Documents at award stage]	
C1.3	**Securities proforma**	**[●]**

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:

Design of Training Facility, Security Control Room, and Induction Facility at Kusile Power Station for the Period of 9 Months

The tenderer, identified in the Offer signature block, has

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

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

The offered total of the Prices exclusive of VAT is	**R**
Value Added Tax @ 14% is	**R**
The offered total of the Prices inclusive of VAT is	**R**
(in words)	

If Option E or G apply, for each offered total insert in brackets, "(Not Applicable – Cost reimbursable)"

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 *Consultant* 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 .....

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 Consultant 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: The Scope

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

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

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

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

Signature(s) .....

Name(s) .....

Capacity .....

for the Employer .....

(Insert name and address of organisation)

Name & signature of witness .....

Date .....

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

Schedule of Deviations

Note:

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

No.	Subject	Details
1		
2		
3		
4		
5		
6		
7		

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

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

	For the tenderer:	**For the Employer**
Signature	.....	.....
Name	.....	.....
Capacity	.....	.....
On behalf of	..... *(Insert name and address of organisation)*	..... *(Insert name and address of organisation)*
Name & signature of witness	.....	.....
Date	.....	.....

C1.2 PSC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option	
		A: Priced contract with activity schedule
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X2 Changes in the law
		X5: Sectional Completion
		X7: Delay damages
		X9: Transfer of rights
		X10 *Employer*'s *Agent*
		X11: Termination by the *Employer*
		X13: Performance bond
		X18: Limitation of liability
		Z: *Additional conditions of contract*
	of the NEC3 Professional Services Contract (April 2013)[1]	
10.1	The *Employer* is (Name):	**Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
	Tel No.	**[•]**
	Fax No.	**[•]**
11.2(9)	The *services* are	**Design of Training Facility, Security Control Room, and Induction Facility at Kusile Power Station**

[1] Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009 and www.ecs.co.za

11.2(10)	The following matters will be included in the Risk Register	**Risk Identification and assessment meeting to be held subsequent to contract award and risk register compiled and managed.**
11.2(11)	The Scope is in	**Part 3: Scope of Work**
12.2	The *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**1 week**
13.6	The *period for retention* is	**52 weeks following Completion or earlier termination.**

2 The Parties' main responsibilities

25.2	The *Employer* provides access to the following persons, places and things	**access to**		***access date***
		1	**Kusile Power Station**	**10 November 2025**

3 Time

31.2	The *starting date* is.	**03 November 2025**
11.2(3)	The *completion date* for the whole of the *services* is.	**31 July 2026**

11.2(6)	The *key date*s and the *condition*s to be met are:	***Condition* to be met**		***key date***
		1	**Training Facility -** Concept Designs submissions	**23 January 2026**
			Induction Facility- Concept Designs submissions	**30 January 2026**
			Security Control Room- Concept Designs submissions	**06 February 2026**
		2	**Training Facility -** Detailed Designs submissions	**31 March 2026**
			Induction Facility - Detailed Designs submissions	**30 April 2026**
			Security Control Room- Detailed Designs submissions	**29 May 2026**

		3	**Training Facility -** Final Detail Designs Reports submissions	**17 June 2026**
			Induction Facility - Final Detail Designs Reports submissions	**22 June 2026**
			Security Control Room- Final Detail Designs Reports submissions	**30 June 2026**
31.1	The *Consultant* is to submit a first programme for acceptance within	**2 weeks of the Contract Date.**		
32.2	The *Consultant* submits revised programmes at intervals no longer than	**2 weeks.**		
4	**Quality**			
40.2	The quality policy statement and quality plan are provided within	**2 weeks of the Contract Date.**		
42.2	The *defects date* is	**52 weeks after Completion of the whole of the *service*s.**		
5	**Payment**			
50.1	The *assessment interval* is	**between the 25th day of each successive month.**		
50.3	The *expenses* stated by the *Employer* are	**Item**	**Amount**	
		Not applicable	**Not applicable**	
51.1	The period within which payments are made is	**4 weeks.**		
51.2	The *currency of this contract* is the	**South African Rand**		

51.5	The *interest rate* is	**the publicly quoted prime rate of interest charged by Standard Bank of South Africa Limited at the time an amount payable in SA Rand was due,** **and** **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**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
7	**Rights to material**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
8	**Indemnity, insurance and liability**	**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.**
82.1	**The *Consultant*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than the excluded matters, is limited to**	**The total of the Prices**
9	**Termination**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
10	**Data for main Option clause**	
A	**Priced contract with activity schedule**	
21.3	The *Consultant* prepares forecasts of the total *expenses* at intervals of no longer than	**4 weeks.**
11	**Data for Option W1**	

W1.1	The *Adjudicator* is	**the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).**
	Address	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	e-mail	**[●]**
W1.2(3)	The *adjudicator nominating body* is:	**the Chairman of the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering. (See www.ice-sa.org.za).**
W1.4(2)	The *tribunal* is:	**arbitration**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	The place where arbitration is to be held is	**South Africa**
	The person or organisation who will choose an arbitrator • if the Parties cannot agree a choice or • if the *arbitration procedure* does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**

12 Data for secondary Option clauses

X2 Changes in the law

X2.1	The law of the project is	**The laws of the Republic of South Africa**

X5 Sectional Completion

X5.1 The *completion date* for each *section* of the *services* is:

section	**description**	***completion date***
1	**Training Facility Detailed Designs**	**30 April 2026**
2	**Induction Facility Detailed Designs**	**29 May 2026**
3	**Control Room Detailed Designs**	**30 June 2026**

X7 Delay damages

X7.1	Delay damages for late Completion of the whole of the *services* are	**The Delay Damages will be 0.5% of the cost of the section per day. The total Delay Damages for each section (dealt with individually) shall not exceed 10% of the contract price for that section.** **The total Delay Damages for all sections combined shall not exceed 10% of the total contract price.**
X9	**Transfer of rights**	**There is no reference to Contract Data in this Option and terms in italics used in this Option are identified elsewhere in this Contract Data.**
X10	**The *Employer's Agent***	
X10.1	The *Employer's Agent* is	
	Name:	**Refilwe Mosadi**
	Address	**Kusile Power Station**
	The authority of the *Employer's Agent* is	**Christopher Nani**
X11	**Termination by the *Employer***	**There is no reference to Contract Data in this Option and terms in italics used in this Option are identified elsewhere in this Contract Data.**
X13	**Performance bond**	
X13.1	The amount of the performance bond is	**10% of the contract value.**
X18	**Limitation of liability**	
X18.1	The *Consultant's* liability to the *Employer* for indirect or consequential loss is limited to:	**R0.00 (Zero Rand)**
X18.2	The *Consultant's* liability to the *Employer* for Defects that are not found until after the *defects date* is limited to:	**The total of the Prices.**
X18.3	The *end of liability date* is	**ten years after Completion of the whole of the *services*.**
Z	**The *Additional conditions of contract* are**	**Z1 to Z14 always apply.**

Z1 Cession delegation and assignment

Z1.1 The *Consultant* 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 *Consultant* 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 *Consultant* 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 *Employer* within two weeks of the Contract Date of the key person who has the authority to bind the *Consultant* on their behalf.

Z2.3 The *Consultant* 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 *Consultant* in writing.

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

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

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

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

Z3.4 Failure by the *Consultant* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in core clause 91. The payment on termination includes a deduction of the forecast of the additional cost to the *Employer* of completing the whole of the *service*s in addition to the amounts due in terms of core clause 92.1.

Z4 Confidentiality

Z4.1 The *Consultant* 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 *Consultant*, enters the public domain or to information which was already in the possession of the *Consultant* at the time of disclosure (evidenced by written records in existence at that time). Should the *Consultant* disclose information to Others in terms of clause 23.1, the *Consultant* ensures that the provisions of this clause are complied with by the recipient.

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

Z4.3 In the event that the *Consultant* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Consultant*, 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 *Consultant* 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 *Employer*'s project works or any portion thereof, in the course of Providing the Services and after Completion, requires the prior written consent of the *Employer*. All rights in and to all such images vests exclusively in the *Employer*.

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, 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 Provision of a Tax Invoice. Add to core clause 51

Z6.1 The *Consultant* (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.

Z7 Notifying compensation events

Z7.1 Delete from the last sentence in core clause 61.3, "unless the *Employer* should have notified the event to the *Consultant* but did not".

Z8 *Employer's* limitation of liability

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

Z9 Termination: Add to core clause 90.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

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

Z10 Delay damages: Addition to secondary Option X7 Delay damages (if applicable in this contract)

Z10.1 If the *Consultant'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 *Consultant's* obligation to Provide the Services.

Z10.2 If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in core clause 91. The payment on termination includes a deduction of the forecast of the additional cost to the *Employer* of completing the whole of the *service*s in addition to the amounts due in terms of core clause 92.1.

Z11 Ethics

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

Affected Party means, as the context requires, any party, irrespective of whether it is the *Consultant* or a third party, such party's employees, agents, or Subconsultants or Subconsultant'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 *Consultant*, or any member thereof in the case of a joint venture, or its employees, agents, or Subconsultants or the Subconsultant's

employees,

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

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

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

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

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

Z11.2 The *Employer* may terminate the *Consultant*'s obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Consultant* 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 *Consultant*'s obligation to Provide the Services for this reason.

