

# Re-Tender

## **TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES BAY SUBSTATION 40MVA CAPACITY UPGRADE**

**at the**

**East London Industrial Development Zone**

**CONTRACT NO: ES/24/ELEC/LEACHESBAY/ 40MVA/02**

**VOLUME A (1 of 2): TENDER FOR THE PROPOSAL  
OF 132/11kV ESKOM LEACHES BAY SUBSTATION  
40MVA CAPACITY UPGRADE**

East London IDZ  
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**NOTE: DO NOT SPLIT/UN-BIND THIS DOCUMENT**

## TABLE OF CONTENTS

<b>1.</b>	<b>THE TENDER</b>	
<b>1.1</b>	<b>TENDERING PROCEDURES</b>	
1.1.1	Introduction	6
1.1.2	Tender Notice and Invitation to Tender	7-12
1.1.3	Tender Data	13-20
F	Standard Conditions of Tender	
<b>2.</b>	<b>THE CONTRACT</b>	
<b>2.1</b>	<b>CONTRACT DATA</b>	
2.1.1	Contract Data	23-36
<b>2.2</b>	<b>SCOPE OF WORK</b>	
<b>2.2.1</b>	<b>Description of the Works</b>	
2.2.1.1	Employer's Objectives	37
2.2.1.2	Overview of the Works	37
2.2.1.3	Extent of the Works	37-45
2.2.1.4	Location of Works	46
<b>2.2.2</b>	<b>ENGINEERING</b>	
2.2.2.1	Design	46
2.2.2.2	Employer's Design	46
2.2.2.3	Contractor's Design	46
2.2.2.4	Drawings	46
<b>2.2.3</b>	<b>PROCUREMENT</b>	
2.2.3.1	Procurement Principles	47
2.2.3.2	Contractors Personnel	47
2.2.3.3	Temporary Workforce	48
2.2.3.4	Labour Intensive Construction	48
2.2.3.5	Subcontracting	49
2.2.3.6	Handover & Training	50
2.2.3.7	Proof of Compliance with the Law	50
2.2.3.8	Meetings frequency for upgrade	50
<b>2.2.4</b>	<b>CONSTRUCTION</b>	
2.2.4.1	Standard Specifications	51
2.2.4.2	National and International Standards Variations	52-54
2.2.4.3	Variations and Additional Clauses to The Standard and Particular Specifications	55-69
<b>2.2.5</b>	<b>MANAGEMENT</b>	

	2.2.5.1	Management of The Works	70
	<b>2.3</b>	<b>SITE INFORMATION</b>	
	2.3.1	Existing System	74
	2.3.2	Environmental Restrictions	74
	<b>APPENDICES</b>		
	A	Generic Occupational Health and Safety regulations	76
	B	Functional Design Specification and Drawings (Detailed Package and remaining drawings to be issued to the successful bidder upon appointment)	77
	C	ELIDZ guidelines for completion of supplier development bid document	78
	D	Environmental Management Plan (EMP)	84

## PART 1 - THE TENDER

CONTRACT NO: ES/24/ELEC/LEACHESBAY/ 40MVA/02

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM  
LEACHES BAY SUBSTATION 40MVA CAPACITY  
UPGRADE**

## **1.1 TENDERING PROCEDURES**

### **1.1.1 Introduction**

### **1.1.2 Tender Notice and Invitation to Tender**

### **1.1.3 Tender Data**

### **1.1.4 Standard Conditions of Tender**

### **1.1.1 INTRODUCTION**

The proposal to develop an Industrial Development Zone (IDZ) in East London has been adopted as a result of the Department of Trade and Industry's policy to provide incentives for the development of IDZ's at locations that have good access to harbours and / or airports. The East London Industrial Development Zone (SOC) Ltd (ELIDZ) was formed for the purpose of establishing the East London Industrial Development Zone.

The ELIDZ is made up of representatives of Buffalo City Municipality, Provincial Government, the Eastern Cape Development Corporation, business, labour and parastatals. The current electricity supply to Zone 1 is from the Leaches Bay 132/11kV 2 x 20MVA substation. The Eskom Leaches Bay substation is supplied by 2 x 132kV lines with a transfer capacity of 80MVA. The Leaches Bay substation has fourteen 11kV Feeders currently installed.

The current ELIDZ electrical network is divided into Four supply Zones with limited interconnection between them. Each Zone has a dedicated switching station from which all its MV/LV substations are connected. Zone 1A has Two switching stations due to its high electricity demand and available land still to be developed. The substation feeds Two switching stations within the development Zone and has Two Feeders which feeds residential areas outside of the Development Zone, within Buffalo City Metropolitan Municipality.

The existing Eskom Leaches Bay substation and the downstream ELIDZs, MV network; has inefficient spare capacity for future load growth to provide the bulk supply for the new tenants and the existing tenants expansion at East London Development Zone. The Industrial Development Zone aims to obtain an additional power supply through creating a redundant power connection and upgrading of Eskom Leaches Bay substation by upgrading the existing substation to include a Third transformer bay with a 40MVA capacity. This will assist in achieving an end state 40MVA firm power supply capacity to the ELIDZ.

The upgrading of the substation to accommodate the additional capacity includes upgrade of ancillary equipment; namely the AC/DC board, Vamp protection panel, Feeder protection on switchboard, transformer protection and metering panels. The scope of works for this package will form part of the Customer Application no.3 Scope of Works. All upgrades will be completed as per the Eskom self-build policy, where the developer shall design, procure and pre-commission the primary and secondary scope of works.

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES BAY SUBSTATION 40MVA CAPACITY UPGRADE**



### **1.1.2 TENDER NOTICE AND INVITATION TO TENDER**

The ELIDZ is the duly appointed operator of the East London Industrial Development Zone, a multi-million-rand infrastructure and bulk services development initiated by the Department of Trade and Industry (DTIC) that is part of the government's micro-economic reform strategy. The zone is already operational and currently houses a number of manufacturers that supply products for the local and international markets.

The East London Industrial Development Zone hereby invites suitably qualified and experienced Eskom Approved service providers (otherwise referred to as the contractor) for integrating the supply, install and commissioning of the Eskom Leaches Bay 132/11kV substation upgrade.

<b>Tender Reference No.</b>	<b>Tender Description / Name</b>	<b>Closing Date / Time</b>
<b>ES/24/ELEC/LEACHESBAY/ 40MVA/02</b>	<b>TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES BAY SUBSTATION 40MVA CAPACITY UPGRADE</b>	<b>06 Dec 2024 @ 12:00 noon</b>

The Services include the following summarized scope of work:

#### **1.1. The Scope of work**

The works comprises of the supply, delivery, installation, testing and commissioning of all Primary and secondary plant equipment for the construction for an additional 132/11kV 40MVA transformer bay, 11kV Switchboard upgrade (2x transfer feeders, 1x bus section and 1x incomer feeder) and related ancillaries. All equipment for this project to be supplied to Eskom specifications and standards. All Installation to be in accordance with the applicable South African codes, local codes and ordinances, Eskom specific equipment Sapp no. apply for ordering.

The contractor should go through the issued BOQ, drawings and Eskom specifications to get a deep understanding of the detailed scope of work and materials to be supplied as enlisted on **Annexure B**.

#### **1.2. Resource Management**

1.2.1. The activities each member to be involved in may be indicated in the project programme.

1.2.2. The estimated time the member will be involved in the relevant activities must also be indicated on the project programme.

#### **BRIEFING MEETING**

**Note: A Compulsory Briefing with representatives of the Employer will take place Virtually via Microsoft Teams on 12 Nov 2024 starting at 11h00. Participants will be required to use the following details to join Meeting ID: 395 597 875 439 and Passcode: H6B8e3.**

#### **BID CONDITIONS:**

- ☐ Tenderers are required to submit a Valid SARS Tax Clearance Certificate with their tender, or the relevant SARS pin code which will allow the ELIDZ to confirm the tenderers tax status on-line.

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



- ❑ Tenderers should submit a Valid original or certified B-BBEE certification. Companies with annual turnover less than R10 million to submit an accountant or SARS letter confirming turnover.
- ❑ Tenderers to provide certified copy of Company Registration Certificate
- ❑ The tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.
- ❑ Tenderer must be registered on Central Supplier Database (CSD) from National Treasury and MAAA number must be provided.
- ❑ A registered office within the Buffalo City municipal boundaries will be given preference.
- ❑ The tenderer must submit a bank rating equal to and or better than a C. (Note letter from Bank to exclude tendered amount).
- ❑ Tenderers to provide a Valid Letter of Good Standing from Compensation Commissioner
- ❑ Tenderers must submit technical and financial proposals in two separate envelopes clearly marked "Envelope A -Technical Proposal "and "Envelope B – Financial Proposal". Then the financial proposal will only be opened should the technical proposal be found to be acceptable.
- ❑ Non- signed "Form of Offer" the financial proposal in "Envelope B" submission will result in the disqualification of the tender.
- ❑ Inclusion of Price Offer and/ or any other price related details in "Envelope A -Technical Proposal "will result in the disqualification of the tender.
- ❑ The successful Tenderer will be required to have sufficient and competent staff available to commence full time operations in accordance with the contract with effect from the Commencement Date, failing which the contract will be awarded to the next most preferred Tender.
- ❑ Registration with the CIDB in the category **7EP** or higher is compulsory for companies wishing to submit tenders.
- ❑ All returnable documents and schedules as listed in T2.1 OF Volume 2 of 2: List of Returnable Documents.
- ❑ Provide **Eskom approved vendor number** for Eskom Holdings SOC Ltd (Eastern Cape) confirming the service provider is an approved Eskom Contractor Failure to confirm this will result in disqualification.
- ❑ Submit confirmation of compliance with **ORHVS level/outcome 6(Including authorisation confirmation from Eskom)** for site agent with Eskom Holdings SOC Ltd (Eastern Cape). Failure to confirm this will result in disqualification.
- ❑ Submit signed declaration of 90% Local content production, for electrical equipment.
- ❑ The successful tenderer is encouraged to sub-contract a minimum of 30% of the value of the contract labor component to designated SMME from within BCMM area. SMME profile should meet 51% Black ownership. Database for selection provided by ELIDZ.
- ❑ Final award decision may be subjected to Eskom's final comments and/or recommendation.

## **POPIA**

By submitting this tender, the bidder hereby consents to providing the ELIDZ with personal information as provided in the Protection of Personal Information Act 2013 (POPIA).

The ELIDZ undertakes to:

1. It will take all reasonable steps and precautions to preserve the integrity of bidders Personal Information and to prevent any corruption or loss of such data.
2. It will not do any of the following: copy, compile, collect, collate, process, store, transfer, alter, delete, interfere with or in any other manner use the bidders Personal Information as described in the Act for any purpose other than with the express prior written consent of the bidder.
3. Utilize the personal information provided for the purposes of assessment of the tender submitted by the bidder and contracting with the successful bidder as the case may be.
4. It will immediately inform the bidder in writing if any Personal Information relating to it has been



**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



compromised. The ELIDZ undertakes to immediately inform the bidder in writing as to how it will manage such compromise and what steps will be taken to rectify the situation.

5. Due and reasonable care of the bidder's personal information and not to share the said personal information with any third party unless you have authorized such disclosure, or the release of such information is required by law.

6. At all times strictly comply with its obligations under Data Protection Legislation.

7. Subject to legislative, regulatory, contractual and other legitimate conditions, the respective bidder has certain rights in terms of how their information is processed. The bidder can request access to information or guidance on how to lodge a complaint from or direct a request to exercise afforded rights to the ELIDZ Information Officer, or his/her deputy/ies, or the Information Regulator.

8. It will maintain guidelines, policies or procedures for the retention or destruction of data and will retain it only as long as necessary for the identified purposes or to meet legal requirements or policies.

9. It shall implement and maintain, at its cost and expense, appropriate, reasonable technical and organizational measures to prevent loss of damage to or unauthorized destruction of Personal Information and unlawful access to or Processing of Personal Information. The ELIDZ shall not incur any liability for costs, loss or damage arising from the use of inaccurate or incomplete data provided by or on behalf of the bidder.

## **EVALUATION**

The evaluation will be guided by the ELIDZ procurement policy. Points will be awarded on the basis of Price and BBEE.

Score breakdown:

- ☐ 80 Points for Price
- ☐ 20 Points for Specific Goals

All tenders not providing compulsory responsive documentation and with functionality scoring less than 70 %, will not be considered for the next stage of tender evaluation

## **TENDER DOCUMENT & SUBMISSION**

The RFT document will be available for download on 01 Nov 12h00 at [www.elidz.co.za](http://www.elidz.co.za) under opportunities & Dispatch website under opportunities.

It will be the responsibility of the respondent to ensure that the RFT documents reaches the ELIDZ. All tender documents are to be submitted online at <https://tenderportal.elidz.co.za> before the closing date and time . Only PDF documents must be uploaded with a maximum size limit of 2GB per file.

