



NEC3 Professional Services Contract (PSC3)

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

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

**for Professional Services required for the Design and
specification of integrated security solutions for all
Peaking Generation Power Stations and Office
Buildings**

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PART C1: AGREEMENTS & CONTRACT DATA

Document reference	Title	
C1.1	Form of Offer & Acceptance [to be inserted from Returnable Documents at award stage]	
C1.2a	Contract Data provided by the <i>Employer</i>	
C1.2b	Contract Data provided by the <i>Consultant</i> [to be inserted from Returnable Documents at award stage]	
C1.3	Securities proforma	

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C1.1 Form of Offer & Acceptance

Offer

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

PROFESSIONAL SERVICES REQUIRED FOR THE DESIGN AND SPECIFICATION OF INTEGRATED SECURITY SOLUTIONS FOR ALL PEAKING GENERATION POWER STATIONS AND OFFICE BUILDINGS.

The tenderer, identified in the Offer signature block, has

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

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *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	N/A Cost Reimbursable
Value Added Tax @ 15% is	N/A Cost Reimbursable
The offered total of the Prices inclusive of VAT is	N/A 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

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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				
Name & signature of witness	(Insert name and address of organisation)		Date	

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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			

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C1.2 PSC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
		G: Term contract
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X2: Changes in the law
		X7: Delay damages
		X9: Transfer of rights
		X10: <i>Employer's Agent</i>
		X11: Termination by the <i>Employer</i>
		X13: Performance bond
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Professional Services Contract (April 2013) ¹	
10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
11.2(9)	The <i>services</i> are	PROFESSIONAL SERVICES REQUIRED FOR THE DESIGN AND SPECIFICATION OF INTEGRATED SECURITY SOLUTIONS FOR ALL PEAKING GENERATION POWER STATIONS AND OFFICE BUILDINGS

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11.2(10)	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> • Non delivery within timeline of the Project • Non-compliance to performance requirements specified in the scope of service • Inability to execute the services within the required project time frame • Deviations resulting in non-compliance to the required scope and performance of the required solution as specified in the <i>Employer's Scope</i>.
11.2(11)	The Scope is in	Part 3: Scope of Work
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period for reply</i> is	1 week
13.6	The <i>period for retention</i> is	1 year following Completion or earlier on termination all information is handed back to the <i>Employer</i> .

2 The Parties' main responsibilities

25.2	The <i>Employer</i> provides access to the following persons, places and things	access to	access date	
		1	Acacia Power Station	Access dates from contract starting date.
		2	Palmiet Pumped Storage Scheme	
		3	Ankerlig Power Station	
		4	Gourikwa Power Station	
		5	Drakensberg Pumped Storage Scheme	
		6	Ingula Pumped Storage Scheme	
		7	Gariep Power Station	
		8	Vanderkloof Power Station	
		9	Port Rex Power Station	
		10	Sere Windfarm	
		11	Durbanville Office Building	
		12	Bella Rosa Office Building	
		13	Colley Wobbles Power Station	

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		14	First Falls Power Station	
		15	Ncora	
		16	Second Falls Power Station	
3	Time			
31.2	The <i>starting date</i> is. 01 October 2023			
11.2(3)	The <i>completion date</i> for the whole of the services is.	31 July 2024		
11.2(6)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met		key date
		Perimeter CCTV systems Security structures (buildings), Site control room, Peaking security control room.		28 February 2024
		Balance of plant CCTV, Integrated Access Control systems, PA Systems, Intrusion detection system, Non-lethal fencing, Security lighting, Perimeter fence systems		30 April 2024
31.1	The <i>Consultant</i> is to submit a first programme for acceptance within	2 weeks of the Contract Date. The programme includes <i>Consultants'</i> mobilization, Employer's brief, site visits, design, specification and tender pack (per security element), review, approval, publishing, surrendering of information and de-mobilization		
32.2	The <i>Consultant</i> submits revised programmes at intervals no longer than	1 week.		
4	Quality			
40.2	The quality policy statement and quality plan are provided within	1 week of the Contract Date.		
42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the services.		
5	Payment			
50.1	The <i>assessment interval</i> is	between the 25th day of each successive month.		
51.1	The period within which payments are made is	30 Days after receipt of acceptable Invoice		
51.2	The <i>currency of this contract</i> is the	South African Rand – ZAR		

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51.5	The <i>interest rate</i> 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,
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	See Z12
82	Limitation of Liability	
82.1	The <i>Consultant's</i> total liability to the <i>Employer</i> 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	As per core clause 9 of the contract
10	Data for main Option clause	
G	Term contract	
21.4	The <i>Consultant</i> prepares forecasts of the total Time Charge and <i>expenses</i> at intervals no longer than	Monthly
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
W1.2(3)	The <i>adjudicator nominating body</i> 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 <i>tribunal</i> is:	arbitration
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	Cape Town, South Africa

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	<p>The person or organisation who will choose an arbitrator</p> <ul style="list-style-type: none"> if the Parties cannot agree a choice or if the <i>arbitration procedure</i> does not state who selects an arbitrator, is 	<p>the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.</p>
12	Data for secondary Option clauses	
X2	Changes in the law	
X2.1	The law of the project is	The law of the Republic of South Africa
X7	Delay damages	
X7.1	Delay damages for late Completion of the whole of the <i>services</i> are	10% of Task Order Value per day
X9	Transfer of rights	
X9.1		The Employer owns the Consultant's rights over material prepared for this contract by the Consultant. The Consultant provides to the Employer the documents which transfer these rights to the Employer.
X10	The Employer's Agent	
X10.1	<p>The Employer's Agent is</p> <p>Name:</p> <p>The authority of the Employer's Agent is</p>	<p>Yaron Truter</p> <p>To carry out all obligations in the Contract on behalf of the Employer.</p>
X11	Termination by the Employer	Applies as per secondary option clause X11
X13	Performance Bond	
X13.1	The amount of the performance bond is	10% of 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 <i>defects date</i> is limited to:	The total of the Price
X18.3	The <i>end of liability date</i> is	five (5) years after Completion of the whole of the <i>services</i>

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Z	The <i>Additional conditions of contract</i> 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 services in addition to the amounts due in terms of core clause 92.1.

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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)

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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 *services* 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

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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 <i>Consultant</i> 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 <i>services</i>	The total of the Prices	Until the end of Liability date
Liability for death of or bodily injury to a person (not an employee of the <i>Consultant</i>) or loss of or damage to property resulting from an action or failure to take action by the <i>Consultant</i>	<p><u>Loss of or damage to property:</u> The replacement cost where not covered by the <i>Employer's</i> insurance</p> <p>The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance</p> <p><u>Bodily injury to or death of a person:</u> The amount required by the applicable law.</p>	Until the end of Liability date
Liability for death of or bodily injury to employees of the <i>Consultant</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law	Until the end of Liability date

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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.

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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 <i>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</i> .
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

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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 Consultant, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.
- 

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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)² 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 <i>Consultant</i> is (Name): Address Tel No. Fax No.	
22.1	The <i>key people</i> are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications: Experience:	
Only if required		CV's (and further <i>key persons</i> data including CVs) are appended to Tender Schedule entitled .
11.2(3)	The <i>completion date</i> for the whole of the services is	

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11.2(10)	The following matters will be included in the Risk Register		
11.2(13)	The <i>staff rates</i> are:	name/designation	rate
	Either complete here or cross refer to a schedule in Part C2.2		
25.2	The <i>Employer</i> provides access to the following persons, places and things	access to 1 2 3	access date
31.1	The programme identified in the Contract Data is		
50.3	The <i>expenses</i> stated by the <i>Consultant</i> are	item	amount
G	Term contract		
11.2(25)	The <i>task schedule</i> is in		

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PART 2: PRICING DATA

PSC3 Option G

Document reference	Title	
C2.1	Pricing assumptions: Option G	
C2.2	<i>Staff rates, expenses and the task schedule.</i>	

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C2.1 Pricing assumptions: Option G

1. How work is priced and assessed for payment

From Option G: Term contract

Identified and defined terms	11	
	11.2	(17) The Price for Services Provided to Date is, for each Task, the total of <ul style="list-style-type: none"> the Time Charge for work which has been completed on time based items on the Task Schedule and a proportion of the lump sum price for each other item on the Task Schedule which is the proportion of work completed on that item.
		(20) The Prices are <ul style="list-style-type: none"> the Time Charge for items described as time based on the Task Schedule and the lump sum price in the Task Schedule for each other item.

From the Core Clauses:

Identified and defined terms	11.2	(13) The Time Charge is the sum of the products of each of the <i>staff rates</i> multiplied by the total staff time appropriate to that rate properly spent on work in this contract.
------------------------------	------	--

and

Assessing the amount due	50.3	The amount due is <ul style="list-style-type: none"> the Price for Services Provided to Date, the amount of the <i>expenses</i> properly spent by the <i>Consultant</i> in Providing the Services and other amounts to be paid to the <i>Consultant</i> less amounts to be paid by or retained from the <i>Consultant</i>. <p>Any tax which the law requires the <i>Employer</i> to pay to the <i>Consultant</i> is included in the amount due.</p>
--------------------------	------	--

In effect Option G is a cost reimbursable form of contract with work ordered by the *Employer* on a Task by Task basis using the Task Schedule to compile the cost of carrying out a Task.

Expenses are calculated separately and added to the amount due for the services provided.