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

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

Z12 Insurance

Z12.1 Replace core clause 81 with the following:

81.1 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.

81.2 The *Consultant* provides the insurances stated in the Insurance Table A from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	**Minimum amount of cover**	**For the period following Completion of the whole of the *services* or earlier termination**
Liability of the *Consultant* for claims made against him arising out of his failure to use the skill and care normally used by professionals providing services similar to the *services*		
Liability for death of or bodily injury to a person (not an employee of the *Consultant*) or loss of or damage to property resulting from an action or failure	**Loss of or damage to property:** The replacement cost where not covered by the	

to take action by the *Consultant*	*Employer*'s insurance The *Employer*'s policy deductible, as at Contract Date, where covered by the *Employer*'s insurance **Bodily injury to or death of a person:** The amount required by the applicable law.	
Liability for death of or bodily injury to employees of the *Consultant* arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law	

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

INSURANCE TABLE B

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

Z13 Nuclear Liability

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

Z13.2 The *Employer* is solely responsible for and indemnifies the *Consultant* or any other person against any and all liabilities which the *Consultant* 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 *Consultant* or any other person or the presence of the *Consultant* or that person or any property of the *Consultant* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

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

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

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

Z14 Asbestos

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

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

AL means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.

Ambient Air means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.

Compliance Monitoring means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

OEL means occupational exposure limit.

Parallel Measurements means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.

Safe Levels means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

Standard means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

SANAS means the South African National Accreditation System.

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

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

millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z14.2 Upon written request by the *Consultant*, 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 *Consultant* may perform Parallel Measurements and related control measures at the *Consultant*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

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

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

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

Z14.6 The *Consultant* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

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

C1.2 Contract Data

Part two - Data provided by the *Consultant*

[Instructions to the tendering consultant: (delete these notes in the final draft of a contract)

1. The tendering consultant is advised to read both the NEC3 Professional Services Contract, April 2013 and the relevant parts of its Guidance Notes (PSC3-GN)[1] 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 158 & 159 of the PSC3 April 2013 Guidance Notes.
2. The number of the clause in the PSC3 which requires the data is shown in the left hand column for each statement however other clauses may also use the same data.
3. Whenever a cell is shaded in the left hand column it denotes this data is optional in PSC3 and would be required in relation to the option selected. The *Employer* should already have made the selection and deleted the rows not required.

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

Clause	Statement	Data
10.1	The *Consultant* is (Name): Address Tel No. Fax No.	
22.1	The *key people* are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	
Only if required		**CV's (and further *key persons* data including CVs) are appended to Tender Schedule entitled .**
11.2(3)	The *completion date* for the whole of the *services* is	
11.2(10)	The following matters will be included in the Risk Register	

[1] Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009 or www.ecs.co.za

11.2(13)	The *staff rates* are:	**name/designation**	**rate**
	Either complete here or cross refer to a schedule in Part C2.2		

25.2	The *Employer* provides access to the following persons, places and things	**access to**		***access date***
		1		
		2		
		3		

31.1	The programme identified in the Contract Data is		
50.3	The *expenses* stated by the *Consultant* are	**item**	**amount**
A	**Priced contract with activity schedule**		
11.2(14)	The *activity schedule* is in		
11.2(18)	The tendered total of the Prices is	**R (in figures)**	
		(in words), excluding VAT	

PART 2: PRICING DATA

PSC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	**2**
C2.2	The *activity schedule*	**1**

C2.1 Pricing assumptions: Option A

1. How work is priced and assessed for payment

Option A is a lump sum form of contract where the work to be done is broken down into well defined activities each listed in the *activity schedule* and priced by the tendering consultant as a lump sum. (See clause 11.2(18)).

Only completed activities which are without Defects are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date. (See clause 11.2(15)).

The *activity schedule* may change after the Contract Date as a result of compensation events. (See clause 11.2(14)).

2. Function of the Activity Schedule

The Activity Schedule is only a pricing document. Clause 53.1 in Option A states: “Information in the Activity Schedule is not Scope”. Specifications and descriptions of the service or any constraints on how it is to be done are included in the Scope and per Clause 21.1, “The *Consultant* Provides the Services in accordance with the Scope” and therefore not in accordance with the Activity Schedule.

3. Link to the programme

Clause 31.4 states that “The *Consultant* provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance”. Ideally the tendering consultant will develop a high level programme first then resource each activity on the programme and thus arrive at the lump sum price for that activity both of which can be entered into the *activity schedule*.

4. Preparing the activity schedule

Generally it is the tendering consultant who prepares the *activity schedule* by breaking down the work described within the Scope into suitable activities which can be well defined, shown on a programme and priced as a lump sum.

The description of each activity must be sufficient to determine exactly what work is included within it and to know when it has been completed.

The *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the *Consultant* to include in his *activity schedule* and be priced accordingly.

It is assumed that in preparing his *activity schedule* the *Consultant:*

- Has taken account of the guidance given in the PSC3 Guidance Notes;
- Understands the function of the Activity Schedule and how work is priced and paid for;
- Is aware of the need to link the Activity Schedule to activities shown on each programme which he submits for acceptance by the *Employer*;
- Has listed and priced activities in the *activity schedule* which are inclusive of everything necessary and incidental to Providing the Service in accordance with the Scope, as it was at the Contract Date, as well as correct Defects except correcting a Defect for which the *Consultant* is not liable;
- Has priced work he decides not to show as a separate activity within the Prices of other listed activities in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.
- Understands there is no adjustment to the lump sum Activity Schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the *Consultant*

estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event.

However, the *Consultant* does not have to allow in his Prices for matters that may arise as a result of a compensation event.

5. Expenses

Expenses are not included in the *activity schedule* items and are assessed separately at each assessment date, unless an additional condition of contract (Z clause) is included which requires that expenses be included within activity Prices and not paid separately.

Expenses associated with employing a staff member in Providing the Services are listed separately either by the *Employer* in Contract Data provided by the *Employer* or by the *Consultant* in Contract Data provided by the *Consultant*. As only the *expenses* listed may be claimed by the *Consultant*, all other cost to the *Consultant* associated with Providing the Services must be included within the activity schedule prices or *staff rates*.

Rate adjustment for inflation of *expenses* is explained in the PSC3 Guidance Notes.

6. Staff rates

When a compensation event occurs changes to the affected Activity Schedule item or new priced items in the Activity Schedule are assessed as the actual Time Charge for work already done and the forecast Time Charge for work not yet done. (See clause 63.1 and 63.14 in Option A)

The Time Charge is the sum of the products of each of the *staff rates* multiplied by the total staff time appropriate to that rate properly spent on work in this contract. (Clause 11.2(13))

Tendering consultants are advised to consult the NEC3 Professional Services Contract Guidance Notes and Flow Charts before entering *staff rates* into Contract Data, or in C2.2 below.

This is because *staff rates* can be established in one of three ways:

- rates for named staff,
- rates for categories of staff or
- rates related to salaries paid to staff.

Rate adjustment for inflation, if necessary, can be based either on actual salary adjustments or by using Option X1: Price adjustment for inflation. See pages 13 and 14 in the PSC3 Guidance Notes.

C2.2 the *activity schedule*

Use this page as a cover page to the *Consultant's activity schedule* or include here in this format:

Item	Description	Unit	Quantity	Rate	Amount
	ITEM 1				
1	**TRAINING FACILITY**				
1.1	**Concept Designs**				
1.1.1	Site Investigations	Sum	1		
1.1.2	Topographical Survey	Sum	1		
1.1.3	Concept Design Reports	Sum	1		
1.1.4	Concept Drawings	Sum	1		
1.2	**Final Detail Designs**				
1.2.1	Final Detailed Design Reports	Sum	1		
1.2.2	Bill of Quantities	Sum	1		
1.2.3	Technical Specifications	Sum	1		
1.2.4	Final Detailed Design Reports	Sum	1		
1.2.5	Construction Drawings	Sum	1		
1.2.6	Design Calculations	Sum	1		
	ITEM 2				
2	**INDUCTION FACILITY**				
2.1	**Concept Designs**				
2.1.1	Site Investigations	Sum	1		
2.1.2	Topographical Survey	Sum	1		
2.1.3	Concept design reports	Sum	1		
2.1.4	Concept drawings	Sum	1		
2.2	**Final Detail Designs**				
2.2.1	Final Detailed Design Reports	Sum	1		
2.2.2	Bill of Quantities	Sum	1		
2.2.3	Technical Specifications	Sum	1		
2.2.4	Final Detailed Design Reports	Sum	1		
2.2.5	Construction Drawings	Sum	1		
2.2.6	Design Calculations	Sum	1		

	ITEM 3				
3	**SECURITY CONTROL ROOM**				
3.1	**Concept Designs**				
3.1.1	Site investigation	Sum	1		
3.1.2	Topographical Survey	Sum	1		
3.1.3	Concept design reports	Sum	1		
3.1.4	Concept drawings	Sum	1		
3.2	**Final Detail Designs**				
3.2.1	Final Detailed Design Reports	Sum	1		
3.2.2	Bill of Quantities	Sum	1		
3.2.3	Technical Specifications	Sum	1		
3.2.4	Final Detailed Design Reports	Sum	1		
3.2.5	Construction Drawings	Sum	1		
3.2.6	Design Calculations	Sum	1		
	Total				

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	This cover page	1
C3.1	*Employer*'s Scope	32
	Total number of pages	33

C3.1: EMPLOYER'S SCOPE

Contents

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Otherwise insert list of contents manually.