**Hard copy document submission will not be considered.**

## **TENDER ENQUIRIES**

Queries relating to this tender may be addressed to:

Contact Person: Mrs A Mzantsi,  
Contact number: 043 702 8200  
Email: [Anathi@elidz.co.za](mailto:Anathi@elidz.co.za)

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



### 1.1.3 TENDER DATA

<b>Project title:</b>	<b>TENDER FOR THE OF PROPOSAL 132/11kV ESKOM LEACHES BAY SUBSTATION 40MVA CAPACITY UPGRADE</b>		
<b>Contract No:</b>	<b>ES/24/ELEC/LEACHESBAY/ 40MVA/02</b>		
<b>Advertising date:</b>	<b>01 Nov 2024</b>	<b>Closing date:</b>	<b>06 Dec 2024</b>
<b>Closing time:</b>	<b>12h00 noon</b>	<b>Validity period:</b>	<b>120 Days</b>
<b>Clause number</b>			
	<p>The conditions of tender are the Standard Conditions of Tender as contained in Appendix F of SANS 294 : 2004 (Edition 1).</p> <p>The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender.</p> <p>Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.</p>		
F.1.1	The employer is the East London Industrial Development Zone (SOC) Ltd (ELIDZ)		
F.1.2	<p>The tender documents issued by the employer comprise:</p> <p><b>VOLUME A: TECHNICAL PROPOSAL</b></p> <p><b>1. THE TENDER</b></p> <p><b>1.1 TENDERING PROCEDURES</b></p> <p>1.1.1 Introduction</p> <p>1.1.2 Tender Notice and Invitation to Tender</p> <p>1.1.3 Tender Data</p> <p><b>1.2 RETURNABLE SCHEDULES</b></p> <p>1.2.1 List of Returnable Documents</p> <p>1.2.2 Returnable Schedules</p> <p><b>2. THE CONTRACT</b></p> <p><b>2.1 CONTRACT DATA</b></p> <p><b>2.2 SCOPE OF WORK</b></p> <p><b>2.3 SITE INFORMATION</b></p> <p><b>APPENDICES</b></p> <p>A Occupational Health and Safety Regulations</p> <p>B Eskom Functional Detailed Design Package (Specification &amp; Drawings)</p> <p>C ELIDZ guidelines for completion of supplier development bid document</p> <p>D Environmental Management Plan</p>		

F.1.2 (cont.)	<p><b>VOLUME B: FINANCIAL PROPOSAL</b></p> <p><b>1. THE CONTRACT</b></p> <p><b>1.1 AGREEMENT AND CONTRACT DATA</b></p> <p>1.1.1 Form of Offer and Acceptance</p> <p>1.1.2 Form of Offer and Acceptance</p> <p><b>1.2 PRICING DATA</b></p> <p>1.2.1 Pricing Instructions</p> <p>1.2.2 Bills of Quantities</p>										
F.1.4	<p>The employer's agent is:</p> <table border="1"> <tr> <td>Name:</td><td>Bigen Africa Services (Pty) Ltd</td></tr> <tr> <td>Address:</td><td>Allan Cormack St, Perseuor, Pretoria, 0081</td></tr> <tr> <td>Tel:</td><td>012 842 8700</td></tr> <tr> <td>Fax:</td><td></td></tr> <tr> <td>E-mail:</td><td><a href="mailto:nadeem.goolamhoosen@bigengroup.com">nadeem.goolamhoosen@bigengroup.com</a></td></tr> </table>	Name:	Bigen Africa Services (Pty) Ltd	Address:	Allan Cormack St, Perseuor, Pretoria, 0081	Tel:	012 842 8700	Fax:		E-mail:	<a href="mailto:nadeem.goolamhoosen@bigengroup.com">nadeem.goolamhoosen@bigengroup.com</a>
Name:	Bigen Africa Services (Pty) Ltd										
Address:	Allan Cormack St, Perseuor, Pretoria, 0081										
Tel:	012 842 8700										
Fax:											
E-mail:	<a href="mailto:nadeem.goolamhoosen@bigengroup.com">nadeem.goolamhoosen@bigengroup.com</a>										
	<p>Add the following sentence: The period of six months may only be reduced should all tenders received be rejected as non-responsive.</p>										
F.2.1	<p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to submissions, are eligible to submit tenders:</p> <p>a) Contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a <b>7EP</b> or higher class of construction work.</p> <p>Joint Ventures (JV) are eligible to submit tenders providing that:</p> <ul style="list-style-type: none"> <li>• Every member of the JV is registered with the CIDB</li> <li>• The lead partner must be registered in a contractor grading designation not lower than one level below the required grading designation in the class of construction works under consideration. E.g. advertised grade is <b>7EP</b> then the lead partner must be registered in Grade <b>6EP</b> or higher.</li> <li>• The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a <b>7EP</b> or higher class of construction work; and</li> <li>• A Joint Venture agreement is submitted together with the tender indicating shareholding percentage.</li> </ul> <p>All parties to a Joint Venture should meet bid condition requirements to be acceptable.</p>										
F.2.7	<p>The arrangements for a compulsory clarification meeting to be held virtually on:</p> <p>Date : 12 Nov 2024</p> <p>Starting time : 11h00</p>										
F2.11	<p>Replace the last sentence of the clause with the following: If the Bill of Quantities are completed by hand to correct errors made, draw a line through the incorrect entry and write the correct entry above in black ink and place the full signatures of the authorised signatories next to the correct entry.</p>										

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



F2.12.1	<i>Add the following to the clause:</i> All alternative tender offers shall be referred to in Section T2.2.1 – Alterations to Tender.
F2.12.2	<i>Add the following to the clause:</i> Should the Tenderer wish to offer alternative designs and/or construction materials, he shall include with this Tender full details thereof, including a complete bill of quantities, formal design calculations, and full details of all alternative components proposed to be included in the Works. Refer also to the Contract Data in this regard. Failure to properly comply with this clause, thereby preventing the Employer and/or the Employer's Agent to properly assess the full implications of the alternative tender, is likely to disqualify the alternative offered from further consideration. No submission by the Contractor after award for additional payment or time for completion of Works relating to the alternative offer will be considered. The tendered rates submitted shall be considered to reflect the full and final cost implications of the alternative offer.
F2.13.2	The tender document, fully completed by hand in black ink. The tender documents, Volume A and Volume B fully completed are to be submitted online at <a href="https://tenderportal.elidz.co.za">https://tenderportal.elidz.co.za</a> . Only PDF documents must be uploaded with a maximum size limit of 2GB per file. Hard copy document submissions will not be considered.
F2.13.3	Only the original tender submission is required.
F2.13.4	<i>Add the following to the clause:</i> Only authorised signatories may sign the original and all copies of the tender offer where required in terms of F2.13.3.
F2.13.5	It will be the responsibility of the respondent to ensure that the RFP reaches the ELIDZ in accordance with Clause F2.13.2.
F2.13.6	A two-envelope procedure will be followed..
F2.13.8	<i>Add the following to the clause:</i> Accept that the Employer will not assume any responsibility due to an incorrect e-mail address being used by the tenderer or late or non-delivery of e-mail due to load shedding, network disruptions or server downtime. In submitting this tender the tenderer accepts that should there be any unforeseen circumstances with submission of tenders the Employer reserves the right to request that all tenders received held secure and unopened until such time that all matters have been resolved. The Employer reserves the right to not accept a late tender submission should they be of the opinion that there was no material reason related to the electronic method of submission that prohibited submission within the tender period.
F2.13.9	Tenderers are required to submit all returnable documents to be completed as per clause 2.14 and shall submit all required returnable schedules and certificates electronically on the portal as indicated in clause F2.13.2
F2.14	The ELIDZ will disqualify any submission which is not suitably endorsed or which is not comprehensively completed.
F2.15.1	Submissions that are not received on or before the closing time will, in terms of the ELIDZ procurement policy, not be considered.
F.2.16	The tender offer validity period is 120 days.
F2.16.1	<i>Add the following to the clause:</i> If the tender validity expires on a Saturday, Sunday or public holiday, the tender shall remain valid and open for acceptance until the closure of business on the

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



	following working day.
F2.16.5	<p>Add the following Clause:</p> <p>Accept that should the Tenderer unilaterally withdraw his tender during this period, the Employer shall, without prejudice to any other rights he may have, be entitled to accept any less favourable tender for the Works from those received, or to call for fresh tenders, or to otherwise arrange for the execution of the Works, and the Tenderer shall pay on demand any additional expense incurred by the Employer on account of the adoption of the said courses, as well as either the difference in cost between the tender withdrawn (as corrected in terms of Clause 3.9 of the Conditions of Tender) and any less favourable tender accepted by the Employer, or the difference between the tender withdrawn (as corrected) and the cost of execution of the Works by the Employer as well as any other amounts the Employer may have to pay to have the Works completed.</p>
	<p>Add the following to the clause:</p> <p>Accept that if requested, the Tenderer shall within seven (7) days of the date upon which he is requested to do so, submit a full report from his banker as to his financial standing. The Employer may, in its discretion, and subject to the provisions of Section 4(1)(d) of the State Tender Board Act 86 of 1968, condone any failure to comply with the foregoing condition.</p> <p>Accept that the Employer or his agent, reserves the right to approach the Tenderer's banker or guarantor(s) as indicated in the tender document, or the bankers of each of the individual members of any joint venture that is constituted for purposes of this Contract, with a view to ascertaining whether the required guarantee will be furnished, and for purposes of ascertaining the financial strength of the Tenderer or of the individual member of such venture.</p>
F2.19	Access to premises will not be required.
F2.20	<p>Add the following to the Clause:</p> <p>Accept that the Employer or his Agent, reserves the right to approach the Tenderer's banker or guarantor(s) as indicated in the tender document, or the bankers of the individual members of any joint venture that is constituted for purposes of this Contract, with a view to ascertain whether the required guarantee will be furnished, and for purposes of ascertaining the financial strength of the Tenderer or of the individual member of such joint venture. Only guarantees that are submitted in the format provided will be accepted.</p>
F2.23	<p>The tenderer is required to submit with his tender:</p> <ul style="list-style-type: none"> <li>❑ Tenderers are required to submit a Valid SARS Tax Clearance Certificate with their tender.</li> <li>❑ Tenderers should submit a valid original or certified B-BBEE certification. Companies with annual turnover less than R10 million to submit an accountant or SARS letter confirming turnover.</li> <li>❑ A registered office within the Buffalo City municipal boundaries will be given preference.</li> <li>❑ Tenderers to provide certified copy of Company Registration Certificate</li> <li>❑ Tenderers to provide a valid Letter of Good Standing from Compensation Commissioner</li> <li>❑ Tenderer is required to provide a CSD registration certificate on older than 10 days before closing of tender. Proof of registration on CSD – MAAA number.</li> <li>❑ The tenderer must submit a bank rating equal to and or better than a C. (Note letter from Bank to exclude tendered amount).</li> <li>❑ Tenderers must submit technical and financial proposals in two separate envelopes clearly marked "Envelope A -Technical Proposal "and "Envelope B – Financial</li> </ul>

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



	<p>Proposal". Then the financial proposal will only be opened should the technical proposal be found to be acceptable.</p> <ul style="list-style-type: none"> <li>❑ Non- signed "Form of Offer" the financial proposal in "Envelope B" submission will result in the disqualification of the tender.</li> <li>❑ Inclusion of Price Offer and/ or any other price related details in "Envelope A - Technical Proposal "will result in the disqualification of the tender.</li> <li>❑ Proof of Registration with the CIDB in the category <b>7EP</b> or higher.</li> <li>❑ Provide <b>Eskom approved vendor number</b> for Eskom Holdings SOC Ltd (Eastern Cape) confirming the service provider is an approved Eskom Contractor Failure to confirm this will result in disqualification.</li> <li>❑ Submit confirmation of compliance with <b>ORHVS level/outcome 6 (Including authorisation confirmation from Eskom)</b> for the site agent with Eskom Holdings SOC Ltd (Eastern Cape). Failure to confirm this will result in disqualification.</li> <li>❑ All returnable documents and schedules as outlined in this tender including the functionality evaluation criteria No.1 to No.5 supporting documentation.</li> <li>❑ Submit signed declaration of 90% Local content production, for electrical equipment.</li> <li>❑ The successful tenderer are encourage to sub-contract a minimum of 30% of the value of the contract labor component to designated SMME from within BCMM area. SMME profile should meet 51% Black ownership. Database for selection provided by ELIDZ.</li> <li>❑ The preferred bidder will be awarding the tender subject that their vendor status with Eskom is in good standing.</li> </ul>										
F3.4	Tender submissions will not be opened in public immediately after the stipulated closing time and date.										
F3.11	<p>Tender evaluation will be carried out using the 80/20 preference point system, where:</p> <ul style="list-style-type: none"> <li>▪ A maximum of 80 points are allocated for financial offer.</li> <li>▪ A maximum of 20 points are allocated for Specific goals.</li> </ul> <p>The above-mentioned evaluation will be subject to offers being responsive and passing the functionality criteria prescribed in the attached schedule.</p> <p>Table: Specific Goals Points Conversion</p> <table border="1"> <thead> <tr> <th>Estimated Rand Value inclusive of Vat</th><th>Specific Goals and Point allocation</th></tr> </thead> <tbody> <tr> <td></td><td><b>80 points for price</b></td></tr> <tr> <td></td><td><b>10 points - 51% and above Black owned suppliers</b></td></tr> <tr> <td></td><td><b>5 points - 25% up to 50% Black owned suppliers</b></td></tr> <tr> <td></td><td><b>0 points below 25% Black owned suppliers</b></td></tr> </tbody> </table>	Estimated Rand Value inclusive of Vat	Specific Goals and Point allocation		<b>80 points for price</b>		<b>10 points - 51% and above Black owned suppliers</b>		<b>5 points - 25% up to 50% Black owned suppliers</b>		<b>0 points below 25% Black owned suppliers</b>
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**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



			<b>5 points for Eastern Cape Based suppliers</b> <b>0 points outside Eastern Cape</b>
			<b>1 point for 51% and above Youth owned suppliers</b>
			<b>1 point for 51% and above Women owned suppliers.</b>
			<b>3 points for SMME's (EME or QSE)</b>
	The above mentioned evaluation will be subject to offers being responsive and passing the functionality criteria prescribed in the attached schedule.		