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2. Staff rates and expenses

Tendering consultants are advised to consult the NEC3 Professional Services Contract Guidance Notes before entering *staff rates* into Contract Data, or in section C2.2 which follows.

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 of the PSC3 Guidance Notes.

Expenses associated with employing a staff member in Providing the Services can be 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 *staff rates*.

Rate adjustment for inflation of *expenses* is explained on page 15 of the PSC3 Guidance Notes.

3. The function of the Task Schedule

The Task Schedule may include items of work to be paid for on a rate (Time Charge) or on a lump sum price for the item. Any work ordered during the term of the contract – i. e. before the Completion Date – for which there is no priced item in the Task Schedule is priced using the compensation event procedure and the resulting Price is added into the Price List.

The *task schedule* is prepared by the *Employer* for the *Consultant* to price, or may be prepared jointly with the *Consultant*. It is typically priced in two parts as items of work to be carried out on a time basis and lump sum prices for other items of work. The task schedule must be as complete as possible and fully representative of all the work and *services* which the *Employer* may require the *Consultant* to carry out. The only unknown is when the work is to be carried out; the Task Order will be used to instruct when work to be done.

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C2.2 Staff rates, expenses & the task schedule

This section can be used when the *staff rates* and *expenses* are considerable in number and more conveniently located here than in the Contract Data. Entries in the Contract Data should refer to this section of Part 2.

State whether the *staff rates* and *expenses* exclude or include VAT.

1. The *staff rates* are:

No.	Designation (or category) or name of staff member	Rate per {hour, day, month} excluding VAT

2. The *expenses* are:

No.	Expense item	Amount / rate excluding VAT

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3. The task schedule

The following format could be used:

No.	Items of work to be carried out on a time basis
	TBC

No.	Items of work priced on a lump sum basis	Price (excluding VAT)

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PART 3: SCOPE OF WORK

Document reference	Title	
	This cover page	
C3.1	<i>Employer's Scope</i>	
C3.2	<i>Consultant's Scope</i>	
C3.3	<i>Constraints on how the consultant provides the services.</i>	

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C3.1: EMPLOYER'S SCOPE

3.1.1 Description of the Services

The *Consultant* will provide a team of resources, suitably qualified in order to provide the Services. The *Consultant* is required to review current security infrastructure at identified sites, compile reports clarifying the gaps identified, compile user requirements and concept designs, develop detail designs and technical specifications and tender evaluation criteria for the specific security technology areas included in the scope of Services.

The *Consultant* provides subject matter experts suitably qualified for the different security and associated technology included in the *Consultant's* scope. The *Consultant* provides a single interface for the services required.

The services provided by the *Consultant* forms part of the first phase of the *Employer's* overall security upgrade project. The deliverables from the *Consultant* will be used for the specification and related procurement of the overall physical security upgrade projects which will follow later. The execution of the overall physical security upgrade phase is not part of the *Consultant's* contract.

The required assessments and technical documentation are performed and delivered in compliance to the *Employer's* identified standards and guidelines.

3.1.2 Executive Overview

Eskom Peaking has identified the need to upgrade the security features at the Peaking sites due to aging equipment as well as vulnerabilities in the security systems. The overall security upgrade project is planned to be executed in different phases. The phases are divided along technology requirements and site risks. The highest focus currently is the execution of the installation of perimeter CCTV. Preceding the execution of the replacement and upgrading of the physical security systems a gap analysis need to be performed. The gap analysis will review the current status of security systems at the identified sites as well as non-compliance to Eskom standards and requirements and legislative non-compliance.

The deliverables from this professional service contract will enable Eskom to finalise the required scope and technical requirements to proceed with the phased overall physical security system upgrade.

3.1.3 Objective of the Service

The need for the physical security upgrade within the Peaking environment is driven by various factors including risk, compliance, and resource restraints. The final objective of the completed Peaking physical security upgrade project shall ensure compliance with the identified security technology elements as required by Eskom Corporate Security by means of policy and various standards, to ensure the ability to generate and supply electricity to the grid, ensure legislative compliance and to reduce the reliance on human resources to perform security functions.

The objective and purpose of the Services provided by the *Consultant* related to this contract is to review current security installation, compile reports confirming findings, compile technical specification for the identified services which need to be executed and compile technical evaluation criteria for the identified upgrade and replacement scope of work.

The professional service contract will enable access to a qualified and experienced Consultant to perform the review and preparation work to support the future physical security upgrade project.

The *Consultant* deliverables will indicate technology which supports the physical security and addresses the identified vulnerabilities.

The *Consultant's* deliverables will enable the *Employer* to specify required Physical Security Design to enable the future physical security upgrades.

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The development of the other components under the Security Management System, such as guarding, asset scanning and control, searching, and modified standard operating procedures, are not part of the *Consultant's* scope and deliverables.

3.1.4 Scope of the Services

The *Consultant* shall provide a team of suitably qualified resources to meet the required deliverables of the project scope. The scope of the Services includes but is not limited to confirmation of Eskom requirements, site visits, gap analysis reports, detail designs, technical specifications for security technology and finalisation of technical evaluation criteria for identified scope.

The project is carried out on the identified Peaking sites and visitor centres as listed below.

- 1) Acacia (Edgemoor, Cape Town, WC) - Aero-derivative plant
- 2) Ankerlig (Atlantis, Cape Town, WC) - OCGT
- 3) Drakensberg (Bergville, KZN) – Pumped Storage Scheme and visitors centre.
- 4) Gariep (Gariep Dam, NC) – Hydro Station
- 5) Gourikwa (Mossel Bay, WC) - OCGT
- 6) Ingula (Ladysmith, KZN) – Pumped Storage Scheme and visitors centre.
- 7) Palmiet (Grabouw, WC) – Pumped Storage Scheme and visitors centre.
- 8) Port Rex (East London, EC) - Aero-derivative plant
- 9) Vanderkloof (Vanderkloof, NC) – Hydro Station
- 10) Sere (Vredendal, WC) – Wind Farm
- 11) Durbanville Office Complex (Durbanville, Cape Town, WC)
- 12) Colley Wobbles (Dutywa, EC) – Small Hydro Station
- 13) First Falls (Umtata, EC) – Small Hydro Station
- 14) Ncora (Cofimvaba, EC) – Small Hydro Station
- 15) Second Falls (Umtata, EC) – Small Hydro Station
- 16) Bella Rosa Office Building (WC)

The Services include the following security technology:

The security *Consultant* services need to evaluate the following security technologies and aspects in preparation of the technical documentation which will be required for the execution of the Peaking physical security system upgrade.

- 1) CCTV system
- 2) PA System
- 3) Preliminary detection and alarming
- 4) Control rooms
- 5) Civil requirements
- 6) Non-lethal electrical fence
- 7) Access control
- 8) Security lighting requirements

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3.1.5 Interpretation and Terminology

3.1.5.1 List of Definitions

Terminology:	Definition
Business Objective	The Business Objective represents an Enterprise Strategic Objective that defines the strategic intent of the organisation for a specified time period. These objectives are also referred to as goals or focus areas.
Committee / Forum	A committee has a life span and is a grouping of different business roles and, or jobs, that together share the responsibility of delivering the objective of the specific committee / forum.
Cost Estimate	Cost Estimate is the approximation of the cost of a project. The cost estimate is the product of the cost estimating process. The cost estimate has a single total value and may have identifiable component values.
Datasheet	A data sheet describes the technical characteristics of an item or product as designed and/or produced. A data sheet is not a technical specification.
Defence-in-depth	The principle whereby defeating one security measure presents the intruder with another obstacle or defence. This either frustrates the perpetrator or delays him long enough to effect a viable response. The word 'defence' is sometimes exchanged with 'protection'.
Design Basis Threat Analysis	A profile of the type, composition, and capabilities of threats against an asset. A design-basis threat Analysis (DBT) is used as a basis for designing safeguard systems to protect against acts of sabotage and to prevent theft. This term is applied to clearly identify the expected capability of a facility to withstand a threat.
Detail Design	Describe the requirements with a focus on the functionality provided by a specific application system AND / OR Describe the operational detail for successful execution of the business processes at an activity or work instruction level.
Document/Info	Document / Info represents the informal documents not required to be stored on the central document management system. It also includes information that is used or provided to complete activities that is not subjected to audit. Examples include: Audio visuals, Presentations or a Publications.
Electronic Report	The Electronic Report is a system generated report, for instance standard reports.
Engineering specifications	The technical characteristics of a (security) system
Eskom Managed Document	An Eskom Managed Document is a document that should be stored on the central document management system. It is controlled, the documents and content can be electronic or a hard copy. It could go beyond Eskom documents, some examples could be Regulations, Acts, and Industry Standards.
Functional Specifications	The functional specification is the formal response to the objectives. It describes all external users and programming interfaces that the product must support.
Group Security	Formulate security policy and strategy. Establish security governance mechanisms.
Guideline	A document explaining the use of equipment, methods, techniques, controls, approach, etc. or giving recommendations or guidance in a specific area.
Information Systems	All components of Information Systems including application, data, technical infrastructure and integration infrastructure. Hence, inclusive of IT.
Information Technology	The technology infrastructure components (hardware and software) of Information Systems. This term is sometimes used in the industry as a