Table of Contents

1 Description of the *services*

Executive overview

Kusile Power Station currently requires additional building facilities. These facilities are the Kusile training centre, a security control room for security purposes as well as an induction facility. A suitably qualified *Consultant* is required to undertake the design of these building facilities. The *Consultant* shall assume professional design liability and accountability for all the designs that will be provided to the *Employer*.

Interpretation and terminology

Definitions

Definition	Explanation
Consultant	Service provider contracted to provide a specific service to Eskom, Kusile Power Station.
Controlled Disclosure	Controlled disclosure to external parties (either enforced by law, or discretionary).
Employer	Eskom, Eskom Kusile Power Station or representative
Services	Services on a project for which the *Consultan*t is engaged
Subconsultant	Party employed by the Consultant for specialized work (i.e., Electrical, Mechanical and Civil and Structural installations)
Technical Specification	The document/s forming part of the contract which describe the method of executing the project scope works
Works	Activities on a project for which Contractors are under contract to perform including the supply of goods and equipment

Abbreviations

The following abbreviations are used in this Scope:

Abbreviation	Explanation
CCTV	Closed Circuit Television
C&I	Control & Instrumentation
ECSA	Engineering Counsel of South Africa
EEPA	Emergency Exit Public Address
HVAC	Heating, Ventilation and Air Conditioning
ISO	International Organization for Standardization
ITP	Inspection, Testing Plan
LPS	Low Pressure Services
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
SANS	South African National Standards
SAGC	South African Geomatics Council
SAQCC	South African Qualification and Certification Committee
SOW	Scope Of Work

Abbreviation	Explanation
UPS	Uninterruptible Power Supply

2 Specification and description of the *service*s

Roles and Responsibilities

Consultant

The Consultant shall ensure the following:
a) Review the contract in detail to fully understand the design scope, technical requirements, and deliverables.
b) Executes and completes the defined scope according to contractual agreements.
c) Submits all relevant and necessary documentation requested by the Employer e.g. risk assessments, safety compliance reports, certifications, etc.
d) Submits both electronic and hard copy versions of all required documentation e.g. design reports, drawings, calculations, and specifications
e) Report any design changes that could impact cost, schedule, or feasibility.
f) Observe all relevant regulations, standards of professional conduct and industry norms established in relevant South African National Standards and standards recommended by relevant professional associations.
g) Demonstrate skill and care generally used by professionals providing services similar to the required services.
h) Submit all approved design documents, drawings, and models.

Employer

The Employer shall ensure the following:
a) Provide support and information relevant to the scope of work.
b) Reviews the Consultant's designs.
c) Ensure that the contractor signs the contract and understands the scope, deliverables, timelines, and payment terms.
d) Provide all necessary project documentation, including technical specifications, design guidelines, and any regulatory requirements.
e) Ensure compliance with legal, safety, and environmental regulations.

Description of the Works

2.2.1 Executive Overview

The station intends to appoint a suitable external Consultant for engineering professional services to undertake the design of a training facility, a security building control room and an induction facility to meet the end-user's needs. The Consultant shall take full liability for all their designs and Services provided to the Employer.
This section of the document provides the requirements and specification for the design of the following buildings:

a) Training Facility
b) Security monitoring control room for the security building located at the Kusile power station north gate.
c) Induction facility

The work includes but not limited to the following:

a) Architectural design
    - Schematic designs and design concepts
b) Site investigations
    - Surveys

- Geotechnical investigations
- Underground services detection, etc.

c) Civil & Structural design
- Structural Design of Building elements
- Parking and Access roads designs
- Drainage systems (surface and sub-surface)
- Sewage reticulation systems design

d) Electrical designs
- Small power and lighting
- Power Supply
- Earthing and lightning protection

e) Low Pressure systems Design
- Fire Protection
- HVAC
- Potable water supply system

f) Control and Instrumentation systems design
- Fire Detection System
- HVAC alarm monitoring
- Operator's Training Simulators
- Security Monitoring Control Room Computers
- Closed Circuit TV (CCTV) cameras and Access Control System
- Emergency Exit Public Address (EEPA) System
- UPS monitoring

g) Landscaping design

Codes and Standards

The scope of Services shall be done in accordance with SANS standards, prescribed Eskom standards and any other applicable codes of practice, specifications, and regulations. Reference to standards or manuals of any society, organization, or association, whether such reference is specific or by implication, shall mean the latest standard, manual, or code in effect at the time of the contract award. The Consultant adheres to the latest editions of the listed standards (where applicable) and normative references in section 2.1.4. If there is any contradiction within the codes and standards, the Consultant liaises with the Employer for clarification. The Consultant notes that the provided lists are not all-inclusive and do not relieve the Consultant from complying with all applicable design codes.

Table 1: Civil & Structural Standards

Definition	Explanation
Applicable standards	
240-4332798	Engineering policy
240-5311685	Design Review Procedure
203 – 1239	Conceptual Architectural Design Specifications for Structures and Buildings
240-56355815	Ergonomic Design of Power Station Control Suite Guideline
240-71432150	Plant Labelling Standard
240-93576498	Coding Standard
240-76992014	Project/Plant Specific Technical Document and Records Management Work Instruction
240-65459834	Gx Projects Documentation Deliverable Requirements Specification
240-57127953	Execution of Site Preparation and Earthworks Standard
240-57127955	Geotechnical and Foundation Engineering Standard

Definition	Explanation
Applicable standards	
240-56364545	Structural Design and Engineering Standard
240-85549846	Standard for Design of Drainage and Sewerage Infrastructure
240-84418186	Road Specification Manual
240-86973501	Engineering drawing Standard
240-66920003	Documentation Management Review and Handover Procedure for Gx Coal Projects
203-103437	Technical Document Submission and Review Work Instruction
203-770	Kusile Power station specification for structural concrete
240-106365693	Standard for the External Corrosion Protection of Plant, Equipment and Associated Piping with Coatings
240-76368574	High Security Mesh Fencing
ESK AM AAA 1	Corporate Identity Manual
ESK PB AAQ 3	Interior Specifications for Eskom
EN ISO 3382-3	Acoustics -- Measurement of room acoustic parameters -- Part 3: Open plan offices
SANS 10400-A	The application of the National Building Regulations – Part A: General principles and requirements
SANS 10400-C	The application of the National Building Regulations – Part C: Dimensions.
SANS 10400-D	The application of the National Building Regulations – Part D: Public safety.
SANS 10400-J	The application of the National Building Regulations – Part J: Floors.
SANS 10400-K	The application of the National Building Regulations – Part K: Walls
SANS 10400-L	The application of the National Building Regulations – Part L: Roofs
SANS 10400-M	The application of the National Building Regulations – Part M: Stairways.
SANS 10400-N	The application of the National Building Regulations – Part N: Glazing
SANS 10400-O	The application of the National Building Regulations – Part O: Lighting and ventilation
SANS 10400-P	The application of the National Building Regulations – Part P: Drainage
SANS 10400-S	The application of the National Building Regulations – Part S: Facilities for persons with disabilities
SANS 10083 purposes	The measurement and assessment of occupational noise for hearing conservation purposes
SANS 10103	The measurement and rating of environmental noise with respect to annoyance and to speech communication
SANS 10160-1	Basis of structural design and actions for buildings and industrial structures Part 1: Basis of structural design
SANS 10160-2	Basis of structural design and actions for buildings and industrial structures Part 2: Self-weight and imposed loads
SANS 10161	The design of foundations for buildings
SANS 10162-1	The structural use of steel, Part 1: Limit-states design of hot-rolled steelwork
SANS 10162-2	The structural use of steel Part 2: Cold-formed steel structures
SANS 10164-1,	The structural use of masonry Part 1: Unreinforced masonry walling
SANS 10164-2	The structural use of masonry Part 2: Structural design and requirements for reinforced and pre-stressed masonry
SANS 10218	Acoustical properties of buildings. Grading criteria for the airborne sound insulation properties of buildings

Definition	Explanation
Applicable standards	
SANS 11690-2	Acoustics – Recommended practice for the design of low noise workplaces containing machinery.
SANS 204	Energy efficiency in buildings
SANS 10209-1	Concrete floors Part 1: Bases to concrete floors
SANS 10209-2	Concrete floors Part 2: Finishes to concrete floors
SANS 10021	The waterproofing of buildings (including damp-proofing and vapour barrier installation)
SANS 10155	Accuracy in buildings
SANS 10246	Accessibility of buildings to disabled persons
SANS 10305	Painting of buildings
SANS 10313	Protection of structures against lightning
SANS 1129	Steel door frames
SANS 2001 Series	Standardised Specification for Construction Works
SANS 1200 Series	Standardised Specification for Civil Engineering Construction ‘
SANS 3001 Series	Civil Engineering Test Methods

Table 2: Electrical Standards

Definition	Explanation
Applicable standards	
240-55714363	Coal Fired Power Stations Lighting and small power installation standard
240-93576498	KKS Coding Standard
240-56227443	Requirements for Control and Power Cables for Power Stations Standard
240-56356396	Earthing and Lightning Protection Standard
OHS Act 85 of 1993	Environmental Regulations for Workplace, 1987 (Section 3, Lighting)