**Quality/Functionality Evaluation (Include score points for pricing proposal split)**

The score achieved for functionality will be assessed using the following criteria, each of which will be scored individually up to the maximum number of points indicated per criteria (failure to submit the relevant information will result in zero scores for that section):

DETAILED BREAKDOWN OF FUNCTIONALITY POINTS			
Details		SCORE	MAXIMUM SCORE
<b>Criteria 1. Applicant's Expertise and Resources</b>			<b>50</b>
<b>1.1 Project Manager</b>			<b>20</b>
<b>Experience</b>	Submit a Curriculum vitae on the following:  The Project Manager has in excess of 10 years' relevant work experience.  The Project Manager has between 8- and 10-years' relevant work experience.  The Project Manager has between 6- and 8-years' relevant work experience.	15  5  3	15
<b>Qualification</b>	Submit certified certificates on the following:  Pr. CM Professional Registration Certificate (SACPCMP)  Project Management Qualification or PMP Certification.	5  3  2	5



**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



	Diploma or equivalent in Electronics/ Mechanical Engineering/Software Engineering/Electrical Engineering		
<b>1.2 Engineer</b>			<b>20</b>
<b>Experience</b>	<p>Submit a Curriculum vitae on the following:</p> <p>The Engineer has an excess. of 15 years' relevant work experience</p> <p>The Engineer has between 10- and 15- years work experience 2</p> <p>The Engineer has less than 10 years' relevant work experience</p>	<p>15</p> <p>5</p> <p>3</p>	15
<b>Qualification</b>	<p>Submit certified certificates on the following:</p> <p>Degree (B-TECH, B-ENG or BSC) or equivalent in Electrical Engineering or above with professional registration (Pr. Eng/Pr Tech Eng).</p> <p>Degree (B-TECH, B-ENG or BSC) or equivalent in Electrical Engineering only.</p>	<p>5</p> <p>3</p>	5
<b>1.3 Technician</b>			<b>10</b>
<b>Experience</b>	<p>Submit a Curriculum vitae on the following:</p> <p>The Technician or Electrician has an excess. of 15 years' relevant work experience</p> <p>The Technician or Electrician has between 10- and 15-years work experience 2.</p> <p>The Technician or Electrician has less than 10 years' relevant work experience</p>	<p>5</p> <p>3</p> <p>2</p>	5



**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



<b>Qualification</b>	Submit certified certificates on the following:  Diploma or National Technical Diploma equivalent in Electrical Engineering.  Trade tested only	5  3	5
<b>Criteria 2. Relevant Company Experience</b>			<b>15</b>
2.1. Relevant Experience			
Attach a proof of similar size(132kV/11kV 40MVA) HV Substation construction projects completed for Eskom.  A maximum average of 5 points can be scored for each confirmed similar project in progress or carried out in the past 5 years (Form P06 to be completed for each project with an accompanied reference letter to score a maximum 15 points)		15	15
<b>Criteria 3. Methodology Statement (Maximum 10 Pages)</b>			<b>30</b>
3.1. Methodology Statement indicating how the project will be conducted. Company required to provide detailed method statements, which demonstrate the manner in which work is carried out typically on an installation contract of this nature (Transformers, Cables, Switchgear, Control panels, AC/DC supply and Building Extension) and should cover a minimum of four core activities.			
3.1.1 132kV Transformer Bay installation complete with installation, wiring, testing and commission.		10	10
3.1.2 11 kV or higher Metal Clad Switchgear with VCB CB installation, retrofitting and testing and 11 kV or higher MV Cable works (pulling, laying, jointing, terminating, testing, etc.)		6	6
3.1.3 Eskom approved scheme Protection implementation installation, wiring and testing Battery tripping unit with Lead Acid batteries, installation, wiring and testing.		6	6
3.1.4 High Voltage Substation building civil, protection of existing services excavations, oil holding dam, barricading/hording, construction method.		8	8
<b>Criteria 4. Health and Safety</b>			<b>5</b>
4.1 Attach OHS Officer CV and proof of relevant SHE construction training.		5	5
		Total Points Scored	Maximum Points
<b>TOTAL EVALUATION SCORE FOR FUNCTIONALITY</b>			<b>100</b>

PERCENTAGE POINTS SCORED		%	100%
Tender offers scoring less than 70% functionality will not be considered further.			
<p><b><u>Financial Offer Evaluation</u></b></p> <p>The score achieved for financial offer will be determined using formula 2 (option 1) as follows:</p> $\text{Points awarded} = 80 \left[ 1 - \frac{P - P_m}{P_m} \right]$ <p>Where P = the comparative offer of the tender offer under consideration  P<sub>m</sub> = the comparative offer of the lowest responsive tender</p>			
<p><b><u>Preference Evaluation Criteria</u></b></p> <p>A maximum of twenty (20) points will be awarded to a tenderer for achieving Specific Goals objectives. Specific Goals points shall be computed using a table in F3.11  All tenders with functionality less than 70% of the total functional requirements will not be considered for the next stage of tender evaluation. ELIDZ reserves the right to negotiate if preferred bidder's proposal exceeds ELIDZ project estimate.  The tender will be awarded to the bid with the highest number of points. A tender may be awarded to a bidder that did not score the highest number of points if reasonable and justifiable grounds exist.</p> <p>Any contract offered by the ELIDZ will be based on the correctness of information submitted by the service providers. Any misrepresentation of facts by a service provider may lead to disqualification. Should such misrepresentation be uncovered after the commencement of the contracted work, the ELIDZ reserves the right to terminate the contract and recover all payments made to that service provider and any costs that may have been incurred in the process.  ELIDZ reserves the right to have the tenderer's Black Economic Empowerment Credentials verified by an independent agency. (Procurement Handbook – Appendix C: 1 must be fully completed and supplementary information may be completed by service providers with a turnover of less than R10m and be accompanied by letter from an accounting firm or SARS confirming the company's or sworn affidavit turnover is less than R10m).  In the event that the successful Bidder has been awarded the contract with value above R 2 000 000.00 for the same goods/services on a consecutive basis, the successful Bidder will be required to submit a Supplier development plan for SMMEs to be agreed with the ELIDZ.</p>			
F3.13.1	<p>Tender offers will only be considered if:</p> <ol style="list-style-type: none"> <li>the tenderer has in his or her possession an original valid Tax Clearance Certificate issued by the South African Revenue Services</li> <li>the tenderer in possession of a valid or certified BBBEE certificate</li> <li>the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.</li> <li>The tenderer must submit a bank rating equal to and or better than a C. (Note letter from Bank to exclude tendered amount).</li> <li>Tenderers must submit technical and financial proposals in two separate envelopes clearly marked "Envelope A -Technical Proposal "and "Envelope B – Financial Proposal". Then the financial proposal will only be opened should the technical proposal be found to be acceptable.</li> <li>Non- signed "Form of Offer" the financial proposal in "Envelope B" submission will result in the disqualification of the tender.</li> </ol>		

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



	<p>g) Inclusion of Price Offer and/ or any other price related details in “Envelope A - Technical Proposal “will result in the disqualification of the tender.</p> <p>h) the tenderer has not:</p> <p>i) abused the Employer’s Supply Chain Management System; or</p> <p>ii) failed to perform on any previous contract and has been given a written notice to this effect.</p> <p>i) Tenderers to provide a valid Letter of Good Standing from Compensation Commissioner</p> <p>j) Proof of Company Registration is submitted with this tender.</p> <p>k) Proof of of Registration with the CIDB in the category <b>7EP</b> or higher is submitted with this tender.</p> <p>l) All returnable documents and schedules as listed in T2.1 OF Volume 2 of 2: List of Returnables, have been completed and submitted with this document.</p> <p>m) The tenderer has registered on CSD. Proof of registration on CSD – MAAA number is required.</p> <p>n) Provide <b>Eskom approved vendor number</b> for Eskom Holdings SOC Ltd (Eastern Cape) confirming the service provider is an approved Eskom Contractor Failure to confirm this will result in disqualification.</p> <p>o) Submit confirmation of compliance with <b>ORHVS level/outcome 6(Including authorisation confirmation from Eskom)</b> for the site agent with Eskom Holdings SOC Ltd (Eastern Cape). Failure to confirm this will result in disqualification.</p> <p>p) All returnable documents and schedules as outlined in this tender including the functionality evaluation criteria No.1 to No.5 supporting documentation.</p> <p>q) Submit signed declaration of 90% Local content production, for electrical equipment.</p> <p>r) The successful tenderer are encouraged to sub-contract a minimum of 30% of the value of the contract to designated SMME from within BCMM area. SMME profile should meet 51% Black ownership. Database for selection provided by ELIDZ.</p> <p>Final award decision may be subjected to Eskom’s final comments and/or recommendation.</p>
F3.13	<p>Replace the first sentence in the sub-clause with:</p> <p>“The Employer has the right not to accept any tender or to not accept the lowest priced tender and may accept the tender offer that in the opinion of the Employer presents the lowest risk and/or provides the best value to the Employer.”</p>
F.3.18	<p>The number of paper copies of the signed contract to be provided by the employer is 1 (one).</p>

**F. Standard Conditions of Tender (CIDB July 2015)  
(See attachments)**

## PART 2

### THE CONTRACT

CONTRACT NO: ES/24/ELEC/LEACHESBAY/ 40MVA/02

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM  
LEACHES BAY SUBSTATION 40MVA CAPACITY  
UPGRADE**

## **2.1 CONTRACT DATA**

### **2.1.1 Contract Data**

## 2.1.1 CONTRACT DATA FOR

<b>Project title:</b>	<b>TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES BAY SUBSTATION UPGRADE</b>
<b>Contract No:</b>	<b>ES/24/ELEC/LEACHESBAY/ 40MVA/02</b>

## CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works, Third Edition (2015), published by the South African Institution of Civil Engineering, is applicable to this Contract.

The General Conditions of Contract are not bound into this document, but are available at the Contractor's expense from the Secretary of the South African Institution of Civil Engineering, Private Bag X200, Halfway House, Midrand, 1685 or [www.saice.org.za](http://www.saice.org.za).

## CONTRACT SPECIFIC DATA

In terms of clause 1.1.1.8 of the General Conditions of Contract for Construction Works, Third Edition (2015), the following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition (2015) are applicable to this Contract:

The Contract Data consists of two parts. Part 1 contains information provided by the Employer, while Part 2 contains information to be provided by the Contractor.

### Part 1: Data Provided by the Employer

<b>Clause</b>	<b>Contract Data</b>
1.1.1.3	Delete the contents of the clause and insert the following:  "Certificate of Completion" means the certificate issued by the Employer's Agent stating the date on which completion of the Works was achieved. Certificates of Completion will not be issued for portions or phases of the Works.
1.1.1.13	The Defects Liability Period for the Works shall be 730 calendar days.
1.1.1.14	Add the following to the end of this definition:  This clause shall apply <i>mutatis mutandis</i> to any portion or phase of the Works that may be described in the Scope of Works or in the Contract Data, or agreed subsequently between the Contractor and the Employer, and committed to writing.  The time for achieving Practical Completion, including the 28 days allowance for finalisation of documentation in terms of Clause 5.3.2 and Clause 5.3.3, is 576

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Clause	Contract Data
	days (Days Includes Long lead time of 7 months to purchase materials and strictly 12 months construction).
1.1.1.15	The Employer is East London Industrial Development Zone (SOC) Ltd (ELIDZ).
1.1.1.16	The Employer's Agent means any Principal, Associate Principal or Registered Professional appointed generally or specifically by the management of the firm Bigen Africa Services (Pty) Ltd to fulfil the functions of the Employer's Agent in terms of the Conditions of Contract.
1.1.1.26	The pricing strategy is Fixed price rate but re-measurable
1.1.1.35	Add the following new clause:  'Construction Work Permit' means a statutory permit as defined in relevant legislation, and where required for the Works, to be provided to the Contractor by the Employer before commencement of the Works.
1.2.1	Add the following to the clause:  1.2.1.3 Sent by facsimile, electronic or any like communication irrespective of it being during office hours or otherwise.  1.2.1.4 Posted to the Contractor's address, and delivered by the postal authorities.  1.2.1.5 Delivered by a courier service or messenger, and signed for by the recipient or his representative.
1.2.1.2	The address and telephone number of the Employer is:  Employer's postal address P.O. Box 5458 Greenfields 5208  Employer's physical address Lower Chester Road, Sunnyridge Buffalo City (East London) 5201



**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Clause	Contract Data
	<p>E-mail: <a href="mailto:thato@elidz.co.za">thato@elidz.co.za</a> Telephone: 043 – 702 8200</p> <p>The address and telephone number of the Employer's Agent is: Bigen Africa Services (Pty) Ltd</p> <p>Allan Cormack Street The Innovation Hub Pretoria 0087</p> <p>PO Box 29 The Innovation Hub Pretoria, 0087</p> <p>Tel: (012) 842 8700 Fax: (012) 843 9000/1</p>
2.4.1	<p>Delete the contents of the clause and insert the following:</p> <p>The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence, listed from highest to lowest priority:</p> <ul style="list-style-type: none"> <li>(a) Form of Offer and Acceptance</li> <li>(b) Contract Data</li> <li>(c) General Conditions of Contract</li> <li>(d) Drawings</li> <li>(e) Variations and Additional Clauses to Particular Specifications and Standard Specifications</li> <li>(f) Particular Specifications</li> <li>(g) Standard Specifications</li> <li>(h) Bill of Quantities</li> <li>(i) any other documents forming part of the Contract</li> </ul> <p>If an ambiguity or discrepancy between the documents is found, the Employer's Agent shall provide the necessary clarification or instruction.</p>
3.2.3	<p>The Employer's Agent is, in terms of his appointment by the Employer for the design and administration of the Works included in the Contract, required to</p>

Clause	Contract Data
	<p>obtain the specific approval of the Employer for the execution of the following duties:</p> <p>3.2.3.1 The issuing of an order to suspend the progress of the Works, the extra cost resulting from which order is to be borne by the Employer in terms of Clause 5.11 or the effect of which is liable to give rise to a claim by the Contractor for an extension of time under Clause 5.12 of these conditions.</p> <p>3.2.3.2 The issuing of an instruction in terms of Clause 6.3, the estimated effect of which will be to increase the Contract Price by an amount exceeding R100 000,</p> <p>3.2.3.3 The valuation of all variation orders in terms of Clause 6.4,</p> <p>3.2.3.4 The adjustment of the sum(s) tendered for General Items in terms of Clause 6.11.</p>
3.2.4	<p>Delete the contents of the Clause and insert the following:</p> <p>The Employer's Health and Safety Agent, appointed in terms of the Construction Regulations promulgated under the Occupational Health and Safety Act, is authorised to act as his representative relating to the responsibilities imposed by the Occupational Health and Safety Act on the Employer. Such an agent shall be responsible to the Employer's Agent in terms of these Conditions of Contract.</p>
4.1.2	<p>Add the following to the clause:</p> <p>The Contractor shall provide the following to the Employer's Agent for retention by the Employer or his assignee in respect of all works designed by the Contractor:</p> <p>4.1.2.1 A Certificate of Stability of the Works signed by a registered Professional Engineer confirming that all such works have been designed in accordance with the appropriate codes of practice.</p> <p>4.1.2.2 Proof of registration and of adequate and current professional indemnity insurance cover held by the designer(s).</p> <p>4.1.2.3 Design calculations should the Employer's Agent request a copy thereof.</p> <p>4.1.2.4 Engineering drawings and workshop details (both signed by the relevant professional engineer), in order to allow the Employer's Agent to compare the design with the specified requirements and to record any comments he may have with respect thereto.</p>