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	synonym for "IS" as described above, and in some cases as a synonym for "Information Resources" or "Information Management" as defined below. ICT is a similar term which includes communications technology to provide for the convergence of technologies.
Informative Reference	Represents documents that are used as additional information or useful information that relates to the PCM.
Measure	A measure is a unit of information that provides meaningful insight into an activity or event. It may be an aggregate or summation.
Minimum Information Security Standards	This document lays down a minimum standard for the handling of classified information in all institutions, so that various institutions may send classified information to one another in the knowledge that the risk of compromising such information has been eliminated.
National Key Point	An installation which is of strategic importance to the Republic of South Africa. If at any time, any place or any area is so important that its loss, damage, disruption or immobilization may prejudice the Republic, the Minister may declare the facility to be a National Key Point in terms of the NKP Act.
Normative Process Knowledge	The process understanding that this refers to is indispensable for the application of the relevant
Normative Reference	The process understanding that this refers to is indispensable for the application of the relevant activities. This always refers to a Basic/Detail (L4) PCM.
Physical security	Describes measures that are designed to deny access to unauthorized personnel (including attackers or even accidental intruders) from physically accessing a building, facility, resource, or stored information; and guidance on how to design structures to resist potentially hostile acts.
Procedure	A document which sets out the description of the purposes, scope and sequence of activities, control points and responsibilities required to perform a task and how it shall be recorded.
Process Objective	Process Objective; The Process Objective states the objective of the end-to-end process, usually in terms of time, quality and cost.
Record	A Record is defined as data generated as a result of business activities, a class of records can be added to a Records register. Content based records cannot be amended, as this would invalidate their content. The information is historical and it includes documents stating results of activities performed (examples: archived e-mail, previous versions of controlled documents, minutes of meeting, Correspondence, Data files, Drawings, Lists, Checklists, Logs, Meeting documents, Registers, Reports, Source code and Statements.
Risk	A Risk is defined as an event, hazard, variance, or an opportunity, which could influence the achievement of Eskom's strategic, operational and compliance objectives, for example noncompliance with legislation, fraud, natural disasters or competition. Risk is a measure of uncertainty. The chance of something happening that will have an impact on objectives. In the business process, the uncertainty is about the achievement of objectives.
Security Advisory	Improve the quality of security in the organisation through the implementation of Eskom's security strategies and policies.
Security Advisory Design and Projects	Security Advisory Design and Projects; Provides guidance and direction on the design of security solution(s) and the technology requirements for these security solution(s).
Security Solution	A security solution is the appropriate solution, method, technique or skill to address a security gap / deficiency or satisfy a need or objective. A security solution could include a physical, logical, technical system, application, barrier, procedure, guard force, monitoring, response, executive protection programme.

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Security Technical System	Security Technical System; A security technical system relates to a specific field or subject in Security Management and it consists of a combination of interrelated interacting artefacts and components designed to work as a coherent entity to limit, prevent or eliminate the exposure to a security threat.
Specification - Design	A document that describes the features of the solutions for the Requirement Specification, referring to the designed solution or final produced solution.
Specification - Functional	A document that shows functional relationships and objectives of a system.
Specification - Requirement	A set of documented requirements of a system to be satisfied by a material, design, product, or service.
Standard	A document established by consensus that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.
Standard Generic Physical Design	A standard specifying the details of the Physical Security Design at a facility.
System Specification	A list of the measurements of characteristics of a system and its elements and the requirements for proper installation. The description of the various items needed to operate and maintain the system.
Task	A Task is an atomic unit of work, which is performed by a single person (position) / role, utilising specific resources. A set of sub-tasks occur over time and has a defined result. It describes transformations from an initial state to a final state.
Template/Form	A predetermined format defining the information required for a specific purpose and space for the provision of the information: A Template is a pre-developed page layout used to create new pages from the same design, pattern or style. A Form is a document with blank spaces for information to be inserted. It could include: Authorisations and Approvals, Assessments, Certificates, Forms, Checklists, Meeting documents, Registers, Reports and Statements.

Table 1 - Definitions

3.1.5.2 List of Abbreviations

Abbreviation	Description
ACS	Access Control System
BMS	Building Management System
BO	Business Objects or Business Objectives
BPM	Business Process Management
BU	Business Unit
CAD	Computer Aided Design
CCTV	Closed Circuit Television
CR	Control room
ECSA	Engineering Council of South Africa
E-Forms	Electronic Form
Eskom	Eskom Holdings SOC Limited, its divisions and owned subsidiaries.
GUI	Graphical User Interface (The display design used by operator to interact with the system)
Gx	Generation
h	Hour
IAC	Integrated Access Control
IACS	Integrated Access Control System
ID	Identity Document
IDOCS	Intermediate Document, Used in SAP to Transfer Information to Other Systems
IT	Information Technology
km	Kilometre
MPSS	Minimum Physical Security Standards

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MWP	Megawatt Park
NKP	National Key Point (Key protection objective)
NLEPDS	Non-lethal Electrified Fences
OGCT	Open Cycle Gas Turbine
PA	Public Address device (Audio response and communication)
PCR	Project Change Request
PSD	Physical Security Design
PSIUP	Physical Security Infrastructure Upgrade Program
PSU	Power Supply Unit (Converting distribution power into device power requirements)
Ref.	Reference, relates back to the numbered list in Section 6 in each document.
SACPCMP	South African Council for Project and Construction Management Professionals
SANS	South African National Standard
SAP	System Applications and Products, Business software for the Enterprise by the German Software Company
SCC	Security Control Centre, used non-specific as the active command & control unit
SHEQ-S	Safety Health Environmental Quality and Security
SOC	State Owned Company
SSCC	Site (Local) Security Control Centre
STRA	Security Threat & Risk Assessment
TBD	To Be Decided/determined
TRA	Threat and Risk Assessment
TRS	Technical Requirement Specification
UPS	Uninterruptable Power Supply
UTP	Unshielded Twisted Pair
VDSS	Vendor Document Submission Schedule

Table 2 – Abbreviations

3.1.6 Work and Things for the Services Supplied by the Employer/Others

The *Consultant* will be provided with a site office. Site office will be able to accommodate two people. Offices are furnished with desk and chairs. No communication support or IT support will be provided by the *Employer*. The *Consultant* is responsible for his own transport.

3.1.6.1 Approval of documentation

The *Project Manager* is to approve all documentation. The *Consultant* is not relieved from his obligations or responsibilities after the *Project Manager* has approved any of the documentation.

3.1.6.2 Drawing Numbering System

- (1) The *Employer* supplies the proposed drawing numbering system.
- (2) The *Consultant* may assign his own drawing number as required to meet his document control system requirements.

3.1.7 Confirmation of Eskom Standards and Guideline Requirements

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

After Contract award, the *Consultant* familiarises themselves with the Eskom related standards and guidelines. During this period the *Employer* will provide all available information to support the *Consultant*.

3.1.7.1 Eskom Standards and Works Instructions

Professional Services required for the Design and specification of integrated security solutions for all Peaking Generation Power Stations and Office Buildings

- [1] 240-53114002: Engineering Change Management Procedure.
- [2] 240-53113685: Design Review Procedure
- [3] 240-56176852: Essential Power Supplies for Power Stations Standard
- [4] 240-56177186: Battery Room Standard*
- [5] 240-56356396: Earthing and Lightning Protection*
- [6] 240-56355815: Control & Instrumentation Field Enclosures and Cable Termination Standard
- [7] 240-56364545: Structural Design and Engineering Standard
- [8] 240-76992014: Project Plant Specific Technical Documents and Records Management Work Instruction
- [9] 240-50317699: Manage Technical Queries Procedure*
- [10] 240-76368574 High Security Mesh Fencing
- [11] 240-91190304 Specification for CCTV Surveillance with Intruder Detection
- [12] 240-139282493_Security Lighting for Eskom Applications
- [13] 240-78980848 Rev 3 NON-LETHAL FENCE
- [14] 240-86738968 Rev 2 Integrated Security Alarm systems
- [15] 240-170000096 Rev 1 Physical Security Integrated Standard
- [16] 240-142962454 Peaking ECM Process Flow Work Instruction*
- [17] 240-102220945 - Specification for Integrated Access Control System (IACS) For Eskom Sites
- [18] 240-64720986: Emergency Preparedness Public Address System Standard
- [19] 240-91252315 - Standard for bullet resistant guard huts
- [20] 32-550 - Standard for perimeter security lighting at Eskom installations
- [21] 240-64636794 - Standard for Wiring and Cable Marking in Substations
- [22] 240-70413291 - Specification for Electrical Terminal Blocks
- [23] 240- 118870219 Standby Power System Topology
- [24] 240-56360034, Stationary Vented Lead Acid Batteries Standard
- [25] 240- 170000104 Lithium Iron Phosphate batteries
- [26] 240-51999453, Standard Specification for Valve-Regulated Lead Acid Cells
- [27] 240-53114248, Thyristor and Switch Mode Chargers Standard
- [28] 240-64139144, AC Boards and Junction Boxes for Substations
- [29] 240-76628687, AC/DC Reticulation Equipment for Breaker-and-a-Half Substations
- [30] 240-75658628, Distribution Group's Specific Requirements for AC/DC Distribution Units
- [31] 240-56227516 Low Voltage Switchgear Control Gear Assembly for voltage 1000VAC to 1500VAC
- [32] 240-53114026: Project Engineering Change Management Procedure
- [33] 240-54179170 Technical Documentation Classification and Designation Standard
- [34] 240-86973501 Engineering Drawing Standard - Common Requirements
- [35] 240-109607332 Eskom Plant Labelling Abbreviation Standard
- [36] 240-64550692: Label Specification and Plant Codification
- [37] 240-109607736: Eskom KKS Keypart Standard