Table 3:LPS Fire Protection & Detection Standards

Definition	Explanation
Applicable standards	
NFPA 850	Recommended Practice fo Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations
NFPA 10	Standard for Portable Fire Extinguishers, 2018 edition
NFPA 11	Standard for Low-, Medium-, and High Expansion Foam
NFPA 13	Standard for the Installation of Sprinkler Systems, 2019 edition
NFPA 15	Standard for Water Spray Fix Systems for Fire Protection, 2017 edition
NFPA 72	National Fire Alarm and Signalling Code
240-56737448	Fire Detection and Life Safety Design Standard
240-54937450	Fire Protection and Life Safety Design Standard
240-54937454	Inspection, Testing and Maintenance of Fire Protection Systems
SANS 10400-T	The Application of the National Building Regulations – Fire Protection
SANS 10139	Fire Detection and Alarm Systems for Buildings – System Design, Installation and Servicing
SANS 50054	Fire Detection and Fire Alarm Systems (Adopted from BS EN 54)

Definition	Explanation
Applicable standards	
SANS 10108	The Classification of Hazardous Locations and the Selection of Apparatus for Use such Locations
32-124	Eskom Fire Risk Management
BFPA	Code of Practice for Design, Installation, Commissioning and Maintenance of Asp Smoke Detector (ASD) Systems.
BS 7974	Application of Fire Safety Engineering Principles to the Design of Buildings
EN 54-18	Fire Detection and Alarm Systems Part 18: Input / Output Devices
SANS 10400-A	The Application of the National Building Regulations – General Principles and Requirements.
SANS 62	Steel pipes
SANS 121	Hot Dip Galvanized Coatings on Fabricated Iron and Steel Articles – Specification Test Method
SANS 193	Fire Dampers
SANS 246	Code of Practice for Fire Protection for Electrical Equipment Installations
SANS 428	Fire Performance Classification of Thermal Insulated Building Envelope Systems
SANS 533-1	Black Polyethylene Pipes for the Conveyance of Liquids
SANS 719	Electric Welded Low Carbon Steel Pipes for Aqueous Fluids (Large Bore)
SASN 4427	Plastics piping systems for water supply and for drainage and sewerage under pressure – Polyethylene (PE)
SANS 10287	Automatic Sprinkler Installations for Fire-Fighting Purposes
SANS 1091	National Colour Standard
SANS 1123	Pipe Flanges
SANS 1128	Hydrant Systems
SANS 1186	Symbolic Safety Signs
SANS 1253	Fire-doors and Fire-shutters
SANS 1910	Portable Refillable Fire Extinguishers
SANS 10177	Fire Testing of Materials, Components, and Elements Used in Buildings
SANS 10400-T	The Application of the National Building Regulations Part T: Fire Protection
SANS 10400-A	The Application of the National Building Regulations – General Principles and Requirements.
SANS 62	Steel pipes
SANS 121	Hot Dip Galvanized Coatings on Fabricated Iron and Steel Articles – Specification and Test Method
SANS 193	Fire Dampers
SANS 1475-1	The production of reconditioned fire-fighting equipment – Part 1 Portable and wheeled (mobile) rechargeable fire extinguishers

Table 4: LPS HVAC Standards

Definition	Explanation
Applicable standards	
240-70164623	Eskom Heating Ventilation and Air Conditioning (HVAC) Design Guideline
32-894	Eskom Server Rooms and Data Centres Standard
240-102547991	General Technical Specification for HVAC Systems Standard
240-56355731	Environmental conditions for process control equipment used at Power Stations
CIBSE	Commissioning Code A: Air Distribution Systems
CIBSE	Commissioning Code B: Boilers
CIBSE	Commissioning Code C: Automatic Controls
CIBSE	Commissioning Code M: Commissioning Management
CIBSE	Commissioning Code R: Refrigeration
CIBSE	Commissioning Code W: Water Distribution Systems
ASHRAE 15	Safety Code for mechanical refrigeration
ASHRAE 62	Ventilation for acceptable indoor air quality
ASHRAE55	Thermal environmental condition for human occupancy
SANS10147	Refrigeration systems including plants associated with air-conditioning systems

Table 5: LPS Potable Water Standards

Definition	Explanation
Applicable standards	
SANS 10400	The application of the National Building Regulations
SANS 204	Energy efficiency in buildings
SANS 10252-1:2018 (Ed. 3.02)	Water supply and drainage for buildings Part 1: Water supply installations for buildings
SANS 10252-2 1993	Water supply and drainage for buildings Part 2: Drainage
SANS 10254:2017	The installation, maintenance, replacement, and repair of fixed electric storage water heating systems
SANS 1200 LB	Bedding (pipes)
SANS 1808	Water supply and distribution system components
240-101712128	Standard for the Internal Corrosion Protection of Water Systems, Chemical Tanks Vessels, and Associated Piping with Linings
240-106365693	Standard for External Corrosion Protection of Plant Equipment and Piping
240-5636535	Architectural Design and Green Building Compliance Manual

Table 6: C&I Standards

Definition	Explanation
Applicable standards	
SANS 10139	Fire detection and alarm systems for buildings - System design, installation, and servicing
240-56737448	Fire Detection and Life Safety Design Standard
BS EN 62676-4	Video Surveillance Systems for use in Security Applications
240-91190304 -	Specification for CCTV Surveillance with Intruder Detection
SANS 10222-5	Electrical security installations Part 5: CCTV installations
240-102220945	Specification for Integrated Access Control System (IACS) for Eskom sites
240-86738968	Specification for Integrated Security Alarm System for Protection of Eskom Install and its Subsidiaries
240-55410927	Cyber security standard for Operational Technology
240-64720986	Emergency Preparedness Public Address System – For Large Area Deployment

Table 7: Configuration Management standards

Definition	Explanation
Applicable standards	
240-131050729	Hybrid Coding Standard
240-109607732	Eskom Plant labelling Abbreviation Standard
240-109607736	Eskom KKS Key part Standard
240-86973501	Drawing Standard
240-76992014	Technical Document and Record Management
240-51093273	Engineering Change Management or Control

Site Location

The Kusile Power Station site is located approximately 37km northwest of eMalahleni in the Mpumalanga Province. The site is accessed from the R686 road between highways, N4 and N12. The Employer has identified potential sites for the new building facilities, for consideration. The Consultant shall be responsible for evaluating the suitability of the sites for the intended Services and Works. The Consultant shall identify alternative sites, where deemed necessary, and the building sites shall suit project objectives and requirements.

Figure 1: Proposed Locations of Facilities

Scope of Services

Description of the Services

The scope of *Services* entails the following:

The Consultant provides engineering design services in accordance with the Engineering Profession Act, 46 of 2000, Guideline for Professional Fees: Scope of services and Tariff of Fees for Registered Persons.

The scope of Services includes the following but not limited to:

a) Design of new training facility, security control room, and an induction facility with all associated services and infrastructure. The infrastructure includes but not limited to:

Structural design

Sewage system

Potable water supply system

Fire water supply system

Drainage (Surface and Sub-surface)

Small power & lighting

Fire protection

Operator's Training Simulators

Security Control Room Monitoring Computers

Fire Detection System

Heating, Ventilation and Air Conditioning (HVAC)

Access Control System

Closed Circuit Television (CCTV) Surveillance

Emergency Exit Public address (EEPA) systems

IT Infrastructure, etc.

Landscaping

The Consultant appoints and manages his Subconsultants for the scope of Services. The Consultant co-ordinates the work of discipline specific design Subconsultants as relevant and satisfies the relevant requirements of the National Building Regulations, Act 103 of 1977, amongst others. The Consultant co-ordinates interfaces to ensure design integration for all components of the Works.

Stage 1: Inception

a) The Consultant liaises with the project team and stakeholders to assess and establish the user needs and client requirements.

b) The Consultant establishes the need for specialist advice, studies, tests, investigations, and surveys relevant to the scope of Services, including the appointment of such specialist resources and services.

c) The Consultant performs and co-ordinates all studies, tests and surveys required for the scope of works. The Consultant collates outputs of specialist studies, surveys, and advises on implications of the findings. The findings are reported and communicated to the Employer.

d) The Consultant assesses the existing infrastructural elements to ensure integration between existing and proposed new works.

e) The Consultant obtains, investigates, and collates available data and drawings relating to the scope of Services.

Stage 2 Concept and Viability

a) The Consultant develops the concept designs and related documentation in accordance with the scope requirements. The Consultant ensures conformance with user and regulatory requirements as well as the relevant standards. A cost benefit analysis for each concept design option is performed by the Consultant.

b) The Consultant manages and integrates the concept documentation for presentation and submission to the Employer for approval.

c) The Consultant conducts design reviews in accordance with the Employer's Design Review Procedure, 240-5311685 for his designs in collaboration with the project team.

d) The Consultant establishes the life cycle and project related cost estimates associated with hisdesigns.

Stage 3: Detail Design Development

a) The Consultant develops the detail designs and related documentation per the scope requirements. The Consultant ensures that the Employer requirements are fully met in the designs. The Consultant submits his detailed designs to the Employer for acceptance.

b) The Consultant incorporates the Employer's detailed requirements into the design.

c) The Consultant incorporates his Subconsultant's designs and requirements into the design.

d) The Consultant performs temporary and permanent design changes necessary to complete his designs. The Consultant submits the design changes to the Employer for review and acceptance.

e) The Consultant conducts design reviews in accordance with the Employer's Design Review Procedure, 240-5311685 in collaboration with the project team.

f) All design reports, working or construction drawings prepared by the Consultant, are signed off by an ECSA Professionally registered Technologist/Engineer who takes full professional accountability and liability for the designs.

g) The Consultant prepares detailed specifications for all components of Works for inclusion in the construction/installation scope of works. The Consultant defines amongst others, the performance,quality, operating and maintenance requirements etc. of the required services.

h) The Consultant prepares detailed construction/installation Bill of Quantities..

i) The Consultant prepares cost estimates of proposed variations for the Work.