Clause	Contract Data
	<p>4.1.2.5 “As-Built” drawings in .dgn (Microstation) electronic format after completion of the Works.</p> <p>The Contractor shall be responsible for the design of the Temporary Works.</p>
4.3.3	<p>Add the following new clause:</p> <p>The Contractor shall comply with the Occupational Health and Safety Specification prepared by the Employer in terms of the Construction Regulations, 2014 promulgated in terms of Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993).</p> <p>Without limiting the Contractor’s obligations in terms of the Contract, the Contractor shall before commencement of the Works or any part thereof, be in the possession of an approved Health and Safety Plan.</p> <p>The Contractor shall submit an approved Health and Safety Plan to the Employer’s Agent within 14 days from the Commencement Date.</p>
4.3.4	<p>Add the following new clause:</p> <p><b>Contractor’s liability as mandatory</b></p> <p>Notwithstanding any actions which the Employer may take, the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2014, for which he is liable as mandatory. By entering into this Contract it shall be deemed that the parties have agreed in writing to the above provisions in terms of Section 37 (2) of the Act.</p>
4.3.5	<p>Add the following new clause:</p> <p><b>Contractor to notify Employer</b></p> <p>The Employer retains an interest in all inquiries conducted under this Contract in terms of Section 31 and/or 32 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and its Regulations following any incident involving the Contractor and/or Sub-Contractor and/or their employees. The Contractor shall notify the Employer in writing of all investigations, complaints or criminal charges which may arise pursuant to work performed under this Contract in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Regulations.</p>
4.3.6	<p>Add the following new clause:</p> <p><b>Contractor’s Designer</b></p>

Clause	Contract Data
	The Contractor and his designer shall accept full responsibility and liability to comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Construction Regulations, 2014 for the design of the Temporary Works and those part of the Permanent Works which the Contractor is responsible to design in terms of the Contract.
4.13	<p>Add the following new clause:</p> <p><b>“As-Built Information”</b></p> <p>The Contractor shall submit to the Employer’s Agent complete as-built data in accordance with Clause C3.5.1.11 under Part C3.5 of the Contract for all work completed. Failure by the Contractor to submit the as-built data shall be just cause for the Employer to withhold any further payment certificates and the Practical Completion Certificate.</p> <p>The work completed shall mean all work as per the Scope of Works including any additional works issued in terms of the Contract. The as-built data shall be submitted in the format as prescribed in Clause C3.5.1.11 under Part C3.5 of this Contract.”</p>
5.3.1	<p>The documentation required before commencement with Works Execution are:</p> <ul style="list-style-type: none"> <li>• Environmental and Health and Safety Plan (Refer to Clause 4.3.3)</li> <li>• Initial programme (Refer to Clause 5.6)</li> <li>• A detailed cashflow forecast (Refer to Clause 5.6.2.6)</li> <li>• Security (Refer to Clause 6.2)</li> <li>• Insurance (Refer to Clause 8.6)</li> </ul>
5.3.2	The time to submit the documentation required (Refer to Clause 5.3.1) before commencement with Works execution is 14 days.
5.3.3	Replace both periods of “7 days” in Clause 5.3.3 with “14 days”.
5.3.4	<p>Add the following new clause:</p> <p>“Notwithstanding anything stipulated to the contrary in these Conditions, the Contractor shall not be entitled to any claim or extension of time arising from any delay in obtaining a Construction Works Permit which has been duly applied for, unless such delay exceeds 84 consecutive days.”</p>

Clause	Contract Data
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but as set out in the Scope of Works and/or Site Information.
5.5.1	The contract period for the Works is Two years.  (Note: contract end date will also be determined by budget depleting in the contract. In which case either of the two will be considered).
5.6.1	Add the following to the clause:  In this regard the Contractor shall have regard for the phases and sub-phases (if applicable) for the Works, which shall also be the order in which the Permanent Works shall be constructed, unless otherwise agreed between the parties and committed to writing. If phased construction is applicable, the phases and sub-phases will be described in the Scope of Works and/or will be indicated on the Phasing Plan which forms part of the Drawings.
5.7.1	Delete the last paragraph of the clause and replace with the following:  No instruction by the Employer's Agent to the Contractor to improve his rate of progress in this regard will qualify for additional compensation, unless the instruction explicitly states that the Contractor is entitled to additional compensation and cites the amount of such compensation or the basis upon which it is to be determined.
5.8.1	The non-working days are Sundays.  Special non-working days shall be all South African statutory public holidays and the year-end break (which commences on 16 December and ends on 05 January).
5.12.5	Add the following new clause:  <b>Extension of time due to Abnormal Rainfall</b>  Extension of time for Practical Completion of the Contract in the event of abnormal rainfall shall only be allowed in accordance with the following formula. No additional extension of Time for Practical Completion caused by abnormal climatic conditions will be allowed, irrespective of the cause thereof or the effect it may have on the execution of the Works:

$$V = (N_w - N_n) + (R_w - R_n)/20$$

*Where:*

*V = Extension of time in calendar days for the calendar month under consideration*

*N<sub>w</sub> = Actual number of days during the calendar month under consideration on which a rainfall of 10mm and more is recorded*

*R<sub>w</sub> = Actual total rainfall in mm recorded during the calendar month under consideration*

*N<sub>n</sub> = Average number of days, derived from rainfall records, on which*

*a rainfall of 10mm and more was recorded during the relevant calendar month as per the data tabulated hereinafter*

*R<sub>n</sub> = Average total rainfall in mm for the relevant calendar month, derived from rainfall records, as tabulated hereinafter*

Where the extension of time due to abnormal rainfall has to be calculated for portion of a calendar month, pro rata values shall be used. Should V be negative for any particular month, and should its absolute value exceed the corresponding value of N<sub>n</sub>, then V shall be taken as being equal to minus N<sub>n</sub>. The total extension of time to be granted shall be the algebraic sum of all the monthly extensions, provided that if this total is negative then the time for completion shall not be reduced due to subnormal rainfall.

Rainfall records for the period of construction shall be taken on Site. The Contractor shall provide and install all the necessary equipment for accurately measuring the rainfall. The Contractor shall also provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost. The Employer's Agent or his Representative shall take and record the daily rainfall readings. The Contractor shall be permitted to attend these readings, in the company of the Employer's Agent's Representative. Access to the measuring gauge(s) shall at all times be under the Employer's Agent's control.

The rainfall records applicable to this Contract are those recorded at Weather Station East London Weather Station. The following values of N<sub>n</sub> and R<sub>n</sub> shall apply:

Clause	Contract Data																																												
	=	<table><tr><th>Month</th><th>R<sub>n</sub> (mm)</th><th>N<sub>n</sub> (days)</th></tr><tr><td>January</td><td>87</td><td>9</td></tr><tr><td>February</td><td>87</td><td>9</td></tr><tr><td>March</td><td>96</td><td>10</td></tr><tr><td>April</td><td>89</td><td>8</td></tr><tr><td>May</td><td>37</td><td>5</td></tr><tr><td>June</td><td>36</td><td>4</td></tr><tr><td>July</td><td>40</td><td>4</td></tr><tr><td>August</td><td>50</td><td>5</td></tr><tr><td>September</td><td>62</td><td>6</td></tr><tr><td>October</td><td>83</td><td>9</td></tr><tr><td>November</td><td>88</td><td>9</td></tr><tr><td>December</td><td>88</td><td>10</td></tr><tr><td>Total</td><td></td><td></td></tr></table>	Month	R <sub>n</sub> (mm)	N <sub>n</sub> (days)	January	87	9	February	87	9	March	96	10	April	89	8	May	37	5	June	36	4	July	40	4	August	50	5	September	62	6	October	83	9	November	88	9	December	88	10	Total			
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5.13.	Delete the contents of the clause and insert the following:																																												
5.13.1	If the Contractor fails by the Due Completion Date to complete the Works, or any specific portion thereof that is identified in the Scope of Works to the extent which entitles him in terms of Clause 5.14.2 to receive a Certificate of Practical Completion for the Works, then the Contractor shall be liable to the Employer for the sum(s) stated below as (a) penalty(ies) for every day which shall elapse between the Due Completion Date for the Works or the specific portion of the Works and the actual Date of Practical Completion of the Works or of the specific portion.																																												
	The penalty for delay shall be: 0.05 % of Contract Amount per day.																																												
5.13.2	If before the issue of a Certificate of Practical Completion for the whole of the Works, or for any specific portion thereof that is identified in the Scope of Works, any further part of the Works has been:																																												
5.13.2.1	certified as complete in terms of a Certificate of Practical Completion; or																																												
5.13.2.2	occupied or used by the Employer, his agents, employees or other contractors (not being employed by the Contractor);																																												

Clause	Contract Data
	<p>then the appropriate penalty for delay referred to in Clause 5.13.1 above shall be reduced by the amount which is determined by the Employer's Agent to be appropriate under the circumstances.</p> <p>5.13.3 The imposition of penalties in terms of Clause 5.13.1 shall not relieve the Contractor from his obligation to complete the Works, nor from any of his obligations and liabilities under the Contract.</p> <p>5.13.4 All penalties for which the Contractor becomes liable in terms of Clause 5.13.1 shall be accumulative. The Employer may, without prejudice to any other method of recovery, deduct the amounts of all such penalties from any monies in his possession that are or may become due to the Contractor.</p> <p>5.13.5 The imposition of any penalties in terms of Clause 5.13.1 shall not limit the right of the Employer's Agent of the Employer to act in terms of Clause 9.2.</p>
5.13.6	<p>Add the following new Clause:</p> <p>If the Contractor shall, without the prior written permission of the Employer's Agent, in respect of any portions of the Works which are prescribed in the Scope of Work to be executed using labour intensive construction methods, or for which the maximum size and capacity of mechanical plant and equipment is restricted in terms of the Contract:</p> <ul style="list-style-type: none"> <li>• fail to execute such portions of the Works, or any parts thereof, utilising labour intensive construction methods strictly in accordance with the provisions of the Contract; or</li> <li>• utilise in the execution of such portions of the Works, or any parts thereof, mechanical plant or equipment which is in conflict with the terms of the Contract; or</li> <li>• utilise in the execution of such portions of the Work, workers drawn from sources other than those allowed in terms of the Contract;</li> </ul> <p>then the Contractor shall be liable to the Employer for the percentage stated below of the value of the Works so executed in conflict with the provisions of the relevant Scope of Work, as a penalty for non-compliance.</p> <p>The penalty for non-compliance is: 15% of the value of Works specified.</p> <p>The imposition of penalties in terms of this clause shall not relieve the Contractor from his obligation to complete the Works, nor from any of his obligations and liabilities under the Contract.</p>



Clause	Contract Data
5.16.3	The latent defect period is 10 years after the issue of the Final Approval Certificate.
6.2.2	<p>Delete the contents of the clause and insert the following:</p> <p>If the Contractor fails to select the security to be provided, or if the Contractor fails to provide the selected security within the time period stated in Clause 5.3.2, or if the performance guarantee shall differ substantially from the pro forma, it shall legally be deemed that the Contractor has selected a security of a Cash deposit of R4 000 000.00 plus retention of 5% of the value of the Works without limiting the Employer's right to terminate the Contract in terms of Clause 9.2.</p>
6.2.3	<p>Delete the contents of the clause and insert the following:</p> <p>If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable until the Certificate of Completion is issued. <b>A fixed expiry date performance guarantee will not be accepted.</b></p> <p>The performance guarantee shall be provided by a financial service provider approved by the Employer. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990)</p> <p>The financial institution shall be an authorised financial service provider as contemplated in the Financial Advisory and Intermediary Services Act, 2002 (Act No 37 of 2002) (FAIS Act). In addition, the financial institution shall also be a licensed authorised financial services provider with the Financial Sector Conduct Authority of South Africa (FSCA).</p> <p>The financial institution/financial services provider shall have the following credit rating from one of the registered credit rating agencies mentioned:</p> <ul style="list-style-type: none"> <li>Insurance companies: A claims paying ability rating of A- or above (Fitch, Global Credit Rating or Standard &amp; Poor) or A3 or above for Moody's Investor's Service; and</li> <li>Banks: A short term rating of F1 or above for Fitch Ratings, A1 or above for Global Credit Rating, A-1 or above for Standard &amp; Poor or P-1 or above for Moody's Investor's Service.</li> </ul>

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Clause	Contract Data
	Guarantees must be issued on the pro-forma attached as Annexure A to the Contract Data. No alterations or amendments of the wording of the pro forma will be accepted.
6.8.2	The application of a Contract Price Adjustment factor will not apply to this Contract. Refer to Contract Price Adjustment Schedule for details
6.8.3	Price Adjustments for variations in the cost of special materials will not be allowed.
6.8.4	In line 8 delete the words “between the Employer and the Contractor”.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%.
6.10.3	The limit of retention money is 5% of the Contract Sum.
6.10.4	In line 4 delete the word “said” and insert the word “correct”.
6.11.1.3	Delete “15 per cent” and replace it with “25 per cent”.
8.6.1.3	The limit of indemnity for liability insurance is 20 000 000 per event, the number of events being unlimited.
10.5.3	The number of Adjudication Board Members to be appointed is one (1).