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- [38] 240-93576498: KKS Coding Standard
- [39] 240-869713501 Eskom Drawing Standard
- [40] 240-44175038 Control of Non-Conforming Product or Service Procedure
- [41] 240-55410927 Cyber security standard for Operational Technology
- [42] 240-55683502 Definition of Operational Technology (OT) and OT/IT Collaboration Accountabilities
- [43] 240-79537982 Security Threat and Risk Assessments
- [44] 32-86 - Integrated Risk Management Policy*
- [45] Outline Generic Security Physical Design for Power Stations SRP/PO/Gen OR/001
- [46] SRPPSDDxCritSubs v2.0 – Outline Generic Physical Security Design for Distribution Substations
- [47] 240-168966153 Generation Technical Tender Evaluation Procedure (Rev 1)
- [48] 167A/49 Drawing and documentation standard for Consultants
- [49] 167A/143 Drawing Office Standard
- [50] 240-56063805 LV Power and Control Cable with Rated Voltage Standard

3.1.7.2 Legislative Documentation

- [51] National Key Point Act 102 of 1980*
- [52] Critical Infrastructure Protection Act 8 of 2019*
- [53] Access to Public Premises Act (Act No. 53 of 1985)
- [54] Firearm Control Act (Act No. 60 of 2000)
- [55] GGR 0992 : Plant Safety Regulations
- [56] Minimum Information Security Standards (MISS) (State Security Agency)
- [57] Minimum Physical Security Standards (MPSS) (Government Security Regulator (SAPS))
- [58] National Key Point Directive of 1990;
- [59] National Building Regulations And Building Standards Act, 1977 (Act No. 103 of 1977)
- [60] Companies Act no. 71 of 2008, and the guidelines of the King IV Report
- [61] *GNR1031, 1986 General Safety Regulations*
- [62] *R1010 Construction Regulations*
- [63] Occupational Health and Safety Act 85, of 1993 (OHS Act)
- [64] Eskom Plant Safety Regulations GGR 0092

3.1.7.3 EPSIUP Reference Documentation

- [65] EPSIUP_Task 606_73-001_PSIUP_Training Plan and Philosophy_Rev1*
- [66] EPSIUP_Task 606_121-001_Integrated Logistic Support_Plan_Rev1*
- [67] EPSIUP_Task 606_237_Deployment Model_Rev1*
- [68] EPSIUP_Task 606_238_Change Management Plan_Rev1.0*
- [69] EPSIUP_Task 606_240-001_PSIUP Compliance to the Reference PLCM_Rev1*
- [70] EPSIUP_Task 606_245_RACM_report_V1.0*
- [71] EPSIUP_Task 606_246_SystemDesignStrategy_Rev1*

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- [72] EPSIUP_Task 606_249_Generic Specification for Open Cycle Gas Turbine Generation Plants_Rev1
- [73] EPSIUP_Task 606_250_Generic Specification for Large Area Generation Facilities_Rev1
- [74] EPSIUP_Task 606_252_Generic Specification for Office Blocks_Buildings_Campuses_Rev1
- [75] EPSIUP_Task 606_253_Generic Design Specification for Control Centres_Rev 1.0
- [76] EPSIUP_Task 606_256_PSIM System Functional Specification_Rev1.0
- [77] EPSIUP_Task 606_257_High level Test Plan_Rev 1.0
- [78] EPSIUP_Task 606_258_Internet of Things (IoT) Technology Standards and Applications_Rev1
- [79] EPSIUP_Task 606_260_ESDTNet Telecommunications User Requirement Specification_Rev1
- [80] EPSIUP_Task 606_261_Power Management User Requirement Specification_Rev1.0
- [81] EPSIUP_Task 606_262-Generic Concept Design for Control Centres_Rev 2
- [82] EPSIUP_Task 606_263_General Abbreviations and Definitions used in PSIUP Documents_Rev1
- [83] EPSIUP_Task 606_265_Specification for Video Surveillance and Intrusion Detection Systems Rev1.0
- [84] EPSIUP_Task 606_267_Specification for Integrated Access Control Rev1.0
- [85] EPSIUP_Task 606_270_Specification for Integrated Security Alarm System_Rev1.0
- [86] EPSIUP_Task 606_273-02_ESDTNet Technology Standards Portfolio_Rev1
- [87] EPSIUP_Task 06_283_Preliminary Detail Physical Security Design Specification for Apollo_Tx_Substation_Rev1.0
- [88] EPSIUP_Task 606_293_Preliminary Detailed Design for NSCCA_Rev 1.0
- [89] EPSIUP_Task 606_294_Interface Management Approach_Rev1
- [90] EPSIUP-TASK 606-121-001 - PSIUP Integrated Logistic Support Plan.

3.1.7.4 Applicable South African and International Standards

- [91] SANS 10142-1 : Code of Practice for the wiring of premises
- [92] SANS 10222-1 : Electrical Security Installations - General
- [93] SANS 10222-2 : Electrical Security Installations - Access control
- [94] SANS 10222-3 : Electrical Security Installations – Electrified Fences
- [95] SANS 10222-5 : Electrical Security Installations - CCTV installations
- [96] SANS 10400 : Code Of Practice For The Application Of The National Building Regulations;
- [97] SANS 1091 : National colour standards for paint
- [98] SANS 1274 : Coatings applied by powder coating process
- [99] SANS 2220-1-7 : Electrical security systems Part 1.7: Intruder alarm systems: Power units
- [100] SANS 2220-2-1 : Access control systems Part 2-1: General characteristics
- [101] SANS 2220-2-2 : Access control systems Part 2-2: Central processors
- [102] SANS 2220-2-3 : Access control systems Part 2-3: Card readers
- [103] SANS 2220-2-4 : Access control systems Part 2-4: Reader controllers
- [104] SANS 2220-2-5 : Access control systems Part 2-5: Biometric readers
- [105] SANS 2220-2-6 : Access control systems Part 2-6: Access cards

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- [106] SANS 61000-1-2: Electromagnetic compatibility (EMC) Part 1-2:
- [107] SANS 9000 to 9004 : Quality management systems and standards
- [108] SANS 10389-2 Exterior lighting Part 2_Exterior security lighting
- [109] SANS 23-4 Test for all welding shear strength to be conducted according to this standard.
- [110] BS EN 10025-2 Posts are to be manufactured from either S275JR or S355JR grade steel:
- [111] SANS 121 The standard against which all metal parts to be hot dip galvanized
- [112] SANS 675 All fencing wire to comply to the requirements of
- [113] SANS 1700-5-8 Fasteners Part 5:
- [114] SANS 4628 Sections addressing cracking, blistering etc.
- [115] SANS 1200 SANS Standard Specifications for Civil Engineering Construction
- [116] SANS 10108 The classification of hazardous locations
- [117] SANS 10086-1 Maintenance and inspection of flameproof equipment
- [118] SANS 60079 Explosive atmospheres
- [119] SANS 1186 Symbolic Safety Signs
- [120] SANS 10400D Public safety
- [121] SANS 10400F Site operations
- [122] SANS 60529 Vehicle access
- [123] SANS 2220-2-7 Vehicle stoppers

3.1.7.5 Quality Related standards and Procedures

- [124] ISO 9001 Quality Management Systems
- [125] ISO 14001:2000 Environmental Management Systems
- [126] ISO 10007 Guidelines for Configuration Management
- [127] QM-58
- [128] SANS 9000 to 9004 : Quality management systems and standards

3.1.8 Existing Plant Overview

The Peaking sites are situated within the Eastern Cape, Western Cape, KZN and Free State provinces. The sites which are part of the scope of Service reflect different security footprints due to the function and size of the specific sites.

The current OCGT Sites, Drakensberg and Ingula are National Key Points – The sites have a self-start capability, and can rapidly join the grid to recover shortfalls in power production.

The sites have elements of the required security systems which are required in accordance with Eskom's standards and guidelines. The operational status of the equipment is however unknown.

a) OGCT and Aero-derivative plant sites

Applicable sites - Acacia, Ankerlig, Gourikwa and Port Rex

Current physical security at sites is limited to perimeter fence systems which are in place with security lighting and access points.

b) Pumped Storage

Applicable sites – Drakensberg, Ingula and Palmiet.

Current physical security at sites is limited to perimeter fence systems which are in place with security lighting and access points.

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c) Hydro

Applicable sites - Gariep, Vanderkloof, Colley Wobbles, First Falls, Ncora and Second Falls,

Current physical security at sites is limited to perimeter fence systems which are in place with security lighting and access points.

d) Wind Farm

Applicable site - Sere

Current physical security at site is limited to access control building

e) Office Complex

Applicable site – Durbanville Office, Bella Rosa Office Building

Limited access control exists

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C3.2 CONSULTANT'S SCOPE

3.2.1 Methodology of Execution of the Work Required

The required Service needs to be completed within a five month duration which will allow a single month for the corrections to information provided. The *Consultant* will have to provide for resources to enable parallel execution of work, due to the limited time durations, the large scope and long distances between Peaking sites.