Stage 4: Additional Services of the Project

a) The Consultant reviews design data prepared by others, that interface or may impact hisdesigns, for purposes of delivering sound engineering designs.
b) The Consultant performs all required topographical and environmental surveys, analyses, tests and investigations necessary to carry out the Services. Preparing record drawings related to alterations to *Works*.

2.2.4.2 Boundary of the Services

The extent of the engineering professional services includes the following:

a) The Consultant shall design the following building facilities but not limited to:
   - 1-off Operator's Training Facility (Operating Simulators) .
   - 1-off Security building control room.
   - 1-off Induction facility

b) The Consultant shall specify the required furniture, equipment requirements and specifications for their designs. Spatial design requirements shall be considered in the designs.

Consultants Key Persons

The *Consultant* submits a detailed organogram of all the key project personnel of the principal *Consultant* and his subconsultants. If the *Consultant* intends on making use of the services of a subconsultant/s for sections of the scope, the delegation of duties and responsibilities should be clearly indicated. The *Consultant's* key persons become a contractual obligation upon contract award. Any proposed change should be handled formally through a written request to the *Employer* for approval. Replacement personnel shall have the necessary competencies and experience as those initially appointed.

The project personnel required in the management and delivery of the project, include the following but not limited to:

- Project Manager registered with SACPCMP.
- Architectural Professional professionally registered with the SACA, with 5 years related experience in architectural design. Resource has a formal engineering degree (or equivalent qualification) in the relevant discipline i.e., BSc/B.Tech (Architecture)/MArch,
- Structural Engineer/Technologist, professionally registered with ECSA with 5 years related experience. Resource has a formal engineering degree (or equivalent qualification) in the relevant engineering discipline i.e., BSc/BEng/BTech/Meng, with demonstrable experience in structural design.
- Civil Engineer/Technologist, professionally registered with ECSA with ECSA with 5 years related experience. Resource has a formal engineering degree (or equivalent qualification) in the relevant engineering discipline i.e., BSc/BEng/BTech/Meng, with demonstrable experience in civil design.
- Geotechnical Engineer, professionally registered with ECSA with 5 years related experience. Resource has a formal engineering degree (or equivalent qualification) in the relevant engineering discipline i.e., BSc/BEng/BTech/Meng, with demonstrable experience in conducting geotechnical site investigations and design.
- Electrical Engineer/ Technologist, professionally registered with ECSA with 5 years related experience. Resource has a formal engineering degree (or equivalent qualification) in the relevant engineering discipline i.e., BSc/BEng/BTech/Meng, with demonstrable experience in electrical system design.
- Mechanical Engineer/ Technologist, professionally registered with ECSA with 5 years related experience in the following:
    - Heating, Ventilation and Air Conditioning Systems
    - Wet services i.e., potable and fire systems
- C&I Engineer/Technologist, professionally registered with ECSA with 5 years related design experience in the following:
    - Access control systems
    - Closed Circuit Television (CCTV)
    - Fire detection systems
    - Public address systems
- Draughts persons to produce mechanical/civil/structural/architectural/C&I drawing designs, with 5 years droughting experience. Resource to have at least a Grade 12 qualification or equivalent.
- Planner with 3 years related experience in a technical field. Resource to have a Grade 12 qualification or equivalent.
- Professional quantity surveying service provider/s, in good standing with SACQSP. Resource to have 5 years working experience in engineering projects.
- Professional Land Surveyor professionally registered with the SAGC.

The *Consultant* notes that all project resources shall be compliant in terms of the Construction Regulation (2014) pertaining to competency, skills, responsibility, and professional registration.

Engineering Scope

2.2.5.1 Civil & Structural Scope

All relevant and applicable SANS standards shall be adhered to when executing the designs. This shall include all relevant organizational standards as referenced in sections 2.2 and 3.2 Designs shall be practical, functional, feasible and aesthetically pleasing. The building architecture shall align to the existing station building designs: The designs to integrate to the existing station systems and infrastructure, as far as possible.

The new building facilities shall include the following but not limited to:

Office spaces
Classrooms
Operator's Training Simulator rooms
North gate security monitoring control room
North gate control and instrumentation equipment room
Support spaces i.e., meeting rooms
Storage spaces
Ablutions
Change room & shower facilities.
Facilities for disabled persons
Water reticulation
Sewage and storm water drainage/disposal
Emergency and evacuation routes
Maintenance access
Road access and parking facilities
Landscaping
Equipment room/s
Perimeter fencing

Table 8: User requirements for building facilities

Item No.	Description	Quantity	Occupancy
Kusile Training facility			
1.	Classrooms	8	20 people per class
2.	Simulator Training room	3	60 x simulators (6 big screen computers and 54 small screen computers
3.	Auditorium	1	40 people
4.	Meeting room/Boardroom	1	15 people
5.	Office space	Based on occupancy	15 Employees (Including 1x Manager)
6.	Rest rooms/Ablution facility	Based on total building occupancy	Based on total building occupancy
7.	Parking space	Based on total building occupancy	Based on total building occupancy
8.	Document Storage room	1	
9.	Kitchen/Dining Area	1	
10.	HVAC room	2	
Security Control Room			
1.	Control Room	1	Let's confirm the occupancy number with security. They had previously indicated that 2 personnel occupy the area at a given time. 4 big screen computers and 16 small screen computers
2.	Equipment room	1	
3.	Rest rooms/Ablution facility	Based on total building occupancy	Based on total building occupancy
4.	Kitchen/Dining Area		
Induction Facility			
1.	Induction hall	1	Hall to accommodate a maximum of 100 people per induction session.
2.	Rest Rooms	Based on occupancy	
3.	Offices	2	2 x employees
4.	Equipment/ HVAC room	1	

2.2.5.1.1 Geotechnical Investigation

The Consultant conducts a geotechnical investigation to characterize the soil condition/properties of the proposed project sites, to permit acceptable designs and construction of the Works. The Consultant submits to the Employer a report on the findings from the conducted investigation. The content of the written report must confirm what is pointed out in the investigation/s and if necessary, discussed with the Employer, highlight the extent and location of the investigation area.

2.2.5.1.2 Surveys

The Consultant conducts topographical and environmental surveys necessary to complete his designs for the proposed project sites. The Consultant submits to the Employer a report on the findings from the conducted surveys. The report findings, if necessary, are discussed with the Employer.

2.2.5.1.3 Landscaping, Parking and Road Access

The Consultant performs the landscaping design for the new facilities to create an aesthetically pleasing environment. The landscaping should preserve and enhance the architectural and natural features of the station surroundings. The Consultant to cater for parking and access road facilities in his designs. The access roads shall be interfaced with existing access roads.

2.2.5.1.4 Corporate Identity Requirements

Eskom's Corporate Identity Specifications: ESK AM AAA 1, Corporate Identity Manual and Interior specifications for Eskom: ESK PB AAQ 3, shall be adhered to for all designs to ensure that all architectural components are compliant to Eskom's corporate requirements.

2.2.5.2 Electrical Scope

The scope of Services includes the following:

a) Electrical Supply:

Provisions are made for sufficient power supply to meet the demands of the facilities.

The Consultant coordinates with electrical Contractors to establish designated supply points near designated buildings.

b) Lighting Systems:

All light sources to be installed must be LEDs for both indoor and outdoor areas to ensure visibility and safety. The Consultant adheres to design specifications and safety standards for efficient illumination.

Buildings must have standardized lighting system, i.e., what is installed at Admin Building, the same must be installed in new buildings.

c) Earthing Systems:

Implementation of effective earthing systems to protect personnel and equipment from electrical faults and lightning strikes.

Utilization of high-quality materials and techniques to ensure proper grounding throughout the facility.

d) Cable Routing:

Planning and implementation of efficient cable routing strategies to minimize interference, maximize reliability, and ensure ease of maintenance.

Utilization of cable racks, trunking, conduits, and appropriate labelling to organize and protect electrical cables.

e) Site Assessment:

The Consultant conducts a thorough assessment of existing electrical infrastructure and identifies areas requiring modification or expansion.

f) Design and Planning:

Develop detailed electrical plans in coordination with engineering teams to ensure seamless integration with building modifications.

2.2.5.3.1 Consolidated Building Management System

There is a CBMS system already existing in the station. The CBMS is based on the Honeywell EBI architecture. The CCTV portion of the CBMS is based on the DVM VMS. The modifications to be done under the project may impact on the existing CBMS systems. The CBMS covers Access Control, CCTV, HVAC interface, Fire Detection and Public Address System.