<b>CONTRACT PRICE ADJUSTMENT SCHEDULE</b>	
<b>Clause</b>	<b>Contract Data</b>
1.1	<p>The application of a Contract Price Adjustment factor will not apply to this Contract. The price adjustment formula provided in the General Conditions of Contract will apply, together with the following coefficients and the definition of the relevant indices indicated below if applicable.</p> <p><math>X=0,15</math>      <math>a=[a]</math>      <math>b=[b]</math>      <math>c=[c]</math>      <math>d=[d]</math></p> <p>[See SEIFSA Guidelines for coefficients]</p> <p><math>M_o</math> = SEIFSA Index of Production Price (Electrical Engineering Materials) as ruling at date of Tender.</p> <p><math>M_t</math> = SEIFSA Index of Production Price (Electrical Engineering Materials) ruling for month prior to month during which work was performed.</p>
1.2	<p>The following definitions of the relevant indices shall apply to this Contract:</p> <p>“L” is the “Labour Index” and shall be the Consumer Price Index CPI for the province of Eastern Cape Province, as published by Statistics South Africa in the Statistical Release, P0141 , Table A - Consumer Price Index: Main indices; Geographic indices.</p> <p>“P” is the “Plant Index” and shall be the “Plant and Equipment” indices, as published by Statistics South Africa in the Statistical Release, P0151.1 Table 4 - Mining and construction plant and equipment price index.</p> <p>“M” is the “Materials Index” and shall be the “Civil engineering material- total” as published by Statistics South Africa in the Statistical Release, P0151.1 Table 6 - Civil engineering material price indices.</p> <p>“F” is the “Fuel Index” and shall be the “Diesel” indices as published by Statistics South Africa in the Statistical Release, P0142.1, Table 1 - PPI for final manufactured goods; Coke, petroleum, chemical, rubber and plastic products.</p>
1.3	The base month shall be the month before the close of tender.
1.4	<p><b>RATE OF EXCHANGE VARIATIONS</b></p> <p>No Contract Price Adjustment will be applicable to this contract as whole. The Tenderer must therefore allow for changes in the Rate of Exchange in his unit</p>

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



prices. Provision will however be made for Rate of Exchange changes on only long lead items listed in the table below. Rate of exchange will apply to imported material to cater for upward and downward fluctuations in cost.

Note - The country of manufacturing origin's exchange rate shall be used i.e. a USD – ZAR exchange rate will not be accepted for equipment not manufactured in the USA.

Indicate the exchange rate and country of manufacturing applicable to the respective equipment.

\*Tenderer to list applicable items

Rate of change

EQUIPMENT	FOREIGN CURRENCY (E.g., R16.30 = 1 Euro)	MANUFACTURING ORIGIN (E.g., Europe)
132kV & 11 kV Circuit Breakers		
Surge Arrestor		
11kV Feeder Protection (Protection Schemes)		
132kV Post Type CT's		
132kV Surge Arrestor (MCOV 84kV)		
11kV Surge Arrestor (MCOV 12kV)		
11kV Feeder No. 15 & 16 Switchboard Panels		
11kV Transformer No.3 switchboard Panel		
300A NECRT		
132kV outdoor cable end support		
11kV Bus-Section Switch Panel		
132kV/11kV 40MVA Power Transformer		
110V, 30A ,170Ah Battery Charger		
FCP 21 cells 171Amp hour chloride Lead Acid battery bank		
Transformer Protection Schemes		

**Part 2: Data provided by the Contractor**

Clause	Contract Data						
1.1.1.9	<p>The name of the Contractor is:</p> <hr/>						
1.2.1.2	<p>The address of the Contractor is:</p> <hr/> <hr/>						
6.2.1	<p>The security to be provided by the Contractor shall be one of the following:</p> <table border="1"> <thead> <tr> <th>Type of Security</th><th>Contractor's choice. Indicate "Yes" or "No"</th></tr> </thead> <tbody> <tr> <td><i>Cash deposit as a contractor work guarantee of R4 000 000.00 (excl. VAT) plus retention of 5% of the value of the Works (excl. VAT).</i></td><td></td></tr> <tr> <td><i>Performance guarantee of 4 000 000.00 (excl. VAT) plus retention of 5% of the value of the Works (excl. VAT).</i></td><td></td></tr> </tbody> </table>	Type of Security	Contractor's choice. Indicate "Yes" or "No"	<i>Cash deposit as a contractor work guarantee of R4 000 000.00 (excl. VAT) plus retention of 5% of the value of the Works (excl. VAT).</i>		<i>Performance guarantee of 4 000 000.00 (excl. VAT) plus retention of 5% of the value of the Works (excl. VAT).</i>	
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<i>Performance guarantee of 4 000 000.00 (excl. VAT) plus retention of 5% of the value of the Works (excl. VAT).</i>							
6.8.3	<p>The variation in cost of special materials is:</p> <table border="1"> <thead> <tr> <th>Special Material</th><th>Method</th><th>Price for Base Month</th></tr> </thead> <tbody> <tr> <td></td><td></td><td></td></tr> </tbody> </table>	Special Material	Method	Price for Base Month			
Special Material	Method	Price for Base Month					

**END OF SECTION**

## **2.2 SCOPE OF WORK**

### **2.2.1 Description of the works**

#### **2.2.1.1 *Employer's Objectives***

The East London Industrial Development Zone (SOC) Ltd (ELIDZ) is the duly appointed operator of the East London Industrial Development Zone, and as such has an obligation to ensure that the various facilities and services that they own and control are at all times fully operational and able to perform the function for which they were intended.

Accordingly, the ELIDZ has a need to enter into a contract with a suitable service provider who is able to carry out substation upgrade duties for both the primary and secondary plant. This will be achieved through creating a redundant power connection and upgrading the Eskom Leaches Bay existing substation to include a Third transformer bay with a capacity of 40MVA and subsequently, assist in achieving an end state 40MVA firm power supply capacity to the ELIDZ.

#### **2.2.1.2 *Overview of the Works***

The Leaches Bay 132/11kV existing substation will be upgraded to accommodate a 40MVA firm power requirements of the East London Industrial Development Zone. The preferred bidder will be required to increase the power capacity of ELIDZ through establishing a Third 132/11kV Transformer Bay as shown on D-EC-1973 Sheet 1A Rev 7, Sheet 7 Rev 1 and Sheet 8 Rev 1 including the extension of the existing 132kV Tubular busbar and the installation of the 2x132kV busbar isolators.

In addition to the above-mentioned primary plant works, the service provider will be required to install cables from the transformer cable end support to the 11kV Indoor feeder panel, extend Leaches Bay MV Internal Switchboard to include additional 1x11kV 2500A incoming feeder, 1x11kV 2500A bus section and 2x11kV 2500A outgoing transfer switch feeder breaker as detailed on D-EC-1973 Sheet 1D Rev 0.

Currently, there are Fourteen outgoing Feeders, Two 11kV incomers and One 11kV Bus-Section at the substation. The 3CF-4100F scheme will be implemented on the new panels and will be modified to work with indoor breakers. The transformer will utilise a 5TM-3100 protection scheme which will be integrated with the 5JB-3200 scheme. The contractor should go through the issued BOQ, drawings and Eskom specifications to get a deep understanding of the detailed scope of work and materials to be supplied as enlisted on Annexure B.

#### **2.2.1.3 *Extent of the Works***

The scope of works for this project covers the upgrade of the ELIDZ 132kV/11kV substations from primary plant, earth work, secondary plant and civil works, either through establishment, replacement or refurbishment of electrical and civil works. Therefore, this document provides a detailed engineering processes and relevant standards that will be adhered to during the construction phase of this project through compliance with stakeholder requirements and technical risks identified for this design phase and ensuring a continued reliable supply of electricity to the ELIDZ substation in the long term.

Leaches Bay Substation is an existing substation and currently equipped with 2x20MVA 132/11kV Transformer and has been initially designed to accommodate an additional 132/11kV, 40MVA Third Transformer which could ultimately provide a firm 80MVA 11kV supply capacity. The 11kV MV network feeds the ELIDZ Leaches Bay substation and currently, has Fourteen 11kV Feeder capacity on the switchboard (SBV3s). Twelve (12) Feeders are utilised to supply ELIDZ and Two Feeders to supply Buffalo City Metro (BCM) load, therefore leaving no spare feeders.

The current ELIDZ electrical network is divided into Four supply zones with limited interconnection between them. Each zone has a dedicated switching station from which all its MV/LV substations are connected. Zone 1A has two switching stations due to its high electricity demand and available land still to be developed.

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



This project is required to allow Leaches Bay substation to supply the additional load demand through its 11kV feeders to the ELIDZ as outlined in the customer's application. For Leaches Bay to supply additional load to the ELIDZ, the present design suits for the establishment of a 40MVA transformer at the spare transformer bay.

Any deviations and/or additions considered advisable by a tenderer in view of the contemplated duty of the set should be clearly indicated in the tender and included in this tender. All works to include transport of equipment to site as well as the safe removal, transport and disposal of replaced equipment and materials by the contractor at a legal disposal site, external to ELIDZ, within the local municipality.

Should the need arise, the rendered service may be extended to include one or more portions of new works undertaken on behalf of the ELIDZ. This additional work shall be undertaken at billed rates wherever possible.

**The quantities shall not be interpreted as indicating the overall scope of work to be undertaken under the contract, and the ELIDZ representative otherwise known in this contract as the Engineer shall instruct the Service Provider as to the actual extent of work to be carried out under each billed item. The service is to ensure the works is completed within the stipulated period and will not be compensated for any project overrun expenditure. All equipment is to be Eskom approved.**

**The scope of work for Leaches Bay Substation Primary Plant is as follows:**

***Civil Work Scope:***

Supply and install the following equipment foundations as per the foundation layout drawing (D-EC-1973-5, Rev2) and Eskom D-DT specifications:

- 4x 132kV Tubular Busbar Foundation.
- 1x 132kV Breaker Foundation.
- 2x 132kV Isolator Foundation.
- 3x Medium Equipment Support Foundation – CT
- 4x Medium Equipment Support Foundation – PI
- 1x 11kV NECR'T/AUX. TRFR Fondation
- 1x 22kV Isolator Foundation
- 2x Road Crossing Foundation
- 1x MV Cable Sealing End Foundation
- 5x 14m Lighting/Lightning mast foundation
- Cast a 40MVA Transformer Plinth, slipway and build a transformer bound wall
- Build 2x PIU (5JB-3200) Plinth
- Establishment of an access road to deliver transformer/transformer rigging.

Extend the existing 750mm wide LV cable trenches with covers to near each new equipment of the transformer bay as shown on D-EC-1973-12, Rev 1 and D-EC-1735 Sheet 1 Rev 4.

Demolish the existing Oil Holding Dam, Supply and install a new Oil Holding Dam of 32 000 litres Oil Capacity.

Remove the existing layer of yard stone in the area where construction work is to be carried out. Stockpile and re-spread the yard stone to a layer thickness of 100mm after the work has been completed. Spray weed killer on all the stoned areas once all the stoning has been completed.

***Earth Work Scope:***

Connect the new equipment of the new 3rd transformer bay to the existing earthmat by at least two 50x3mm flat copper strap as indicated on D-EC-1973-4, Rev 1.

All new equipment are to be earthed using the foundation HD bolts. The earth tails (flat copper) comes on the side of the foundations to the earthmat as indicated on D-DT-5240 Sheet 6 Rev 3. Install earthing balls on the equipment steelwork supports as detailed on D-EC-1973 Sheet 4 Rev 1, final position of earthing balls is to be negotiated with the Customer Network Centre.

The isolator mechanical boxes and handles are to be earthed in accordance with the manufacture's isolator specification

Carry out additional earth resistivity and continuity test to ensure continuity between each existing element and the earthmat. Assess the existing earthmat and equipment bonding integrity.

***Steel Erection Scope:***

Supply, assemble, erect and bolt in position the following equipment steelworks as per the steelwork layout drawing (D-EC-1973-6, Rev 1) and Eskom D-DT specifications:

- 4x 132kV Tubular Busbar Support.
- 1x 132kV Breaker Support.
- 1x 132kV Isolator Standard Support.
- 1x 132kV Isolator Inline Support.
- 3x 2.5 Medium Equipment Support– CT
- 4x 2.5 Medium Equipment Support– PI
- 3x M1 Medium Equipment Cap– CT
- 4x M1 Medium Equipment Cap– PI
- 1x 11kV NECR'T/AUX. TRFR Support.
- 1x 22kV Isolator Support.
- 1x 11kV Surge Arrestor Bracket
- 2x Road Crossing Support.
- 1x MV Cable Sealing End Support
- 5x 14m Lighting/Lightning mast
- 2x YMK PIU (5JB-3200) Steelwork Assembly

Install equipment labels and phasing discs for the new transformer bay. The positions of the phasing discs are indicated on D-EC-1973 Sheet 6 Rev 1.

***Equipment Erection Scope:***

Take delivery or Supply (as applicable), erect, bolt in position and commission the following equipment as per the electrical equipment layout drawing (D-EC-1973-7, Rev 1) and Eskom D-DT specifications:

- 1x 132kV Breaker.
- 3x 132kV Current Transformer.
- 1x 132kV Isolator Standard.
- 1x 132kV Isolator Inline.
- 10x 132kV Post Insulators
- 3x 132kV station class Surge Arrestors.
- 1x 132/11kV 40MVA Two winding Transformer.



**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



- 1x 11kV NEC/NER/AUX TFR.
- 6x 11kV Surge arrestors.
- 1x 22kV Isolator.
- 6 x 66kV Post insulators.
- 1x PIU (5JB-3200).
- 3x Indoor 11kV Feeders (SBV3s)
- 1x Indoor 11kV Bus section (SBV3s)

Remove the existing 400W/230V floodlights from the existing lighting/lightning masts, Supply and install new 60W/230V 44x LED Flood lights on the existing and the new masts.

Extend the existing 132 kV tubular busbar and install 2x 132 kV Busbar Isolators.  
Extend 11kV Board to accommodate 1x incoming feeder, 2x outgoing transfer feeders and 1x section breaker.

Install new 12x1 core 630 mm<sup>2</sup> XLPE cables from the transformer cable end support to the 11kV MV Indoor incoming feeder panel.

The Isolator JB bracket and equipment are to be mounted on Busbar 1 isolator (IS16) and Busbar 2 isolator (IS15).