3.2.1.1 Priorisation of deliverables

Due to current constraints and challenges the security *Consultant* is required to prioritise activities to meet the *Employer's* need for the execution of the upgrade of the Peaking physical security systems. The total duration for all the identified work which need to be provided by the Consultant 6 months from contract award.

Key deliverable dates

Security area	Priority	Completion Date
Perimeter CCTV systems Security structures (buildings), Site control room, Peaking security control room.	One	28 February 2024
Balance of plant CCTV, Integrated Access Control systems, PA Systems, Intrusion detection system, Non-lethal fencing, Security lighting, Perimeter fence systems	Two	30 April 2024

Table 3 – Prioritising Schedule

3.2.1.2 Related Information

The Consultant utilises the Eskom standards and work instructions in section 3.1.7.1, legislative documentation in section 3.1.7.2, ESIUP documentation in section 3.1.7.3 and SANS standards in section 3.1.7.4 to confirm the need of the Employer to be met in the assessment and future physical security upgrade project. Services and deliverables are provided in accordance with specified intent and regulations.

The ESIUP documentation is included in the reference documentation since the information contains confirmation of the anticipated processes and concepts related to the upgrade of the Eskom physical integrated security systems. The concepts and approaches specified in the documentation are applicable for the Peaking physical security upgrades requirement review and specification.

3.2.1.3 Site Verification

The *Consultant* compiles a review check sheet per security technology area which will be used for the site assessments based on the requirements derived from Eskom's standards and guidelines. Once the site review check sheet is accepted by the *Employer*, site verification can commence.

During this phase the sites are visited. Security technology and areas are inspected to confirm current state of the equipment and vulnerabilities as part of the Design Basis Threat Analysis.

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Due to the nature of the security technologies these site visits will provide for visits during day time as well as night time. The *Consultant* records the required information as per the accepted site review check sheets. The *Consultant* records any additional information which will provide security benefit to the *Employer*. The *Consultant* will need to attend site meetings to confirm security practises and coordinate site inspections.

3.2.1.4 Gap Analysis

The *Consultant* compile a gap analysis report per site which specifies the areas inspected, verification against the benchmark Eskom requirements, identified vulnerabilities and recommendations based on the information recorded during the site visits and meetings

The *Consultant* provides confirmation of the site information which will need to be provided by the *Employer* to support the technical specification for the different technologies.

3.2.1.5 Technical Specification

The *Consultant* combines the identified scope for the sites which is required to address identified vulnerabilities and conformance to Eskom's specifications. The Technical specification is compiled utilising Eskom technical specification templates as the basis of the report. The Technical specification includes the required information which will enable the *Employer* to proceed with the future planned physical security technology upgrades.

The technical specification addresses the scope of work, quantities, detail design requirements, execution, budget estimations, installation requirements and the technology performance requirements.

3.2.1.6 Technical evaluation Specification

Once the technical specification is accepted by the *Project Manager*, the *Consultant* provides the technical evaluation criteria which will be used to verify the tender technical suitability. The criteria as well as evaluation measures are provided in line with Eskom's Technical evaluation standard 240-168966153 Generation Technical Tender Evaluation Procedure (Rev 1).

The *Consultant* presents the technical evaluation specification to the Project Manager once the initial specification has been reviewed by the *Employer* and comments addressed.

3.2.1.7 Defect and Completion

The final month is used to address additional clarifications or updates to documentations provided as part of the contract. On foreseen or identified discrepancies which are identified after the final month correction period are corrected in line with the contract defects period. The *Consultant* will be responsible for corrections and clarification related to the deliverables as part of his Services for the defects period specified in the contract.

The services and deliverables need to be discussed with the Project Manager to enable confirmation and agreement on the completion phases associated with the Service being delivered in executing the *Consultant's* scope.

Completion will be reached once the final revision of the associated documentation which needs to be delivered by the *Consultant* has been accepted by the Project Manager as the final accepted version of the deliverable. Completion is derived on a sectional completion concept. The associated documentation need to be complete with all associated descriptions, specifications and drawings.

The following deliverables are required for completion of the sectional completion per site.

1. Gap analysis report.
2. User requirement report (ROC).
3. Concept design report
4. Detail design report.

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5. Technical specification.
6. Evaluation criteria report.

3.2.2 Employer's Standards and Reference Information to be used in Site Reviews

The information which is used to compile the site review check sheet and which serves as benchmark for the different technologies are indicated in the following sections. Note the consultant need to provide for the requirements of the Employers standards which are listed in section 3.1.71 where standard requirements are common to the specified references in this section.

Eskom Standards incorporates engineering best practice and standardisation. The Security System Design must apply the best solution to counter the defined threat. If that solution cannot satisfy the specification, or two specifications are contradictory, the conflicting requirement shall be recorded and the Project Manager shall make the decision in writing on which standard (if any) to apply.

3.2.2.1 Physical Security Infrastructure

Eskom Security Guideline

EPSIUP_Task 606_256_PSIM System Functional Specification_Rev1.0

3.2.2.2 OGCT Requirements

Eskom Security Guideline

EPSIUP-Task 606_249 - Generic Specification for Open Cycle Gas Turbine Generation Plants_Rev1

3.2.2.3 Large Area Security Requirements

Eskom Security Guideline

EPSIUP_Task 606_250_Generic Specification for Large Area Generation Facilities_Rev1

3.2.2.4 Office Buildings

Eskom Security Guideline

EPSIUP_Task 606_252_Generic Specification for Office Blocks_Buildings_Campuses_Rev1

3.2.2.5 Access Control Requirements

Eskom Standards;

240-102220945 - Specification for Integrated Access Control System (IACS) For Eskom Sites

Eskom Security Guideline

EPSIUP-TASK 606-267 – Specification for Integrated Access Control

3.2.2.6 Fence Requirements

Eskom Standards;

240-78980848 - Specification for Non-Lethal Energized Perimeter Detection System (NLEPDS) for protection of Eskom Installations and its subsidiaries

3.2.2.7 CCTV system

Eskom Standards;

240-91190304 - Specification for CCTV Surveillance with Intruder Detection

Eskom Security Guideline

EPSIUP_Task 606_265_Specification for Video Surveillance and Intrusion Detection Systems Rev1.0

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3.2.2.8 PA System

Eskom Standards;

240-64720986: Emergency Preparedness Public Address System Standard

3.2.2.9 Preliminary detection and alarming

Eskom Standards;

240-86738968 - Specification for Integrated Security Alarm System for Protection of Eskom Installations and its Subsidiaries

Eskom Security Guideline

EPSIUP-TASK 606-270 - Specification for Integrated Security Alarm Systems

3.2.2.10 Control rooms

Eskom Standards;

240-91252315 - Standard for bullet resistant guard huts

Eskom Security Guideline

EPSIUP_Task 606_262-Generic Concept Design for Control Centres_Rev 2

EPSIUP_Task 606_253_Generic Design Specification for Control Centres_Rev 1.0

3.2.2.11 Civil requirements

The standards which need to be used in reviewing the civil requirements for the Service required are listed below.

a) SECURITY MESH FENCE

- | | |
|------------------|---|
| 1. SANS 23-4 | Test for all welding shear strength to be conducted according to this standard. |
| 2. BS EN 10025-2 | Posts are to be manufactured from either S275JR or S355JR grade steel: |
| 3. SANS 121 | The standard against which all metal parts to be hot dip galvanized in accordance with. |
| 4. SANS 675 | All fencing wire to comply to the requirements of |
| 5. SANS 1700-5-8 | Fasteners Part 5: General requirements and mechanical properties
Section 8: Mechanical properties of corrosion- resistant stainless-steel fasteners - Bolts, screws, and studs |
| 6. SANS 4628 | Sections addressing cracking, blistering etc. |
| 7. QM-58 | Supplier Contract Quality |
| 8. 240-76368574 | High security mesh fencing standard |

b) BUILDINGS AND INFRASTRUCTURE

Normative References:

- | | |
|---------------------|--|
| 1. ISO 9001 | Quality Management Systems. |
| 2. (Act 85 of 1993) | Occupational Health and Safety Act and Regulations |
| 3. SANS 1200 | SANS Standard Specifications for Civil Engineering Construction |
| 4. SANS 10400 | The application of the National Building Regulations |
| 5. SANS 10108 | The classification of hazardous locations and the selection of equipment for use in such locations |
| 6. SANS 10086-1 | Maintenance and inspection of flameproof equipment |
| 7. SANS 60079 | Explosive atmospheres |
| 8. SANS 1186 | Symbolic Safety Signs |

Professional Services required for the Design and specification of integrated security solutions for all Peaking Generation Power Stations and Office Buildings

- | | | |
|-----|----------------|---|
| 9. | 240-102220945 | SPECIFICATION FOR INTEGRATED ACCESS CONTROL SYSTEM (IACS) FOR ESKOM SITES |
| 10. | ISO 14001:2000 | Environmental Management Systems |

Informative References:

- | | | |
|-----|---------------|--|
| 11. | GNR1031, 1986 | General Safety Regulations |
| 12. | SANS 10400D | Public safety |
| 13. | SANS 10400F | Site operations |
| 14. | R1010 | Construction Regulations |
| 15. | 167A/49 | Drawing and documentation standard for Consultants |
| 16. | 167A/143 | Drawing Office Standard |

- | | | |
|-----|--------------|--|
| 17. | 240-56364545 | Structural design and construction shall conform to Eskom Structural Design and Engineering Standard |
|-----|--------------|--|

Special requirements for buildings include that:

It is required that all entry points into buildings shall be secured by the Access Control system. Where viable, windows should be protected by burglar proofing, apart from areas where HV Regulations require otherwise.