The following are the Consultant's duties:

a) The Consultant designs in detail the below listed systems to ensure monitoring, operation, and administration capability from the existing CBMS. In cases where newer technology is available which the Consultant proposes for use, the Consultant states this clearly in the design. Both hardware and software aspects of the systems are designed, nothing more.

b) An electronic Integrated Access Control System (ACS) based on the existing Honeywell Tema Server TS02 technology.

c) CCTV system covering the inside and outside of the building (as per user requirement). The system is interfaced to the existing DVM CCTV system.

d) A Public Address system running over the EBI infrastructure utilizing network speakers.

e) An appropriate Fire Detection System complying to SANS10139. A Honeywell hardware platform is required.

f) An HVAC monitoring system based on the Comfort Point CP-IPC system with BACnet interface to the existing CBMS.

g) Independent Back-Up Power Systems which will satisfy the requirements of all systems' design standards.

h) Network for integrating all sub-systems (Switches, cabling etc.)

- Familiarizes themselves with the existing CBMS in the areas where modifications will be made under this project.
- Identifies and collects all drawings required to perform the work.
- Indicates where civil and/or other changes made under this project will impact the existing CBMS.
- Indicates where changes to the existing CBMS have been made due to the civil and/or other changes under this project.
- Ensures that changes to the existing installations do not lead to non-conformance of the installations to applicable design standards e.g., in the case where a smoke detector needs to be moved, it will be moved to a position where it will conform to SANS 10139.
- Prescribes construction/installation methodology for their design to maintain adherence to the applicable standard.
- Marks-up drawings of the existing CBMS installations to indicate where changes will be required. Provides marked up drawings as part of the CBMS design.
- Reviews the entire design(s) (new and modified installations) and confirms that they meet applicable design codes and standards.
- Ensures that the design of the Fire Detection System is performed by parties who have been found competent as Designers of Fire Detection Systems, compliant to SANS10139:2012. SAQCC or FDIA issued certificates of Competence are required.

2.2.5.3.2 Operator's Training Simulator

- The Consultant shall design a training simulator which will accurately replicate the actual distributed control system (DCS) environment, including process control logic, human-machine interface (HMI), alarms, trends, and fault scenarios, enabling realistic operator training for normal operations and emergency responses.
- The simulator must support hands-on training for operators, allowing them to practice normal operations, fault diagnosis, and emergency response procedures in a risk-free environment.
- It should include a high-fidelity dynamic process model that mirrors real plant behaviour and integrates with the actual or emulated DCS system.
- The Consultant shall ensure compatibility with existing control architectures, provide engineering documentation, conduct factory, and site acceptance tests (FAT/SAT), and deliver user training and technical support.

2.2.5.3.3 Security Monitoring Control Room

- The Consultant shall design a security monitoring control room which shall integrate real-time video surveillance, access control, and cybersecurity threat detection systems, ensuring continuous monitoring and protection of critical infrastructure.
- The control room must feature a centralized monitoring system with high resolution video displays, real-time alarm notifications, and secure data logging capabilities.
- The control room should support remote and on-site access for authorized personnel, incorporate redundant power and communication systems for reliability, and ensure seamless integration with existing security infrastructure.
- The contractor shall provide detailed engineering documentation, conduct factory and site acceptance tests (FAT/SAT), and deliver operator training and on-going technical support.

Mechanical Scope

HVAC

a) The Consultant must provide the complete mechanical, civil, electrical and C&I designs with relation to the HVAC systems.

b) The Consultant must design the system as per SANS 10400 and it must adhere to the standards as per Table 4.

c) It is recommended that a ducted HVAC system is designed and not necessarily a single ducted system to service the entire building. Temperature control must be provided for individual rooms.

d) The HVAC design must take into account the summer and winter climate conditions of the eMalahleni area.

e) A dedicated HVAC plant room must be designed which consists of the HVAC air handling units, condenser units, Motor Control Centre, and Local Control Panels. This must be serviced by the HVAC system to maintain the correct room temperature.

f) Redundancy must be provided for the major HVAC equipment as well as electrical equipment so that there would be easy access during maintenance.

g) Accessibility to HVAC equipment such as filters, valves, motors, and control boxes etc must be designed with due consideration to easy access.

h) A smoke extraction system must be provided for in the design.

i) The HVAC systems are to be interfaced with the fire protection system and CBMS.

j) The consultant must provide the following documentation on the HVAC systems during their submission.

- Detailed mechanical design report indicating calculations and the design methodology regarding selection of equipment such as for fans, dampers, valves etc.
- Heat load calculations including software simulations.
- Detailed Bill of Quantities for HVAC system
- Detailed and dimensioned drawings
- Air balancing diagrams for each zone/room
- Spares lists and confirmation of availability of spares with lead times.

k) The designs are subject to review of the Eskom engineering team.

Fire Protection

a) The user of the standard, 240-56737450 shall follow the deemed to satisfy approach. SANS 10400 sets out the different possible ways of demonstrating compliance with functional regulations, including a range of prescriptive provisions that are “deemed to satisfy”. If a design is complaint to SANS10400 and any of the normative SANS, documents referenced within, thenthe design can be classified as deemed to satisfy.

b) The Consultant shall perform a Rational Fire Design where the South African National Standardsdoes not address a specific fire risk or area of plant. This will require referral to codes of practisei.e., NFPA etc.

c) The person who uses this document, 240-56737450, for the purpose of designing the Fire Protection systems, must be a competent person as specified in the National Building Regulation[NBR], section A19 and AZ4.

d) The Employer requires that the person undertaking the *Services* shall have at least the followingqualifications:

- Bachelor’s degree in engineering or higher
- Registered Professional Engineer with ECSA
- At least 4 years of experience in fire engineering

e) Fire Detection and Alarm Systems shall adhere to standard 240-56737448: Fire Detection and Life Safety Design Standard. The responsible Consultant shall be responsible for the following:

- Design comprehensive fire detection system covering all areas of the building, including common areas, corridors, rooms, and sensitive areas such as kitchens.
- Utilize smoke detectors, heat detectors, flame detectors, and manual pull stations asappropriate based on the building's layout and occupancy.
- Integrate the alarm system with the building's communication infrastructure to ensure promptnotification to occupants and emergency responders.

f) Fire Suppression Systems shall adhere to standard 240-56737450: Fire Protection and LifeSafety Design Standard.

g) The responsible Consultant shall be responsible for the following:

- Design automatic fire suppression systems such as sprinkler systems or gas-based suppression systems.

- Ensure proper coverage of all areas, including storage areas, electrical rooms, and any otherhigh-risk spaces.
- Coordinate with structural and architectural plans to integrate suppression systemcomponents seamlessly into the building design.

h) Fire Doors and Fire Rated Construction:

- The Consultant specifies fire-rated doors and partitions to compartmentalize fire and smoke,slowing their spread throughout the building.
- The Consultant ensures compliance with local building codes and regulations regarding fireresistance ratings for doors, walls, and floors.

i) Documentation and Compliance:

- The Consultant maintains detailed documentation of all fire protection systems, including design reports, drawings, etc.

j) Emergency Evacuation Planning

- The Consultant develops an emergency evacuation plan detailing evacuation route, assembly areas, and procedures for occupants in the event of a fire.

Sub Consulting Services

The Consultant submits the name of each proposed Subconsultant to the Employer for acceptance.The Consultant does not appoint a proposed Subconsultant until the Employer has accepted him.

The Consultant submits the proposed conditions of contract for each subcontract to the Employer for acceptance unless an NEC contract is proposed, or the Employer has agreed that no submissionis required. The Consultant does not appoint a Subconsultant on the proposed subcontract conditions submitted, until the Employer has accepted them.

Engineering and the Consultant's Design

Employer's design

The extent of the Employer's design is as described in the Employer's drawings. The Employer will make available all the required native files to the Consultant to enable completion of his designs, design reviews and updating of the Employer's drawings.

Parts of the Works Which the Consultant is to Design

Responsibility for Design

a) The Consultant provides designs that are fit for purpose and in accordance with relevantstandards, regulations, and sound engineering principles.

b) The Consultant assumes full design accountability and liability for his designs.

c) An ECSA Professionally Registered Engineer signs off all designs, design reports and construction design drawings, prepared by the Consultant and his Subconsultant.

d) The Consultant is responsible for the design of all temporary Works required for implementation.

e) Where the Consultant requires additional information to design certain components of the Works, the Consultant notifies the Employer of the requirement/s timeously.

f) The Employer may review, but will only accept, the Consultant's designs. The

responsibility to ensure compliance remains with the Consultant.

g) All changes required for construction or manufacturing, that impact or change the Employer's design is redlined on drawings by the Consultant. The redline drawings include notes for clarification purposes. The Consultant submits the redlined drawings to the Employer for acceptance.

h) The Consultant is mandated in terms of Construction Regulations 2014: Duties of Designer, 6(1)g to fulfil the duties described therein or the detailed designs done by the Consultant. Any risks associated with the Consultant's design is highlighted to the Employer together with the mitigation measures.

i) The Consultant submits design reports, for all his designs, to the Employer for his acceptance. Design reports to include the following as a minimum:

- Design philosophy
- Assumptions made with regard to the design.
- Design criteria/ parameters used.
- List of applicable codes and literature that was used in the design.
- Design results and calculations for all elements
- Software input and output files including design models.
- Materials used; and
- Submit Operation and Maintenance Manuals, where applicable.

j) Submit multidisciplinary detailed design drawings for the full scope of work, capturing all necessary details.