Current Transformer JB is to be mounted on CT20 on the trench side as per D-EC-1973 Sheet 6 & 12.

The Orientation of the breaker is to be such that Pole A, is connected to Red Phase.

All equipment mounted on equipment supports are to be as per the BOQ & Project Specification.

***Conductors & Clamps:***

Electrical phasing e.g. (R W B) of the new 132/11kV transformer bay is to be done as per D-EC-1938.

The new 132/11kV transformer bay equipment are to be stringed with a single bull conductor on the 132kV side and a covered twin bull conductor on the 11kV side. All associated jumpers and clamps connecting to the stringer are to be installed as per D-EC-1973 Sheet 8 Rev1.

***Testing, Pre-commission and commission Scope:***

Pre-commission the new Primary Plant, 1x 40MVA 132/11kV Transformer, 1x 132kV Breaker, 2x 132kV Isolators, 1x Complete Sets 132kV Post Type Current Transformers, 1x NECR-T and 1x 22kV Isolator on the Transformer No. 3 Bay.

Testing and commission of the 1C-4x630mm<sup>2</sup> cables from the cable end support to the incoming feeder panel in the control room.

**The scope of work for Leaches Bay Substation Control Plant is as follows:**

***Protection Scope:***

- Extend Leaches Bay MV board to include additional 1x11kV-2500A incoming feeder, 1x11kV-2500A Bus section breaker and 2x11kV-2500A outgoing transfer switch feeder breaker (SBV3s).
- Supply and Install Transformer 3 1x 11kV 2500A Incomer switchgear Panel.

- Supply and install a new 5JB—3200 (PIU) & 5TM3100 Transformer & Tap change Protection Scheme (Include recorder Points and sacrificial relays).
- Supply and Install 1x 11kV 2500A Bus Section Panel and Link to Buszone scheme.  
Supply and Install 2x 11kV 2500A offboard Transfer Feeders with 3CF-4100F with Solkor N Protection.
- Link 3rd Transformer bay to 132kV Bus Zone Scheme
- Use spare vamp 3BP-4901 protection scheme to accommodate the 2 x feeder schemes.
- Supply and Install new control cables for protection schemes and commission all the protection schemes.
- Supply and Install, gland, ferrule and terminate all the new control technology cables as per cabling and cable block diagrams.
- Supply and Install all control cabling to busbar and feeder links.
- Mount and earth the new 11kV Transformer Incomer switchgear panel, protection scheme, bus section panel and transfer feeder Panels in the Control Room as per Control Room Layout.
- The protection panels must be earthed using a 2 x (25 x 3mm) flat copper earth tails per panel, bolted to the panel and main trench earth. Each weld has to be witnessed by the clerk of works, numbered and photographed (before and after bitumen painting) by the contractor and priced as part of the installation of the earth tails.

**SCADA Scope:**

- Expand the existing IDF verticals to cater for new protection, metering and DC installations.
- Integrate new schemes onto the existing D20 RTU (Config 08, 10m VME)
- Accommodate supervisory alarms and control signals on the new D20 and IDF.

**Metering Scope:**

- Supply and Install class 0.5 stats meter for new transformer with Vecto III.
- Provide cabling, pre-commission and commission new metering installations.

**DC Scope:**

- Decommission and remove the existing 110VDC battery bank and charger and provide Eskom with Safe Environmental Disposal certificate.
- Supply and replace the existing “FCP 21 cells 161AH with New 52 cells” 170AH lead Acid Battery Bank with 30A 110V switch mode Charger.
- Supply and install Battery Terminating Device and Inter-row Connectors to fit new 110V 52 x Lead Acid cells in the battery room according to Eskom standards.
- Supply, Install and Commission all necessary cabling from the Battery Charger to The Battery Bank and to the AC/DC distribution Panel.
- Install, gland, ferrule and terminate all new control technology cables as per cabling – and cable block diagrams.
- Supply and Install Battery Stand
- Supply and Install Safety Signs
- Provide all relevant documents

**Telecoms Scope:**

- Supply and Install Fibre Optic Patch Box 2552A - by 3M for Transformer PIU Junction Box.
- Supply and Install 12 core 1310nm multimode All Dielectric CST fibre (50/125um), 12 Core 1310nm 50/125um Duplex multimode Patch leads 3meter(ST/ST), and Heavy Duty Duct fibre 6 core 1310nm Multi Mode (50/125um)

- Supply and Install 32mm Optex sub duct, 6 Way ODF (Patch Panel, 6 Way termination box, CAT6 Copper Ethernet Cable and Cable Splicing (Including kit)
- Connect and commission all protection circuits using the newly installed fibre optic cable.
- The supplier shall provide all equipment necessary to test the fibre during commissioning and a test report should be compiled on completion.
- Each individual fibre shall be tested. Hand over documentation shall be submitted in hard as well as electronic format.
- The contractor shall provide a list of test equipment and calibration certificates for acceptance by Eskom before commencing of work.
- Supply and Install a Meinberg Lantime M320 GPS Clock with ancillaries in existing remote engineering panel.
- The handover documents should include:
  - ✓ Test results
  - ✓ Number of joint boxes and position on the line
  - ✓ Sagging chart
  - ✓ Type of cable and specification (manufacturer name)
  - ✓ Type of hardware and manufacture name.

**AC/DC Scope:**

- Supply and Install Yard Change over AC Board without distribution (Includes control module, single and dual, distribution module and termination module with steel structure and automatic transfer switch). The Yard AC Board to be wall Mounted as shown on the control room layout.
- Supply and Install, gland, ferrule and terminate all the new control technology cables as per cabling - and cable block diagrams.
- Provide all cabling to lighting masts from AC YARD BOX.

**Note:**

- Supervisory cables to be installed and cable ends to be terminated as per Eskom agreed specifications.
- Supplier to supply all material like cables Krone, cable ties, etc.
- ALL Protection panels must be tested.
- All tests must be performed from Power-On to the Primary Plant circuit breaker for all controls.
- Handover certificate and records to be supplied to Eskom.
- All cables must be labelled.
- *Contractor to supply all material like cables, cross connection, coax cable, glands, connectors, lugs, KRONE, KRONE labels, cable markings and cable ties etc.*

**Isolator/Current Transfer Junction Box Scope:**

- Supply and install a Double circuit Busbar isolator junction with inserts box on Transformer No. 3 HV Busbar isolators and a single circuit isolator junction box on Transformer No.3 MV isolator junction box.
- Supply and install HV CT's junction box with inserts on Transformer No. 3 HV CT.

**Testing, Pre-commission and commission Scope:**

- Pre-commission and commission the new 5JB—3200 PIU & 5TM3100 Transformer & Tap Changer Protection Scheme to the 132/11kV Transformer No.3.

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



- Pre-commission and commission the 1x 11kV 2500A Incomer switchgear Panel, 1x 11kV 2500A Bus Section and 2x 11kV 2500A Transfer Feeders with 3CF-4100F with Solkor Protection.
- Pre-commission and commission the control technology cables from the AC/DC Distribution Panel.
- Pre-commission and commission all isolator connections.
- Test and commission all the metering equipment and current transformers.
- All Protection panels must be tested.
- All tests must be performed from the POWER-ON to the Primary Plant circuit breaker for all controls.
- Database configuration of the station on POWER-ON.
- Commissioning of the station to POWER-ON.

Pre-commission and final commissioning in collaboration with Eskom

***The abovementioned scoping is a high-level description(scope) of the works to be carried out and the details may be found on Annexure B which is the Eskom functional detailed design package (specifications & Drawings) which the contractor must essentially price on for this contract. The contractor is to ensure that the pricing includes all ancillaries, accessories, and equipment to ensure functionality of the entire of the transformer bay, related feeder bays and bus sections. etc***

#### **2.2.1.4 Location of the Works**

The East London Industrial Development Zone is located within Buffalo City on the western side of the Buffalo River, between the East London port and airport. The locality of the Eskom Leaches Bay substation is on Chester Road, Siyakha, East London. The Works are located in the East London development Zone at approximately LAT 33°3'5.38"S and LONG 27°50'47.55"E (see images below).

#### **2.2.1.5 Temporary Works**

The provision of any temporary works of whatever nature, required for execution of the scheduled items, shall be the responsibility of the Contractor, and the cost thereof shall be included in the rates for the respective items of work.

### **2.2.2. ENGINEERING**

#### **2.2.2.1 Design**

Works designed by, per design stage:

Concept, feasibility and overall process  
Basic engineering and detail layouts to bid stage  
Final design to be approved for construction stage  
Temporary works  
Preparation of as-built drawings

Engineer  
Engineer  
Engineer\*\*  
Contractor  
Contractor

\*\* See C3.2.2 and C3.2.3

#### **2.2.2.2 Employer's Design**

The permanent works included in this contract has been designed by the Employer. The engineer has prepared detailed layout drawings and single line diagrams which he believes adequately address the clients' requirements and site limitations. The detail of the works is indicated on the drawings and in the specifications. The Tenderer may submit alternative offers for designs prepared by himself subject to the conditions specified in the Contract Data.

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



### 2.2.2.3 Contractor's Design

The temporary works included in this contract together will be designed by the Contractor. The 132kV Transformer Scheme (5TM-3100 & 5JB3200) control plant design and drawings as per Eskom standards shall be completed by the contractor. Allowance for engineering shall be made by the contractor.

### 2.2.2.4 Drawings

The Contractor shall use only the dimensions stated in figures on the Engineers Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of sleeves, cables, pipe bends, duct ends and all other underground infrastructure shall be given by co-ordinates. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

The Contractor shall be required to complete the as-built/record drawings before a Certificate of Completion will be issued. Provision is made in the schedule of quantities for this.

All drawings provided by the contractor shall be of an appropriate engineering standard and to the approval of the Engineer. The contractor shall keep and maintain an up-to-date drawing register on site. A working copy of all contract drawings shall be available at all times on site for the engineers use. The Drawings prepared by the Employer for the permanent Works are tabulated below :

Drawing Number	Title Description	Rev No.
D-EC-1973-1A	Station Electric Diagram	5
D-EC-1973-1B	Station Electric Diagram -Transformer 1 Incomer	5
D-EC-1973-1C	Station Electric Diagram -Transformer 2 Incomer	4
D-EC-1973-1D	Station Electric Diagram -Transformer 3 Incomer	0
D-EC-1973-2	Site Plan & Future Extension	1
D-EC-1973-4	Earthmat Layout	1
D-EC-1973-5	Foundation layout	2
D-EC-1973-6	Steelwork Layout	1
D-EC-1973-7	Electrical Equipment Layout	1
D-EC-1973-12	Trench & Fence Layout	1
D-SR-121-03	Control Building Switchgear Room and Relay Room Panel Arrangement	1

Refer to all drawings and provided under the **Eskom functional detailed design package on Annexure B.**

The Employer reserves the right to issue amended and/or provide additional drawings during the Contract.

### 2.2.2.5 Information Issued at Award Stage to Successful Tenderer

Accessible data of full detailed design package from Eskom with Construction drawings will be issued upon award.

### **2.2.3 PROCUREMENT**

#### **2.2.3.1 Procurement Principles**

The Employer decided to adopt the Standard of Uniformity in Construction Procurement published by the Construction Industry Development Board (CIDB) for his procurement process.

The Standard for Uniformity in Construction Procurement establishes minimum requirements that:

- Promote cost efficiencies through the adoption of a uniform structure for procurement documents, standard component documents and generic solicitation procedures;
- Provide transparent, fair and equitable procurement methods and procedures in critical areas in the solicitation process;
- Ensure that the forms of contract that are used are fair and equitable for all the parties to a contract; and
- Enable risk, responsibilities and obligations to be clearly identified.

#### **2.2.3.2 Contractors Personnel**

The Contractor shall limit the utilisation of his permanently employed personnel to that of key personnel only on the Works, as defined below, and shall execute and complete the Works utilising a temporary workforce employed directly by the Contractor and/or by his sub-contractors, using the assistance of the Labour Desk(s), from the various communities that are established in proximity to the Works or which will be consumers from the Scheme.

Without derogating from the Contractor's obligations to complete the Works within the specified time for completion in terms of the General Conditions of Contract, the numbers in each category of the Contractor's key personnel, as stated by the Contractor in the Returnable Schedules, will be strictly controlled during the contract period and any increase in numbers will be subject to the prior approval of the Employer.

Key personnel means all contracts managers, site agents, site clerks, materials and survey technicians, quantity surveyors, trainers, supervisors, foremen, skilled plant operators, brick layers, welders, shutter hands and the like, and all other personnel in the permanent employ of the Contractor or his sub-contractors who possess special skills, and/or who play key roles within the Contractor's or his subcontractor's operations.

The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor, and where he deems the circumstances so warrant, authorise in writing that the Contractor may utilise in the execution of the Works, workers not being his key personnel but who are in his permanent employ. Without limiting the generality of application of this sub-clause, circumstances which may be considered by the Engineer to warrant authorization of the use of the Contractor's permanent employees other than key personnel, include:

- a) The unavailability from local sources of sufficient numbers of temporary workers and/or sub-contractors to execute the Works, provided always that the Contractor has satisfied the Engineer that he has exercised his best endeavours and taken all reasonable actions to recruit sufficient temporary workers and sub-contractors from local sources.
- b) The unavailability within the temporary worker pool and/or from subcontractor sources available to the Contractor in terms of the Contract, of sufficient skills necessary to execute the Works or specific portions thereof, in situations where the completion period allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of suitable training as contemplated in the Contract;
- c) Any other circumstances which the Engineer may deem as constituting a warrant.



#### 2.2.3.3 Temporary Workforce

The Contractor shall employ labour from the local communities through the Labour Desk(s). Accordingly, the workforce that is employed on Site shall consist of local residents, except for approved key staff in the permanent employ of the Contractor, to the maximum extent that is compatible with the requirements of Clause 2.3.2.

The contractor shall assist in identifying available local labour and, where available, semi-skilled labour as well as local sub-contractors.

Although the Contractor shall adhere to the statutory minimum wage rates, he is however at liberty to negotiate additional incentive payments based on performance.