All non-automated doors shall be fitted with a suitable grade security lock. Electromagnetic locks with minimum 5000N holding force shall be used, the maglocks shall be released with an authorized access card, pin and/or biometric input.

In the administration buildings all offices shall have security gates installed on the doors, a suitable key control system shall be introduced for the management of access to offices and the safekeeping of duplicate keys.

c) OTHER HARDWARE:

- | | | |
|-----|----------------|---|
| 18. | SANS 60529. | In vehicle gates there shall be an enclosure with locked cover that gives access to the operating mechanism, gears etc. of the gate. For booms, the enclosure i.e., an electric motor for electrically operated gates, or a pump complete with gears and valves for hydraulically operated gates. of an operating mechanism shall at minimum comply with the requirements of class IP45 of this standard. This cover shall also be equipped with a tamper protection switch, which is also to comply the same standard. |
| 19. | SANS 2220-2-7, | Vehicle stoppers shall comply with requirements of section 4.6 of this same standard. Pedestrian turnstiles shall comply with section 4.7 of this standard. Access booths shall be tested in accordance with section 6.3, of this standard. Barrier marking shall comply with section 5 of the standard. All inspections and testing of barriers shall be done in accordance with section 6 of this standard. |

3.2.2.12 Security lighting requirements

Eskom Standards;

32-550 - Standard for perimeter security lighting at Eskom installations

240-139282493_Security Lighting for Eskom Applications

SANS 10389-2 Exterior lighting Part 2_Exterior security lighting

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3.2.2.13 Cabling Requirements

Eskom Standards;

240-64636794 - Standard for Wiring and Cable Marking in Substations

240-70413291 - Specification for Electrical Terminal Blocks

Eskom Security Guideline

- (1) Any new cables installed are to be fire resistive cables PH 120 complying with SANS 10139 and rated for 120 minutes or more is to be used throughout the installation.
- (2) These cables may be fixed to the surface with steel clips where inside voids but must be installed in steel conduits where exposed.
- (3) All cabling is to form A class loops.
- (4) Cables are to be measurable. All cable being brought onto site is to be checked by the Project Manager for logging.
- (5) It is the responsibility of the Consultant to test the cable upon delivery to site and before utilizing such cable.
- (6) The Consultant is required to replace the fire/foam seals on cable racks between units if damaged in any way by the pulling of cables.
- (7) All cables are sized according to the design of the system. This must take into account all electrical and mechanical characteristics, such as voltage drops, current carrying capacity, impedance and mechanical protection. This is often dependant on the type and make of the equipment, as well as the specific environments in which they are installed. This is the responsibility of the Consultant.
- (8) Mixture of cable types is not permitted. Cables are only to be supplied from one manufacturer for the entire system to avoid known impedance problems caused by mixing different manufacturers cables.
- (9) Cable supports have the same fire rating as the cables.
- (10) Maximum bend radius of the new fibre cables are to be adhered to.
- (11) Alternatives to hardwiring of systems may be considered, but only if necessary. These are to comply with the EN 54 standard.
- (12) Joints, splices and terminations are made only in a suitably labelled enclosed terminal box employing fixed terminations and rated the same as the cable. These terminal/junction boxes are to be accessible and indicated on the appropriate drawings
- (13) As a general requirement Eskom field instrumentation installation standard for junction boxes and cable termination FIIS-2 (code name: 240-56355815) must be used as guidelines for installation of field devices.
- (14) In the event of a fire, cabling must not fall and therefore the need for non-flammable saddles/cable supports.
- (15) Where additional devices are installed it is the Consultant's responsibility to extend the conduits to these positions.
- (16) Conduits are to be measurable. All conduits being brought onto site are to be checked by the Project Manager for logging. No claims for extra conduit will be entertained if this procedure is not followed.
- (17) Existing conduit may be used. Any new conduit is to be 25mm in diameter or greater galvanised steel conduit.
- (18) The Consultant provides all wire and cable, complete with all accessories, as required to complete the entire installation.
- (19) All wires and cables comply with SANS 10139.

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- (20) All cables are fire resistant and be tested in accordance with EN 50200 and resist fire conditions for 120 minutes (PH 120)
- (21) All wires and cables supplied for use on the contract are new and are delivered to site in the original manufacturer's wrappings.
- (22) The screen of a screened cable is to be terminated at the main panel end only in accordance with the manufacturer's specification.
- (23) No running joints are allowed in wires or cables.
- (24) The numbers of cables installed in any one conduit or wire way is not to exceed the numbers permitted in terms of the regulations.
- (25) Where the wiring enters the control panels, etc., the cables are neatly and carefully bound together and secured by means of whip bindings. All cables are to be glanded at entry points using appropriate glands
- (26) Loop wiring does not enter the panel in the same entry as the mains power cable.
- (27) All loop cables and network cables are run out of the panel in one direction and return to the panel in a different direction. A class wiring configuration only will be accepted.
- (28) Wiring is to be marked using plastic tags (indoors) and metal (outdoors) so as to allow reference to the wiring diagrams which must be provided in terms of the contract.
- (29) Wiring, Cabling and Conduit is the responsibility of the Consultant.

3.2.2.14 Junction Boxes, Panels and Cubicles

- (1) The Consultant supplies all field mounted junction boxes for the termination of single pair (or triple) cables and connection to multi pair cables.
- (2) All junction boxes are lockable by means of a locking mechanism which limits access to the junction box by keys.
- (3) The junction boxes are supplied complete with terminals, gland plates, glands and all necessary equipment to make a complete assembly.
- (4) All cables enter junction boxes from the bottom.
- (5) All junction boxes have threaded hubs for conduit or cable gland connections.
- (6) Adequate access and space are allowed for maintenance purposes.
- (7) Terminal blocks are non-hygroscopic, sectional (barrier) type; cage clamp type terminals are used.
- (8) Terminal blocks are din rail mounted.
- (9) Minimum spacing in junction boxes is 150mm from terminal block to side of the box and 150mm between terminal block centre lines.
- (10) Incoming wires are connected to one side of the terminal block and outgoing wires connected to the other side.
- (11) All junction points are permanently identified, both on the wire and on the terminal block. All terminals within a junction box are numbered consecutively. All wires terminating in the junction box from the field are tagged with the field instruments AKZ number.
- (12) All junction boxes have sufficient blocks to terminate all cable pairs or triples including shield wires and all spares.
- (13) A terminal box connection diagram is placed in the drawing pocket in each terminal box.

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3.2.2.15 Power Supply Standards

Eskom Standards;

Power requirements are stipulated in each security technology standard and each design is to conform to the standard stipulated below.

Equipment	Technical Standard
Design philosophy	240-56176852, Essential Power Supplies for Power Stations
Standby Times	240- 118870219 Standby Power System Topology [23]
Nickel Cadmium Batteries	240-56360086, Stationary Vented Nickel Cadmium Batteries Standard
Vented Lead Acid Batteries	240-56360034, Stationary Vented Lead Acid Batteries Standard
Lithium Batteries	240- 170000104 Lithium Iron Phosphate batteries
Valve Regulated Lead Acid Batteries	240-51999453, Standard Specification for Valve-Regulated Lead Acid Cells
Power Electronics	240-53114248, Thyristor and Switch Mode Chargers, AC/DC to DC/AC Converters and Inverter/Uninterruptible Power Supplies Standard
Low Voltage Protective Devices, Cubicles and wiring	240-64139144, AC Boards and Junction Boxes for Substations 240-76628687, AC/DC Reticulation Equipment for Breaker-and-a-Half Substations 240-75658628, Distribution Group's Specific Requirements for AC/DC Distribution Units
Low Voltage AC	240-56227516 Low Voltage Switchgear Control Gear Assembly for voltage 1000VAC to 1500VAC

Eskom Security Guideline

EPSIUP_Task 606_261_Power Management User Requirement Specification_Rev1.0

3.2.2.16 Telecommunication

Eskom Security Guideline

EPSIUP_Task 606_260_ESDTNet Telecommunications User Requirement Specification_Rev1

EPSIUP_Task 606_264_ESDTNet Telecoms Link Capacity Plan_Rev1_ApprovalPage

3.2.3 Documentation Requirements

Eskom Standards;

240-76992014: Project/Plant Specific Technical Document Management Work Instruction

240-53113685: Design Review Procedure

240-53114026: Project Engineering Change Management Procedure

240-54179170: Technical Documentation Classification and Designation Standard

240-86973501: Engineering Drawing Standard - Common Requirements

240-109607332: Eskom Plant Labelling Abbreviation Standard

240-64550692: Label Specification and Plant Codification

240-53114002: Engineering Change Management Procedure

240-109607736: Eskom KKS Keypart Standard

240-93576498: KKS Coding Standard

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ISO 9001 Quality Management Systems

ISO 10007 Guidelines for Configuration Management

- i. All documentation is in the English language.
- ii. All documents as dictated by the VDSS are to be supplied by the Consultant. The VDSS security system documentation is applicable for each site.
- iii. Documentation required by standards referenced within this works is also to be supplied by the Consultant.
- iv. Documents are defined by the Consultant and requested by the Consultant. The Employer provides existing and available documentation on request. The identified documentation are added to the project VDSS.
- v. Existing drawings which are impacted by the detail design and the technical specification are marked up by the Consultant.