System Interface & Design Integration

a) The Consultant is responsible for all system interfaces which form part of the project scope. The Consultant caters for all the identified interfaces, taking into consideration all packages required. The Consultant's design considers all existing services ensuring no clashes with existing infrastructure.

b) The Consultant is responsible for all interfaces that form part of the scope and shall cater for these in his design.

c) The Consultant notes that the project areas have existing services. The *Consultant* shall avoid any clashes with existing services as well as cater for this in his design.

Use of the Consultant's design

The Consultant, as specified in this Works Information, supplies all design documentation for the Works to the Employer. The Consultant notes that all design documentation supplied to the Employer become the property of the Employer upon completion of the Works. *The* Consultant notes that the Employer has total rights to use the Consultant's design, as the Employer requires.

3 Constraints on how the *Consultant* Provides the Services.

Management meetings

Regular meetings of a general nature may be convened and chaired by the *Employer's Agent* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	To be confirmed post contract award during the kick-off meeting	**Kusile Power Station / MS Teams**	*Employer's Agent, Project Multi-Disciplinary Team, Consultant and Sub-Consultants*
Overall contract progress and feedback	To be confirmed post contract award during the kick-off meeting	**Kusile Power Station / MS Teams**	*Employer's Agent, Project Multi-Disciplinary Team, Consultant and Sub-Consultants*

Meetings of a specialist nature may be convened as specified elsewhere in this Scope or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *services*. Records of these meetings shall be submitted to the *Employer's Agent* 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.

Consultant's key persons

The *Consultants* shall notify the *Employers Agent when the Consultants* key person's changes contact details, and when taking leave. The Consultants shall submit an organogram showing his/her people and their lines of authority / communication

Documentation Control and Retention

Identification and communication

The Consultant ensures that the Technical Documents and Records Management Work Instruction,240-76992014 is adhered to for all documentation requirements. The Consultant is responsible for the compilation and the supply of all documentation during the various project stages. The Consultant makes provision in their programme for the submission of design documentation. For consistency, it is important that all documents used within the project follow the same layout, style and formatting as described in the Technical Documents and Records Management Work Instruction, 240-76992014. Documents such as QCP's, Method Statements etc. that impact the project works to be approved by the Employer at least 3 working days prior to commencement of theworks.

Each revision of a document or drawing shall be accompanied with a list of comments made by the Employer on previous revisions, if applicable. The responses/corrective actions taken by theConsultant to be recorded in a revision table contained in each drawing/document.

Documents and drawings to indicate the Employer's unique identification number as allocated by the Employer. The Consultant may also have his own internal document or drawing number on the document or drawing.

The Consultant shall ensure that documents have the following minimum attributes on the cover page:

- Document title
- Document unique identification number (Eskom number)
- Consultant document number, if applicable
- Document status
- Revision number
- Document type
- Document revision table/history
- Page number on the footer
- Document author/authoriser
- Document originator

The following additional attributes are important for technical documents:

- Package/System name/sub-system name
- Unit number
- Consultant name
- Contract number
- Plant identification codes

Format and Layout of Documents

For consistency, it is important that all documents used within a specific domain follow the same layout, style, and formatting standard.
a) Layout and Typography
Every document should comply with the following font specifications:
- Font Colour: Black
- Main Headings Font Type: Arial, Bold, Capital Letters
- Main Heading Font Size: 12pt
- Subheadings Font Type: Arial, Bold, Title Case
- Subheadings Font Size: 11pt
- Body Font Type: Arial, Sentence Case i.e., only the first letter of the first word is a capital letter.
- Body Text Font size: 11pt
- Line Spacing: 1.5 line spacing.
- Margins: Standard
- Alignment: Full justification to be used
- Paragraphing: One line skip between paragraphs
- Pagination: Centred page numbers (about 0.5 inches from bottom)
- Indentations: Standard tab for all paragraphs (about 0.4 to 0.5 inches)

Document Headers

The header should include the project name, document title, document number, revision number and page number.

Naming of files

The Consultant complies with the Eskom standard for naming documentation files. The standard is as follows:

i. For documents that have an approval date and signature; (YYYYMMDD_DocType_DocumentTitle_UniqueIdentifier_Revision.FileExte ntion)

ii. For documents that do not necessarily require the 'Approved Date' and 'Revision & Versioning', usethe date of update:

iii. (YYYYMMDD_DocType_DocumentTitle_UniqueIdentifier_Revision.FileExtention)

Documentation Submissions

The Consultant's program to allow a minimum of 21 days for mailing, processing, and review of drawings and data by the Employer. All documents and records must be submitted and managed according to the Project/Plant Specific Technical Document and Records Management Procedure, 240-76992014 as well as the Generation (Gx) Projects Documentation Deliverable Requirements Specification, 240-65459834. The Employer shall ensure that the Consultant is provided with the latest revisions of the mentioned documents.

Information Requirements

The Employer requires information and data from the Consultant for management and execution of the contract. The Consultant shall supply all information required in terms of the contract including, whether specified in the contract, all information necessary for:

- Design reviews and the interface management of the works,
- Quality assurance and control,

The scope of supply of information from the Consultant, to include the below document list, if applicable:

Table 9: Typical Document Requirement List

Typical Document Requirement List	
Document Group	**Description of document type (Includes information data sets)**
General	- Equipment arrangement drawings - Piping & Instrument Diagrams (P&ID's) Equipment list. - Isometric drawings - Drawings and data for all equipment and material
Civils & Structures	- Layout drawings - Elevation and section drawings Structural drawings Architectural drawings - Structural analysis and design report Foundation drawings - Structural support drawings - Access Platform/Walkway Drawings - Professional Engineering Certificates from Professionally Registered Engineers
Logistic Support	- Maintenance concept - Plant maintenance documentation ISI plan/program - Spare parts assessment Plant RAM analysis - Equipment access and removal paths assessment Fault finding diagrams

Safety & Protection	- Fire hazard analysis Waste management plan
Design Analyses	- Reliability model and analysis Flow dynamics analysis - Thermo-hydraulic analysis Pipe Stress Analysis Maintainability analysis FMECA / FMEA analysis HAZOP analysis - 3D model interference checks
Electrical	- Motor list - Electrical load list Circuit list Raceway list - Single line diagram Protection schematic diagram - Electrical load flow and fault studies report Cable block diagrams. - Cable schedule - Cabling routing and cable racking layout diagrams Cable termination diagrams - EMC and earthing standards report Earthing layout drawings. - Lighting layout drawings
C&I	- Alarm and set-point schedule. - Instrument schedule Instrument data sheets Mechanical hook-up drawings Electrical hook-up drawings Cable Schedule - Termination Schedules - Junction Box GA and Internal Layout - Junction Box and Instrument location drawings Instrument Stand GA - Maintenance Manuals and procedures Operating and Control Philosophies Functional Logic diagrams. - Field device calibration certificates Level measurement installation report
CBMS	- Alarm and set point schedule. - Instrument schedule Instrument data sheets Equipment layout drawings Routing layout drawings Cable schedules Termination schedules - Junction Box GA and Internal Layout Instrument Stand GA - Maintenance Manuals and procedures Operating and Control Philosophies Field device calibration certificates Network architecture. - Fire risk assessments

Drawings

The creation, issuing and control of all Engineering Drawings shall be in accordance with the latest revision of the Engineering Drawing Standard, 240-86973501 - to be supplied as part of the enquiry documents. Drawings issued to the Employer will be a minimum of one hardcopy and an electronic copy. The Consultant is required to submit drawings electronically in both native CADD format and PDF format. Drawings issued to the Employer may not be “Right Protected” or encrypted.

Retention of documents

The *Consultant* must retain all documentation, specified on the VDSS. This includes data books. The Contractor must keep the documentation for a minimum of 10 years post contract close out. This is in line with the Rules of Conduct for Registered Persons, Engineering Professional Act, paragraph 4(a): “Registered Persons, may not without satisfactory reasons destroy or dispose of, or knowingly allow any other person to destroy or dispose of, any information within a period of 10 years after completion of the work concerned”.

The *Consultant* must retain the documentation in electronic format. The *Consultant* must also keep the original ink signed hard copies for the minimum of 10 years post contract close out. When the 10years end, the contractor must inform the *Employer* in writing prior to disposal, to confirm if the Employer is not in need of any documentation. The correspondence must include the master documentation register, which outlines all retained documentation. It is the contractor's responsibilityto ensure that the correspondence has reached the *Employer*, by requesting acknowledgement of receipt. The *Employer* has the maximum of 6 months to respond in writing to the contractor, failure to do so, the *Consultant* may proceed and dispose the documentation after the six months has passed.

Documentation Reviews

The *Consultant* shall conduct design reviews in accordance with the *Employer*'s Design Review Procedure, 240-53113685 and participate in all design reviews as specified by the *Employer*. The *Employer* shall review and consolidate review comments for submitted documentation by the *Consultant*. The *Consultant* shall also make the necessary revisions or rectify noted issues highlighted on the documentation by the Employer. The *Consultant* must include the documentation reviews as part of the Design schedules and allocate appropriate timelines/durations for these activities.