A contract of employment or subcontract should be signed between the Contractor and each of his employees or sub-contractors, as the case may be. Likewise contracts of employment must be entered into between each such sub-contractor, and each of the specific subcontractor's employees. Employment and subcontract agreements shall make clear reference to at least the following conditions:

- The minimum agreed wage rate per hour in respect of labourers;
- The agreed pay rate per unit of production where applicable;
- UIF and WCA payments;
- Minimum working hours per day;
- Start and end times of a daily shift;
- Lunch break times;
- Company Policy regarding :
  - Rain time
  - Sickness and absenteeism
  - Disciplinary matters
  - Grievances
- Method and frequency of payment;
- Date of Payslips.
- Work clothes and safety equipment to be issued.

#### 2.2.3.4 Labour Intensive Construction

Labour Intensive Construction shall mean the economically efficient employment of as great a portion of labour as is technically feasible to produce a standard of construction as demanded by the Specifications with completion by the Due Completion Date, thus the effective substitution of labour for equipment. The provision of any temporary works of whatever nature, required for execution of the scheduled items, shall be the responsibility of the Contractor, and the cost thereof shall be included in the rates for the respective items of work.

Appropriate portions of the Works included in the Contract shall be executed using labour intensive construction methods. These portions of the Works shall be constructed utilising only locally employed labour and/or the labour of local sub-contractors, supplemented to the extent necessary and unavoidable by the Contractors key personnel as provided for in clause 2.3.2, unless otherwise instructed by the Engineer. The locally employed labour should be resourced from the local labour desk based in the vicinity of the site. The portions of the Works to be executed using labour intensive construction methods are:

- clearing and grubbing of the Site;
- bedding, selected fill, laying, backfilling and compaction of all pipe, cable trenches irrespective of depth, but assisted by mechanical compaction equipment in order to achieve the specified densities;

- reinstatement of all fill, shoulder and pavement layers at road crossings, but using mechanical compaction equipment in order to achieve the specified densities;
- transportation and spoiling of all trench materials, where the disposal site is located within 20 metres of source;
- removal of oversized materials to the edge of the roadway during the construction of roads and streets;
- laying, testing of cables, including all fittings
- construction of all manholes, cleaning eyes, kerb inlets, junction boxes, culvert floors, end structures and balustrades, valve chambers, thrust blocks, pipeline markers and the like (earth-, concrete-, brick- and metalworks), but excluding the mixing of concrete and transporting of same to the point of pouring;
- construction of concrete interlocking block pavement;
- kerbing;
- road marking and signage;
- dismantling and re-erection of fences; and
- cleaning and tidying up of the Site.

In respect of those portions of works which are not listed above, the construction methods adopted and plant utilised shall be at the discretion of the Contractor, provided always that the construction methods adopted and plant utilised by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

#### 2.2.3.5 Subcontracting

The Contractor shall appoint such authorities and/or specialist subcontractors and suppliers as may be designated or nominated by the Employer or the Engineer for those portions of the Works specified in the Scope of Works. The contractor will be governed by the policies and procedures of the local municipality for the procurement of services.

The Contractor shall sub-let to local emerging sub-contractors' appropriate portions of the works that are designated in 2.3.4 as being reserved for labour intensive construction methods.

As required by the Conditions of Contract, the Contractor shall be responsible for all work carried out by sub-contractors (whether nominated by the Employer or selected by the Contractor) on his behalf. The Engineer will not liaise directly with any such sub-contractor, nor will he become involved in any problems and/or disputes related to payments, programming, workmanship, etc, unless provided for in the Conditions of Contract. Such problems and/or disputes shall remain the sole concern of the Contractor and his sub-contractors.

The subcontractors must be from within the local community unless the works are specialised and the skill set cannot be found within the community, then only will the contractor be permitted to source a subcontractor externally subject to the clients approval.

#### 2.2.3.6 Handover & Training

The Service provider is to ensure that the plant is erected and commissioned with Eskom personnels presence, this is to ensure where necessary, skills transfer on operation and maintenance of the equipment.

#### 2.2.3.7 Proof of Compliance with the Law

Service Provider to abide by all relevant and applicable legislation / s and all applicable regulations pertaining to the required services and site.



**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



**2.2.3.8 Meetings frequency for upgrade**

Work Order or the check list will be kept for the following.

- Inception meeting
- Bi-Weekly progress reports
- Handover meeting
- Site Diaries

## **2.2.4 CONSTRUCTION**

### **2.2.4.1 Standard Specifications**

The Standard Specifications on which this contract is based are the South African Bureau of Standard's Standardized Specifications for Civil Engineering Construction (SABS 1200). (Note: "SABS has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2001 amongst other specifications).

Although not bound in nor issued with this Document, the relevant sections of the standard specifications shall form part of this Contract. These documents are available at the Contractor's expense from the SA Bureau of Standards, Private Bag X191, PRETORIA, 0001.

The applicable SABS 1200 Standardised Specification for this Contract shall be the following:

- |    |   |                  |
|----|---|------------------|
| A  | - | General          |
| AB | - | Engineers office |
| C  | - | Site clearance   |
| D  | - | Earthworks       |
| LB | - | Bedding (cables) |
| LC | - | Cable ducts      |

#### **2.2.4.2 National and International Standards**

SANS 470	Concrete poles
SANS 1063	Street lights regulation
SANS 10142	Wiring of premises (Part 1 and 2)
SANS 1411	Materials of insulated electric cables and flexible cords.
SANS 1029	Miniature substations
SANS 1507	Electric cables with extruded solid dielectric insulation for fixed installations (all parts)
SANS 97	Impregnated paper insulated metal-sheathed cables for rated voltages 3, 3 /3,3 kV to 19/33 kV (excluding pressure assisted cables)
SANS 10198	The selection, handling and installation of electric power cables of rating not exceeding 33 kV (all parts)
SANS 1885	Rules for application of standard wire numbering ANNEX A
SANS 475:2006	Luminaires for interior lighting, streetlighting and floodlighting – Performance requirements
SANS 121:2011	Hot dip galvanized coatings on fabricated iron and steel articles.
NRS 018	Fittings and connectors for low-voltage overhead power lines using aerial bundled conductors.

The Occupational Health and Safety Act 85 of 1993

The relevant regulations of the Buffalo City Municipality and Eskom.

***All standards and specifications are subject to revision, and Tenderers are encouraged to investigate the possibility of applying the most recent editions of the standards comprising of Eskom DT Standards, IEC, ISO and SANS standards for substation and control systems which not limited to as tabulated below:***

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Document No.	Revision No.	Description	Attached (Y/N)
SCSASABK3	0	Generic Substation Design	N
240-56062704	2.1	The DX and TX specification for 11kV to 33kV fixed pattern metal-enclosed indoor primary switchgear standard	N
IEEE 81	-	Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods	N
SANS 121	-	Bending dimensions of bars for concrete reinforcement	N
SANS 282	-	Symbolic safety signs (App)	N
SANS 1186	-	Standardized specifications for civil engineering	N
SANS 10103	-	The measurement and rating of environmental noise with respect to annoyance and to speech	N
SANS 10144	-	communication	N
SANS 10164	-	Detailing of steel reinforcement for concrete	N
SANS 10199	-	The structural use of masonry – All parts	N
SANS 10400-T	-	The design and installation of an earth electrode	N
SANS 60060-1	-	The application of the National Building Regulations –Part T: Fire protection	N
SANS 60815	-	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions – All parts	N
32-95	-	Environmental, Occupational Health and Safety Incident Management Procedure	N
34-195	-	Standard Drawing Practice for Cad Users in the Power Plant and Control Plant Technologies Environments and for Electrification Networks	N
34-1985	-	Distribution Standard – Part 2, Earthing Section 1. MV and LV reticulation earthing	N
240-56065131	3	The DX and TX specification for 6.6kV to 33kV withdrawable indoor metal-enclosed switchgear	N
240-46264031	2	Fibre-optic design standard – part 2: substations	N
240-120804300	-	Standard for the labelling of electrical equipment within Eskom wires networks	N
240-46425213	-	Cable testing – control plant	N
240-54615413	-	Standard for commissioning protection assets	N
240-62629353	-	Specification for panel labelling standard	N
240-64100247	-	Standard for earthing of secondary plant equipment in substations	N
SANS 121:2011 or ISO 1461:2009	-	Hot dip (Galvanised) zinc coatings (other than on continuously zinc-coated sheet and wire	N
DST 34-209	1	MV Cabling in Substation	N
DSP 34-1974	0	Substation Connectors.	N

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Document No.	Revision No.	Description	Attached (Y/N)
DST 34-1175	0	General information and requirements for medium-voltage cable systems	N
DPC 34-333	1	Health and Safety requirements to be met by Principal Contractor employed by Eskom Distribution.	N
DSP 34-1622	1	Accessories for medium-Voltage Power Cables for Systems with Nominal Voltages of 11kV to 33kV.	N
SABS 10198-13	1988	The selection, handling and installation of electric power cables of rating not exceeding 33kV Part 13: Testing, commissioning and fault location	N
DST 34-1245	0	Substation Earthing	N
DISASAAQ1	5	hold point checking of distribution substation construction before handing over for commercial operation	
IEEE 81	-	Guide for measuring earth resistivity, ground impedance and earth surface potentials of a ground system.	N
SABS 920	-	Steel bars for concrete reinforcement.	N
SABS 1186	-	Symbolic safety signs.	N
SABS 1200A	-	Standardized specifications for civil engineering construction – A General.	N
SABS 1200AA	-	Standardized specifications for civil engineering construction – AA General (small works).	N
SABS 1200C	-	Standardized specifications for civil engineering construction – C Site Clearance.	N
SABS 1200D	-	Standardized specifications for civil engineering construction – Earthworks	N
SABS 1200DA	-	Standardized specifications for civil engineering construction – Earthworks (small works).	N
SABS 1200LB	-	Standardized specifications for civil engineering construction – LB Bedding (pipes).	N
SABS 1200DB	-	Standardized specifications for civil engineering construction – DB Earthworks (pipe trenches).	N
SABS 1200G	-	Standardized specifications for civil engineering construction – G Concrete (structural).	N
SABS 1200GA	-	Standardized specifications for civil engineering construction – GA Concrete (small works).	N
SABS 1200GB	-	Standardized specifications for civil engineering construction – GB Concrete (ordinary buildings).	N
SABS 1200H	-	Standardized specifications for civil engineering construction – H Structural steelwork.	N

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Document No.	Revision No.	Description	Attached (Y/N)
SABS 1200HA	-	Standardized specifications for civil engineering construction – HA Structural steelwork (sundry items).	N
SABS 1200HC	-	Standardized specifications for civil engineering construction – HC Corrosion protection of structural steelwork.	N
SABS 1200MK	-	Standardized specifications for civil engineering construction – MK Kerbing and channelling.	N
SANS 1019.	-	The design and installation of an earth electrode.	N
SABS 0164	-	The structural use of masonry. – All parts.	N
SANS 60060-1	-	General -definitions and test requirements	N
ESKPBA9A9	-	Environmental impact assessment policy.	N
ESKPVAAL7:	-	Environmental impact assessment procedure.	N
DISASAAA0S	-	Standard for passive fire protection in distribution substation yards.	N
DST_34-1985	-	MV and LV reticulation earthing.	N
DST_34-195	-	Distribution group's specific requirements for standard drawing practice for substation design layout.	
240-55922824	-	Substation Layout Design Guide	N
240-64720986	-	Emergency Preparedness Public Address System – For Large Area Deployment	N
240-65216546	-	Standard for Portable Earthing Gear	N
240-66917056	-	Standard for Passive Fire Protection in Distribution Substation Yards	N
240-68971854	-	Standard for Power Frequency Electric and Magnetic Analysis in Substations	N
240-72597722	-	Environmental Impact Assessment for Distribution Activities	N
240-75660336	-	Substation and Network Equipment Label Specification	N
240-76368574	-	High Security Mesh Fencing	N
240-76613395	-	Planning Standard for Distribution Network Reliability to Ensure Distribution Network Code Compliance	N
240-78980848	-	Specification for Nonlethal Energized Perimeter Detection System (NLEPDS) for Protection of Eskom Installations and its Subsidiaries	N
240-84854974	-	Continuity Measurement of Substation Earth Grid Systems	N
240-87605434	-	Quality Checklist for Distribution Substation Primary Plant Prior to Handing Over for Commercial Operation	N
240-91252455	-	Lighting for Perimeter Security at Eskom Installations	N
240-96393507	-	Soil Resistivity Testing for Substation Applications	N

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Document No.	Revision No.	Description	Attached (Y/N)
240-101940513	-	Substation Earth Electrode Resistance Measurement	N
240-102220945	-	Specification for Integrated Access Control System (IACS) for Eskom Sites	N
240-109589380	-	Direct Lightning Stroke Protection of Substations	N
240-113163905	-	LED Floodlights for Distribution Substation Applications	N
240-120804300	-	Standard for the Labelling of Electrical Equipment within Eskom Wires Networks	N
240-122922610	-	Specification for Substation Tubular Conductors	N
240-68971972	-	Standard for Stranded Flexible Conductor Selection	N
240-68972408	-	Standard for Flexible and Tubular Conductor Heights and Phase Spacing	N
240-83382076	-	Standard for Operational Floodlighting in Substations	N
240-134369472	-	Substation Earth Grid Design Standard	N
240-64100247	-	Standard for Earthing of secondary plant equipment in substations	N
240-54615413	-	Standard for commissioning protection assets	N
240-85224724	-	standard for distribution protection schemes: common requirements	N
240-84854878	-	Specification for Distribution Protection Schemes: Transformers	N
240-56364444	-	Standard Minimum Requirements for The Metering of Electrical Energy and Demand	N
240-73735443	-	D20 Commissioning Procedure	N
240-68234842	-	Substation Gateway and Station RTU/IED Standard Specification for EVH Substations	N
240-77589987	-	Maintenance Standard for Substation Automation and Telecontrol Equipment	N
240-89388001	-	Commissioning and Implementation of Serial IED – RTU Diagnostics	N
240-64813568	-	Standard indoor and outdoor telephone cable	N
240-95399670	-	Telecommunications Network Interface Converter Standard	N
240-71086056	-	DNP3 Class Allocation Standard	N
240-61223733	-	Telecontrol D20 RTU Application Design Standard for Distribution	N
240-97276914	-	Telecontrol Point Naming Standard for EMS and DMS	N
240-76627823	-	Lead Acid and Nickel Cadmium Battery Logbooks Standard	N
240-107464530	-	Maintenance of L/M/H Range Nickel Cadmium Cells	N
240-56227711	-	Maintenance of Vantage Nickel Cadmium Cells	N
240-89797258	-	The Safe Handling, Transportation and Disposal of Cells, Batteries and Electrolyte	N
240-131935522	-	Battery Maintenance Task Lists	N

**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Document No.	Revision No.	Description	Attached (Y/N)
240-108614750	-	Acceptance and Commissioning of DC Supply Equipment	N
240-56362221	-	Standard for Safety Signs Used in DC Applications	N
240-125437734	-	Design Standard for DC & Auxiliary Supplies	N
240-108614758	-	Maintenance of DC Supply Equipment	N

#### **2.2.4.3 VARIATIONS AND ADDITIONAL CLAUSES TO THE STANDARD AND PARTICULAR SPECIFICATIONS**

The following variations and additions to the Standard and Particular Specifications will be applicable to this Contract:

The various documents listed in section 2.2.4.2 shall be treated as mutually explanatory. However, should any requirement of section 2.2.4.3 conflict with any requirement of the Standardised Specifications or with any requirement of the Particular Specifications, then the requirement of section 2.2.4.3 shall prevail.