3.2.3.1 Drawings

The *Consultant* as a minimum provides the following drawings in support of technical specifications and detail designs:

- i. The positions of all control rooms
- ii. Power supply equipment concept
- iii. Security system layout drawings
- iv. Concept design for cabling
- v. General Arrangement Drawings
- vi. Network concept drawings.
- vii. Power supply concept drawings.
- viii. Integration design showing the interfaces of all security components

The creation, issuing and control of all engineering drawings will be in accordance to the latest revision of 240-869713501 (Drawing Standard) 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 electronic drawings in Micro Station (DGN) format and scanned drawings in pdf format. No drawings in TIFF, AUTOCAD or any other electronic format will be accepted. Drawings issued to the *Employer* may not be "Right Protected" or encrypted.

3.2.3.2 Reports and General documentation requirements

- (1) Documentation deliverables are of a good quality.
- (2) The *Consultant* provides one hard copy and an electronic copy after acceptance of the documentation. The reviews are conducted utilising electronic copies of the documentation.

3.2.4 Configuration and Documentation Management

3.2.4.1 Documentation Management

i. Document identification

The *Consultant* is required to submit the Vendor Document Submission Schedule (VDSS) as per agreed dates with the delegated *Employer* Representative. The *Employer* will pre-allocate document

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numbers on the VDSS and send back to the *Consultant* through the delegated *Employer* Representative. The VDSS is revisable and changes must be discussed and agreed upon by all parties. Changes in the VDSS can be additional documentation to be submitted, changes in submission dates or corrections in documentation descriptions, document numbers, etc.

ii. Documents Submission

All project documents must be submitted to the Project Manager with transmittal note according to Project / Plant Specific Technical Documents and Records Management Work Instruction (240-76992014). In order to portray a consistent image it is important that all documents used within the project follow the same standards of layout, style and formatting as described in the Work Instruction above. The *Consultant* is required to submit documents as electronic and hard copies and must be delivered to the Project Manager with a transmittal note.

iii. Plant Identification

The Contract reference plan and equipment utilising the Eskom plant identification standards within the reports, documentation and detail designs generated by the Consultant.

iv. Plant Coding Allocation

Coding of the design will be based on the KKS coding system and the *Employer* will undertake the coding in line with its standards. The KKS coding shall be applied during the design review stage(s) and cross referenced to all arrangement drawings, schematics, and descriptions. The *Consultant* will be required to include allocated coding to the electronic design drawings.

3.2.5 General Requirements

i. Eskom Standards;

These standards are applicable to all the different technology reviews and need to be considered in the execution of the scope of work related to the areas.

240-44175038 - Control of Non-Conforming Product or Service Procedure

240-55410927 - Cyber security standard for Operational Technology

240-55683502 - Definition of Operational Technology (OT) and OT/IT Collaboration Accountabilities

240-79537982 - Security Threat and Risk Assessments

32-86 - Integrated Risk Management Policy

240-53113685: Design Review Procedure

ii. Eskom Security Guideline

EPSIUP_Task 606_258_Internet of Things (IoT) Technology Standards and Applications_Rev1

EPSIUP_Task 606_273-02_ESDTNet Technology Standards Portfolio_Rev1

Outline Generic Security Physical Design for Power Stations SRP/PO/Gen OR/001

SRPPSDDxCritSubs v2.0 – Outline Generic Physical Security Design for Distribution Substations

EPSIUP-TASK 606-237 - PSIUP Deployment Plan & Philosophy document

EPSIUP-TASK 606-121-001 - PSIUP Integrated Logistic Support Plan

3.2.6 Change Management Requirements

i. Eskom Standards;

The Consultant takes note of the Employer's Project Engineering Change Procedure (240-53114026). An engineering change includes any proposed change originating from engineering, *Consultants* or project management.

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3.2.7 Parts of the Works which the Consultant Delivers

3.2.7.1 Plant investigation work

The project intends to provide strategic technical guidance to mitigate identified security risks, legislative non-compliance, safety risks and engineering challenges at Peaking sites. The *Employer's* priority is to determine an end-state solution to increase security awareness, decrease criminal activities and limit the impact of crime at Peaking sites. The project aims to identify the various technologies, risks and prioritize the implementation along a developed deployment model.

The scope of the plant investigation work includes, but is not limited to:
Verification of the physical security scope of Services as defined by the Works Information and associated appendices.

During the plant investigation work, the *Consultant* takes responsibility for collecting all information and site review deliverables to enable the *Consultant's* gap analysis and technical specification to be completed.

3.2.7.2 Consultant's Gap analysis and concept engineering

The *Consultant* confirms the gaps between existing security installations and requirements to meet Eskom compliance as part of the Design Basis Threat Analysis. The information utilised for the gap comparison is derived from the site visit information. The gap analysis report is used to confirm the final user requirements which are used to complete the detail design for the various security technologies.

i. General requirements

Concept engineering is defined as being all activities to clearly identify the *Consultant's* security proposals for the Peaking security technology scope concerned based on the identified user requirements.

As a minimum, concept engineering consists of the following activities:

- a) Overview of installed security technologies and vulnerabilities – This information forms the cornerstone for the Contract deliverables which will follow.
- b) Plant information consolidation – during which the *Consultant* conducts and finalise the site related information such as procedures and drawings which is required for the execution of the security upgrade project.
- c) Scope definition – during which detailed scope definition and clarifications are performed.
- d) The plant investigation work and scope definition activities are conducted per site.
- e) All concept engineering activities are executed by the *Consultant* in active co-operation with the *Employer*.
- f) The concept engineering activities are phased to meet the overall contract duration and key deliverables.
- g) The *Consultant* identifies any discrepancies that would lead to shortcomings in the security design and makes the Project Manager aware of such discrepancies and provides recommendations, where applicable. The *Consultant* takes action on such identified vulnerabilities and discrepancies.

ii. Related Information Requirements

As a minimum, during the detail design activity, the *Consultant* develops and clarifies the documents defined in as being required for the detail design.

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iii. Scope definition

As a minimum, during the scope definition activities the documents in Appendix A – Vendor Document Submittal Schedule that is required to provide clarity for upfront work. This is optimised in the concept engineering design freeze.

As a minimum, during user requirement/detail design activities the following items are verified and clarified by the Consultant:

- i. Security system input devices
- ii. Security system civil changes
- iii. Confirmed current technology and quantities
- iv. Integration between different technologies
- v. Future compatibility to Eskom Security requirements.
- iv. Interfaces to 3rd party systems

The *Consultant* reviews the requirements to interface to 3rd party systems during the plant investigation phase and is included in the concept engineering phase.

3.2.7.3 Consultant requirements in detail engineering

The Consultant confirms, prior to detail design freeze, that all requirements and clarifications are finalised and completed.

The *Consultant* ensures that no specific configurations or customisations have been implemented without proper technical clarification.

Consideration is given during concept engineering of future version upgrades and the impact of the non-standard applications prior to realising the detail design.

3.2.7.4 Consultant's Technical Specification

i. General requirements

Technical specification phase is defined as being all activities required to translate the Consultant's gap analysis findings and recommendations and detail design into a technical specifications which will allow the *Employer* to issue the information to the market to upgrade the security technology.

As a minimum, the Technical specification phase consists of the development, technical clarification and acceptance of the documents defined in as being required for the detailed technical specification freeze in Appendix A – Vendor Document Submittal Schedule.

The Technical specification provides for the interfaces required for an integrated security solution and includes interface and support systems as part of the works

At the end of the phase the *Consultant* utilises the information to compile the Technical evaluation requirements for the identified requirements in the *Consultant's* Technical specification and detail design.

3.2.7.5 System Requirements

i. Standardisation

A standardised approach is taken for all security equipment and solutions and control room equipment for the security systems. Hardware and software is modular and standardised and a common design philosophy is to be implemented throughout the sites to increase system maintainability, reduce training and spares requirements.

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3.2.8 Procedure for Submission and Acceptance of Consultant's Deliverables

3.2.8.1 Design Review Procedure

The Consultant is the Design Authority as defined in the Design Review Procedure (240-53113685). The Consultant is responsible for following this design procedure and conducting all the design reviews as specified in this procedure. The Consultant is responsible for conducting the following design reviews:

- i. Detail Design Review
- ii. Technical Specification
- iii. Tender Evaluation Specification

The Consultant, who is fully responsible for carrying out the detail design, submits, on a continuous basis, all design calculations and drawings for review by the Project Manager.

The Consultant provides for clarification meetings to confirm requirements and assessments during the execution of the works.

3.2.9 Other Requirements of the Consultant's Design

3.2.9.1 Engineering work to be provided

The scope of work to be performed by the appointed Consultant will be applicable to the following engineering disciplines:

- (1) Mechanical Engineering
- (2) Security system Engineering
- (3) Electrical Engineering
- (4) Civil Engineering

The Scope of Services shall be aligned with those recommended by The Engineering Council of South Africa for persons registered in terms of the current Engineering Professions Act.

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C3.3 CONSTRAINTS ON HOW THE CONSULTANT PROVIDES THE SERVICES.

3.3.1 Management meetings

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.

The Consultant attends monthly feedback meetings at an agreed venue as well as adhoc clarification meetings. Meetings can be attended virtually via MS teams or contact. Contact meetings will be at specific sites or at the Gourikwa Power Station.