Submission of the Consultant's Design

a) The Consultant submits all design documentation to the Employer for review. The documentation submitted to include all design elements i.e., drawings, calculations, reports etc.

b) The Employer conducts a review of the design documentation. The Employer reserves the rightto review any design in detail, where deemed necessary. The Employer accepts no accountability and liability due to the review of any designs.

c) The Consultant is the Design Authority as defined in the Design Review Procedure, 240-53113685 for the project scope. The Consultant is responsible for following this design procedure and conducts all the design reviews as specified in this procedure.

d) The following process will be followed for submission of documents:

- The Consultant submits the documents/drawings to the Employer.
- The Employer's representative distributes the documents/drawings to all relevant parties within the Employer's project team to review.
- The Employer's project team reviews the documents/drawings and submit all comments or inputs to the Employer's representative. The Employer's representative submits the review comments to the Consultant for consideration.
- If the Employer finds major deficiencies in the submitted documents/drawings, the Consultant. revises the documents/drawings and resubmits to the Employer's representative.
- The Employer reviews the documents/drawings and if no major deficiencies are found, the Consultant organises a review session.
- The Employer and the Consultant conduct a review.
- If any fundamental errors are found in the review or further actions are required, the Consultant records all concerns raised and revises the documents/drawings accordingly.
- The Consultant organises a review session once all documents/drawings have been revised.
- If no fundamental errors are found in the documents/drawings during the review session, the Consultant compiles the review minutes/report and submits to the Employer.
- The Employer's project team reviews the Consultant's report/minutes. If the report/minutes are not acceptable, the Consultant revises the report/minutes and resubmits to the Employer.
- The Employer accepts the Consultant's documents/drawings once the report/minutes are accepted by the Employer's project team.

Acceptance of the Consultant's Design

The Consultant is to implement the following for design acceptance:

a) The Employer accepts the Consultant's design upon completion of reviews by the project team.

b) The Consultant stamps, dates and signs his design drawings, to signify approval of his designs.

c) The Consultant informs the Employer in writing of any deviation in the Consultant *'s* drawings, fom the scope requirements.

KKS Classification System

Plant Codification

The KKS system shall be used by the Consultant for classifying and designating both plant and their associated documents (including labelling or tagging of the plant items). All technical documentation as per "Technical documentation classification and designation standard – 240-54179170" shall contain a KKS code as part of the documentation identification relevant to the plant equipment.

All plant (HVAC, Electrical, C&I and Civil) shall be coded up to KKS breakdown level 3 (components level). The KKS code shall contain and comply with break down levels: Level 1, break down; Level 2 and breakdown Level 3, in compliance with Eskom Hybrid Coding Standard [240-131050729]. Omission or any deviation of/from any break down level from aforementioned levels shall not be permitted without any deviation approvals from the Employer.

The system shall be applied from the concept stage until project closeout. The rules specified in the VGB guidelines will be used but all rules specified in Eskom documents will take precedence.

Detailed nameplate or label list with the service legends and including the KKS Code shall be prepared by the Consultant and submitted to the Employer for review and comment before commencing manufacture of the labels. All maintainable plant equipment and components shall be labelled including pipework.

The rules for applying the KKS and coding are contained in the Eskom Standard 240-93576498 andin the publication KKS power plant classification (B105e) 5th Edition 2003 published by Verlag VGB Power Tech Service GmbH (Essen), and the KKS Applications: Guideline and explanations A, B1-4 (B106e).

The Consultant shall use Eskom –specific interpretations of the KKS standards, which will be reviewed and agreed on after Contact Award. The following variations relating to 240-93576498 arenoted.

- Breakdown level 3 component code -> not used in P&ID's and PFUP's, only used by controlhardware supplier.
- Breakdown level 0: will be shown as a general remark on the P&ID not on the individual KKSnumber.
- F0-level is not used; FN level is free -> no general decoding system.

The Consultant shall code all plant within scope of supply according to the KKS Classification Systemto Breakdown Level 3 where possible. The relevant KKS codes thus allocated shall appear on all plant related documentation, drawings, lists and correspondence.

The Consultant shall code all plant within scope of supply according to the KKS Classification System to Breakdown Level 3 where possible. The relevant KKS codes thus allocated shall appear on all plant related documentation, drawings, lists and correspondence.

The Consultant shall be responsible for ensuring the accuracy, completeness, and consistency of the designations in all documents. This applies both to designations within documents (plant designations) and of Documents (documents designations). The Consultant shall submit these for the Employer's approval.

A list of the KKS designations allocated shall be drawn up by the Consultant for each scope of delivery. Methods of KKS designation, list formulation and submission format shall be proposed by the Consultant and agreed by the Employer.

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 Service Manager;
The contract number and title;
Contractor's VAT registration number;
The Employer's VAT registration number 4740101508;
Description of service provided for each item invoiced based on the Price List;
Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
The invoice is to be submitted to invoiceseskomlocal@eskom.co.za once confirmed with the payment certificate.

Contract change management

Changes to the contract, such as compensation events shall be managed through the use of NEC PSC 3 standard forms and templates.

Inclusions in the programme

General
This contract shall follow ECC contract, Clause 3-Time.
The Contractor submits a Level 4 Microsoft project or Primavera P6 programme for the project manager acceptance.

- Discipline Speciality Program (Level 4)

This is the execution Schedule, also called a Project Working Level Schedule. Level 4 is the detailed working level schedule, where each schedule is an expansion of part of a Level 3 schedule and is established within the integrated project schedule.

This programme typically represents day-to-day tasks which are work unit based and become summarised in the Level 3 activities showing the following:

- The starting date, access dates, key dates, and planned completion date.
- The order and timing of all tasks which the contractor plans to do in order to provide the works
- Critical path
- Float
- Time risk allowances, which shall include weather allowance.
- Health and safety requirement

Computerised Planning and Reporting
The programme shall be submitted in MS Project/ Primavera P6 format and the basis of schedule to support the schedule, showing inclusion and exclusions.

Project Calendar
The project calendar includes working days (Monday to Friday) and excludes non-working days which are weekends (Saturday to Sundays) and Public Holidays. If and when the Contractor deems any period in a calendar year as a non-working day, e.g. pay weekends, etc. such shall be declared up front and agreed with the Project Manager in the first programme for acceptance by the Project manager. Failure to declare these days shall render any later declaration as null and void and the Contractor shall provide the services to comply with the accepted first programme.

Additional Programme Requirements

The programme layout takes into account the Key Dates provided in the Contract and the Work Breakdown Structure (WBS).

The following levels of programme are to be used for this project for dynamic integrated project control:

- Management level programme (Level 1)
- Project level programme (Level 2)
- Control level programme (Level 3)
- Discipline speciality programme (Level 4)

Submission of Revised Programmes
The Contractor submits one electronic copy in MS Project (MPP) of the revised programme to the Project Manager for acceptance. The contractor shows on each revised programme.

- The actual progress achieved on each operation and the timing of the remaining works
- The effects of the implemented compensation event
- How the contractor plans to deal with any delay and to correct the notified defects
- Any other changes that the contractor proposes to make to the acceptance programme.

Bi-Weekly Progress reporting
A bi-weekly status report is submitted by the Contractor to the Project Manager. The Contractor submits updated programme bi-weekly or as instructed by the Project Manager.

Contents of a weekly report will include the following items:

- The updated MS Project/ Primavera P6
- Programme summary narrative (Basis of schedule)
- Progress and performance summaries
- Key Milestone status

Quality management

System requirements

The *Consultants* shall comply with ISO 9001 Quality Management System and category 4 of Eskom Supplier Quality Management Specification QM 58/ 240-105658000.

Information in the quality plan

The *Consultant* shall submit objective evidence of a developed and implemented QMS that complies with ISO 9001 or any applicable standard of quality management system (the latest applicable revision). The following documents (approved copies) shall be submitted:

Quality Management System Requirements ISO 9001

- Quality Method statement based on ISO 9001
- Quality Policy Approved by top management.

- Quality Objectives Approved by top management
- Documented information for defined roles, responsibilities and authorities
- Documented information for Control of Externally Provided Processes, Products and Services

The Parties use of material provided by the *Consultant*

Employer's purpose for the material

The detailed designs will be solely used for the purpose specified in the Scope of Work.

Restrictions on the *Consultant*'s use of the material for other work

The *Consultant* shall not use material resulting from the *Scope of Work* for any other party except for Eskom SOC Ltd.

Transfer of rights if Option X 9 applies

All material and rights of this contract belong solely to the *Employer* without exception.
The *Consultant* shall not challenge or assist any other party challenging at any time the validity or ownership of any of the intellectual property rights relating to the material created and developed for this contract.

Health and safety

The *Consultant* shall at all times comply with the health and safety requirements prescribed by law as they may apply to the *service*s and comply with the Eskom issued OHS Specification KUS-20250764

Procurement

Preferred subconsultants

No preferred sub-consultant. The Consultant may sub-consultant only where very specialist services need to be obtained from a particular sub-consultant.

Limitations on subcontracting

The Employer may require that the Consultant must subcontract certain specialised work, or that the Consultant shall not subcontract more than 25% of the whole of the contract.

Working on the *Employer*'s property

Employer shall provide Water and Ablution facilities. Designated smoking areas are marked.

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

The Consultant shall submit names of all personnel and that of Sub-consultants, to the Employer's Agent for temporary access permits.

The Consultant and his employees shall comply with the health, safety and environmental requirements contained in SHE Specification, i.e. Kendal Specific Constraints.

People restrictions, hours of work, conduct and records

The Consultant shall keep records of his people working on the Employer's property, including those of his Sub-consultants. The Employer's Agent shall have access to these records to at any time. These records may be needed when assessing compensation events.

4 List of drawings

Drawings issued by the *Employer*

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

Drawing number	Revision	Title