The Consultant provides a work centre to accommodate the resources required for the execution of the scope of work. The work centre provides for all equipment which is required to execute the scope of work.

3.3.2 Consultant's key persons

The Consultant must provide:

- Contact details of Consultant's key persons (including landline and mobile number)
- Leave requirements of Consultant's key persons. If leave requirements conflicts with deliverable deadlines an alternate, suitable alternative key person are allocated.
- Contact details of alternate, suitable key person

The Consultant provides resources which supports the technology as well as the contract duration. The Consultant provides for the required skill and experience of support the management of the project.

The Consultant must have reference to experience within the technology which is part of the works. The Consultant must have previous experience in executing security projects. The Consultant or must be experienced in the execution of installation of new security systems as well as the required engineering associated with the security systems.

The Consultant provides for specific experts to comply with the experience and skill requirements required for the execution of this contract.

Due to the limited time and large scope competency of the Consultant is critical to meet intended deadlines.

The final concept design associated with specifying the technical specification of the required technology will be approved by an ECSA registered engineer.

The normal Security Vetting of the Consultant's staff will be required after contract award.

3.3.3 Provision of bonds and guarantees

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Consultant* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

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The *Employer* may withhold payment of amounts due to the *Consultant* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Consultant* by the *Employer's Agent* to receive and accept such bond or guarantee. Such withholding of payment due to the *Consultant* does not affect the *Employer's* right to termination stated in this contract.

3.3.4 Documentation control and retention

3.3.4.1 Identification and communication

Format of documentation will be according to Eskom's templates where prescribed. The Employer provides templates that is required to be used with this contract.

3.3.4.2 Retention of documents

The *Consultant* hands over all documentation (hard and electronic copies) upon completion of the contract to the *Employer*. All documents strictly remain the *Employer's* property.

3.3.5 Records and forecasting of expenses

Not Applicable

3.3.6 Records and forecasting of the Time Charge

As per clause 21.4

3.3.7 Invoicing and payment

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

- a) Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Consultant* submits a tax invoice to the *Employer*, showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.
- b) The *Project Manager* to be copied in on all electronic invoices emailed.
- c) Failure to submit the invoice to the correct address could result in delays in payment.
- d) The *Consultant's* Tax Invoices comply with the requirements as stated in clause Z7 of the Contract Data
- e) Invoices are submitted electronically to:
 - Local Eskom Invoices - invoiceseskomlocal@eskom.co.za
- f) Details required when submitting invoices and additional data:
 - The subject line on your email should only contain your vendor number
 - Each invoice in PDF should be named with your invoice number only
 - All electronic invoices must be sent in PDF format only
 - Attach the proof of delivery to your invoice
 - Where applicable, supporting documents must be attached to the scanned PDF invoice as one attachment
 - A copy of the signed assessment certificate

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- CPA calculation sheet
- Retention Certificate where it is a retention invoice
- Any other appropriate documents, e.g.
 - For shipping invoices, please ensure the following documents are attached
 - Invoice (this should only reflect the shipping cost)
 - Commercial invoice
 - Delivery note
 - Your shipping costs calculation relevant to that invoice – not a generic calculation (The amount of the shipping costs calculation must balance on the amount on the invoice.)
 - Forwarding agent's invoice
 - The customs document

Please do not attach unnecessary documents as this will make the file too large

The *Consultant* includes the following information on each tax invoice:

g) Include the following information on the Invoice:

- Name and address of the Consultant and the Employer's Agent
- The contract number and title;
- Consultant's VAT registration number;
- The Employer's VAT registration number 4740101508;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- Consultant's company registration number if applicable
- Consultant's banking details
- Name and address of recipient
- Tax invoice number and date of issue,
- Description of goods/service provided,
- Quantity or volume of goods/services
- Period time for which the Tax Invoice is being rendered,
- Relevant Task Order Number (commencing with a 45 prefix),
- Relevant line item number,

Statement whether value added tax is included or excluded.

The *Consultant* attaches the detail assessment of the amount due to each tax invoice showing the Price for Work Done to Date for each item in the Price List for work which he has completed.

3.3.8 Contract change management

As per core clause 6.

3.3.9 Inclusions in the programme

The Consultant drafts a project execution plan which is submitted as part of the tender evaluation. The program confirms resources and the critical path and interdependencies between activities. The planning provides for critical path approach. All planning unless approved otherwise by the Project Manager is executed in MS Projects.

Normal working time is between:

Monday to Thursday 8:00 till 16:00

Friday 08:00 till 12:00.

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3.3.10 Quality management

3.3.10.1 System requirements

Clause 40.1 requires that the *Consultant* operate a quality management system as stated in the Scope. Supplier Quality Management: Specification 240-105658000 Category 2

3.3.10.2 Information in the quality plan

Clause 40.2 requires that the *Consultant* provide a quality policy statement and quality plan which complies with requirements stated in the Scope. Supplier Quality Management: Specification 240-105658000 Category 2

3.11 The Parties use of material provided by the *Consultant*

3.11.1 Employer's purpose for the material

As per Clause 70.1, the *Employer* will use the material provided by the *Consultant* for implementation outside of this contract.

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

As per 3.3.4.2. the *Consultant* is restricted from using any material obtained during the execution of this contract

3.11.3 Transfer of rights

The *Employer* owns the *Consultant's* rights over material prepared for this contract by the *Consultant* except as stated otherwise in the Scope. The *Consultant* obtains other rights for the *Employer* as stated in the Scope and obtains from a Subconsultant equivalent rights for the *Employer* over the material prepared by the Subconsultant. The *Consultant* provides to the *Employer* the documents which transfer these rights to the *Employer*.

3.12 Management of work done by Task Order

NOT APPLICABLE

3.13 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 *services*.

The *Consultant* is also expected to comply with the following documents when rendering a service to Eskom but not limited to the following:

- a) Eskom *Consultant* Health and Safety Requirements Standards 32-136
- b) SHE Specification provided
- c) Occupational Health and Safety Act 85 of 1993
- d) Compensation for Occupational Diseases and Illnesses Act 130 of 1993
- e) Eskom Life Saving Rules
- f) Eskom Substance abuse Procedure 32-37
- g) SHEQ Policy 32-727
- h) Environmental Occupational Health and Safety Incident Management Procedure 32-95
- i) Vehicle Specification 32-345
- j) Standard SHE Requirements for the Eskom Commercial Process 32-726
- k) Section 37 Agreement

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3.14 Procurement

3.14.1 BBBEE and preferencing scheme

The *Consultant* complies with and fulfils the *Consultant's* obligations in respect of the Broad Based Black Economic Empowerment (as per clause Z3).

The *Consultant* provides proof of B-BBEE status on renewal of status

3.14.2 Other constraints

NOT APPLICABLE

3.14.3 Preferred subconsultants

NOT APPLICABLE

3.14.4 Subcontract documentation, and assessment of subcontract tenders

NOT APPLICABLE

3.14.5 Limitations on subcontracting

Refer to Invitation to Tender, Annexure B.

If the Consultant makes use of a sub-Consultant, complete 8.1- 8.7.

Not more than 30% of the Works may be sub-contracted.

3.14.6 Attendance on Subconsultants

NOT APPLICABLE

3.15 Correction of Design Defects

As per NEC PSC Core Clause 4 (Quality), 41.1 and 41.2

3.16 Working on the *Employer's* property (

Acceptance of this tender is subject to the condition that both the contracting company's management and its employees will provide Eskom with a clear criminal record not older than thirty (30) days from a reputable screening company. If the principal *Consultant* appoints a subcontractor, the same provisions and measures will apply to the subcontractor. Acceptance of the tender is also subject to the condition that the *Consultant* will implement all such security measures for the safe performance of the work as required in the scope of the contract.

- All Site access is controlled through the designated access gate.
- The *Consultant* is informed of the access procedures through Site regulations and that such procedures may change depending on the prevailing security situation.
- The *Consultant* is to comply with all Site regulations and instructions. The onus is on the *Consultant* to ensure his familiarity with the *Employer's* Site regulations and inspections.

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- Before work starts on Site, a Site inaugural meeting is held between the *Consultant* and the *Employer*, where details of the *works* are discussed and clarified.
- The *Consultant's* Site Supervisor is on Site for the entire duration of the *works*.
- General access to the power station is controlled and Site induction must be completed before work is allowed to start.
- It is mandatory that the *Consultant* adheres to all security regulations in force during the period of the contract.
- Before entry to the Site is allowed, everyone undergoes an alcohol breathalyser test which needs to be passed. This is one of the five Life-saving Rules to which the *Consultant* is required to adhere to at all times

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

The *Employer* will at all times furnish the consultant with the minimum security requirements for the affected property. *Employer's* entry and security control, permits and site regulations shall be adhered to at all times.

3.16.2 People restrictions, hours of work, conduct and records

The *Consultant* keeps records of his people working on the *Employer's* property. The Project Manager shall have access to these records at any time.

3.17 Cooperating with and obtaining acceptance of Others

As per Core Clause 23.1

3.18 Things provided by the *Employer*

The *Employer* shall provide access to its facilities to the *Consultant* as and when required to provide the Services

3.19 Cataloguing requirements by the *Consultant*

NOT APPLICABLE

4. Appendixes

4.1 List of Appendixes 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.

Appendix	Revision	Title
VDSS	Rev 0.1	Vendor Document Submission Schedule