**TENDER FOR THE PROPOSAL OF 132/11kV ESKOM LEACHES  
BAY SUBSTATION 40MVA CAPACITY UPGRADE**



Reference	Description
PSA	GENERAL
PSA1	QUALITY (Clause 3.1)
PSA2	PLANT (Clause 4.3)
PSA3	SITE FACILITIES
PSA4	ADJUSTMENT OF PRELIMINARY AND GENERAL TIME
PSA5	HEALTH AND SAFETY
PSA5.1	Fixed-charge Items
PSA5.2	Time-related Items
PSA6	ENVIRONMENTAL MANAGEMENT PLAN
PSA6.1	Fixed-Charge Items
PSA6.2	Time-related Items
PSA7	SUMS STATED PROVISIONALLY (Clause 8.5)
PSA7.1	Contract Price Adjustment
PSA7.2	Contingencies
PSA8.1	Telephone cost
PSA8.2	Site Office consumables
PSA8.3	Electronic office equipment
PSA8.4	Accommodation of the Engineers Representative
PSA8.5	Acceptance Control Testing
PSA9.1	Cross cut and Locating existing services
PSA9.2	Relocating existing services
PSA9.3	Facilitation of Wayleave extension
PSA10	Community Requirements
PSA10.1	CLO/LDO remuneration
PSA10.2	Accredited and approved training courses for Local personnel
PSA11	Specialist Services
PSA11.1	Specialist training
PSA11.2	Land Surveyor
PSA11.3	Features requiring special attention.
PSA11.4	OEM Installation and Commissioning of Transformer Scheme
PSA11.5	Clerk of Works.
PSA11.6	Grading of access road/ Specialized rigging

**PSA GENERAL**

**PSA1 QUALITY (Clause 3.1)**

All material used in the Works shall, where such mark has been awarded for a specific type of material, bear the SABS mark. Alternatively, the Contractor shall furnish the Engineer with certificates of compliance of materials, which bear the official mark of the appropriate standard.

**PSA2 PLANT (Clause 4.3)**

Except where the use of plant is essential in order to meet the specified requirements by the Due Completion Date, the Contractor shall use only hand tools and equipment in the construction of those portion(s) of the Works that are required in terms of the Scope of Works to be constructed using labour intensive construction methods. All construction equipment required for the project shall be provided by the contractor. All equipment shall be fit for purpose and where applicable carry the necessary certification that it has been inspected and maintained in accordance with the OHS Act i.e. all hydraulic lifting equipment.

**PSA3 SITE FACILITIES**

**PSA3.1 SITE FACILITIES AVAILABLE**

**PSA3.1.1 Contractor's Camp**

A Site will be made available by the Employer for the Contractor's camp and depot adjacent to the site. The exact location of the site should be request from the Engineer prior to the contractor establishing site. Full access to council staff/Eskom Staff shall be available at all times at the substation to allow for normal switching and maintenance operations of existing infrastructure.

### **PSA3.1.2 Source of Water Supply**

The Contractor shall be responsible under the Contract for the supply and distribution at his cost of all water that he may require for purposes of constructing the Works. Accordingly, the Contractor shall pay all connection fees and consumption charges, and at his cost provide all connections, consumption meters, pipework, storage tanks, transport and other items associated with the supply of water for the Works.

Should water be supplied by the water utility, The Contractor shall, subject to the approval of the Engineer, make any necessary arrangements with the water utility for the connection(s), and shall provide in his tender for the payment of all charges and costs that are associated with making water available for purposes of constructing the Works.

### **PSA3.1.3 Source of Power Supply**

The Contractor shall be responsible under the Contract for the supply and distribution at his cost of all electricity that he may require for purposes of constructing the Works for no electricity connection is available.

Should electricity be supplied by the power utility, The Contractor shall, subject to the approval of the Engineer, make any necessary arrangements with the power utility for the connection(s), and shall provide in his tender for the payment of all charges and costs that are associated with making electricity available for purposes of constructing the Works.

### **PSA3.1.4 Housing**

The Contractor shall be permitted to house Key Personnel only within his camp site(s). At the commencement of the Contract, the Contractor shall inform the Engineer of his intentions regarding the housing of Key Personnel on Site, and he shall thereafter ensure that all such accommodation is kept neat and tidy, hygienic and properly controlled at all times. Should at any stage of the Contract the Employer and/or the Engineer be of the opinion that the housing of Key Personnel within the camp site(s) of the Contractor is causing disturbance or inconvenience to the landowner or the Employer, then the authority granted by this clause for the Contractor to house Key Personnel on Site may be withdrawn, either partially or entirely.

The Contractor shall at all times conform to all requirements contained in law or bylaws, as well any other requirements set by the controlling local authority.

## **PSA3.2 SITE FACILITIES REQUIRED**

### **PSA3.2.1 For the Contractor**

Whatever may be required for the satisfactory execution of the Contract as set out in Schedule 8.3.2 – Bill of Quantities.

**3.2.1.1 NAME BOARDS (Clause 3.1)**

A name board conforming to the standard requirements of the South African Association of Consulting Engineers must be provided and erected on site, details to be provided by the Engineer.

**3.2.1.2 OFFICE BUILDING (Clause 3.2 and Clause 5.2)**

The Contractor shall provide Office accommodation, meeting facility, ablution facilities for male and female, carports, cleaning and maintenance, as well as 24 hour security for the office for the duration of the contract period. The Contractor shall provide insurance for the above-mentioned period for the buildings, equipment as well as the contents of the buildings at the replacement cost for new buildings/equipment and all contents.

**PSA3.2.2 For the Engineer**

As specified under Section PSA.

**PSA3.2.3 Sanitary facilities**

Male and female Flush toilets or Chemical toilets shall be provided and maintained for the use of the Contractor's personnel at all camp sites that the Contractor may establish for construction of the Works. In addition, the Contractor shall at all times during construction of the Works provide adequate sanitary facilities on site so that all employees are at all times within easy reach of sanitary facilities. The flush toilets or chemical toilet facilitates for male and female is to be provided for every 100m radius.

**PSA4 ADJUSTMENT OF PRELIMINARY AND GENERAL TIME-RELATED ITEMS  
(Clause 8.2.2)**

PSA4.1 Replace the note on the end of the clause with the following:

Note: An approved extension of time shall not necessary qualify the Contractor to receive additional payment for each relevant time related item at the original tendered unit rate for such item. Should the Engineer grant extension of time with additional payment, the additional payment will be calculated pro rata to the extension of time in relation to the time for achieving Practical Completion for the Works at the date when the agreement came into effect.

PSA4.2 Should the Time for Completion be automatically extended due to abnormal weather conditions occurring during execution of the Contract as provided for in the Conditions of Contract, adjustment to the total for time-related preliminary and general items will be applicable as specified in Clause PSA4.1.

## **PSA5 HEALTH AND SAFETY**

The maintenance of safe work practice at all times and in all sections of the execution of the works is embedded in the day to day site activities of all the Contractor's management, staff and workforce on the contract.

The introduction of the Construction Regulations in 2014 requires from the Employer to ensure that the Contractor has made adequate provision for the execution of the works within the specifications of said regulations. The contractor shall comply to the Health and Safety Specification outlined as per Eskom OHS standards and bound into **Appendix A** of this document.

It must be noted that the lists below are not exhaustive and that many items have been traditionally priced by the Contractor as an integral part of his Preliminary and General items or as part of the overhead costs of other items. The tender document, although not detailed with regards the Construction Regulations, requires that the Contractor ensures adherence to the Occupational Health and Safety Act (Act 85 of 1993) the Construction Regulations, 2014.

### **PSA5.1 Fixed-charge Items**

Monthly Progress Payment Certificates shall be submitted to the Engineer's Representative on Site not later than the 20th of each month (or as agreed between the Contractor and the Engineer). All quantity calculations and certificates submitted by the Contractor for checking shall be in accordance with the standard forms supplied by the Engineer. Contractor's monthly invoice shall only be issued after acceptance of claim by Engineer. All quantity calculations and certificates submitted by the Contractor for checking shall be in accordance with the standard forms supplied by the Engineer. Claims shall be a measured and no forecast claims shall be accepted.

Add the following new Clause (Clause 8.3.5):

	<u>Unit</u>
Compliance with the Occupational Health and Safety Act (Act 85 of 1993) and its regulations and with the Employer's and Eskom's Health and Safety Specifications. ....	Sum

The fixed charge item shall include but shall not be limited to the following:

- Preparation of Health and Safety Plan,
- Establishment of Health and Safety File,
- Health and Safety Training
- Personal Protective Clothing and Equipment
- Establishment of Safety Administration
- Signage to demarcate site as a restricted construction area
- Other Health and Safety Fixed-charge Obligations

### **PSA5.2 Time-related Items**

	<u>Unit</u>
Add the following new Clause (Clause 8.4.6): Compliance with the Occupational Health and Safety Act. (Act 85 of 1993) and its regulations and with the Employer's Health and Safety Specifications.	Sum

The time related item shall include but shall not be limited to the following:

- The employment cost of all health and safety personnel including consultants, health and safety officers, inspectors, supervisors and issuers required in terms of the Contractor's Health and Safety Plan,
- Updating the Health and Safety Plan as needed,
- Carrying out of periodic own audits and follow-up audits,
- Compiling ongoing risk assessments and risk assessment reports as required by the Works,
- Convening of regular safety meetings with the Safety Representatives,
- Accompanying and supporting the Employer or his Safety Agent during ad hoc audits,
- Compilation of monthly safety reports and statistics for the Employer or his Safety Agent,
- Implementation and maintenance of Training
- Maintenance of personal protective clothing and equipment
- Maintenance of fences, signs and barricades
- Access control to construction site
- Implementation and maintenance of safety administration
- Other Health and Safety Time-related Obligations

#### **PSA6 ENVIRONMENTAL MANAGEMENT PLAN**

According to the NEMA regulations, the contractor should comply with the Environmental Authorisation (RoD), the Environmental Management Plan (EMP) as well as Best Practices. The Contractor shall comply with all the conditions of the Environmental Agents (MDA) requirements as the EMP is still in process. The contractor is to adhere to environmental control officers requirements. The EMP report for this project is in Appendix D.

##### **PSA6.1 Fixed-Charge Items**

Add the following Clause (Clause 8.3.7):

Compliance with Environmental Management Plan and Record of Decision	<u>Unit</u>
	Sum

The sum tendered shall cover all costs, overheads, profits and charges incurred in complying with all the conditions of the Environmental Management Plan and Record of Decision bound.

##### **PSA6.2 Time-related Items**

Add the following Clause (Clause 8.4.8):

Compliance with Environmental Management Plan and Record of Decision	<u>Unit</u>
	Sum

The sum tendered shall cover all costs, overheads, profits and charges incurred in complying with all the conditions of the Environmental Management Plan and Record of Decision bound.

**PSA7 SUMS STATED PROVISIONALLY (Clause 8.5)**

**PSA7.1 Contract Price Adjustment**

A Provisional Sum shall be included in the Summary of Schedules for Contract Price Adjustment. No percentage mark-up will be applicable to any payments made using contingency money other than the mark up included in prices for variations determined in terms of the Conditions of Contract. The Contract Price Adjustment will only be allowed for the increases relevant to the CPI index applicable to this document.

**PSA7.2 Contingencies**

A Provisional Sum shall be included in the Summary of Schedules for contingencies. No percentage mark-up will be applicable to any payments made using contingency money other than the mark up included in prices for variations determined in terms of the Conditions of Contract. The Provisional Sum will only be allowed for additional scope of works and is subject to the Engineers approval.

**PSA8 Engineers Requirements (Not applicable to this contract)**

**PSA8.1 Telephone cost**

The Engineer's representative will provide his own cellular telephone for the contract.

**PSA8.2 Site Office consumables**

The provisions for site office consumables are not applicable to this contract.

**PSA8.3 Electronic office equipment**

The provisions for electronic office equipment are not applicable to this contract.

**PSA8.4 Accommodation of the Engineers Representative**

The provisions for the engineer's representative accommodation are not applicable to this contract.

**PSA8.5 Acceptance Control Testing**

The provisions for the acceptance control testing are not applicable to this contract.

In addition to the abovementioned amount, provision is made in Schedule 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

**PSA8.6.1 Dayworks**

Add the following to the general specification:

Work will be classified as daywork only if the Engineer considers no other rate in the schedule of quantities appropriate for payment purposes.

An instruction regarding all work to be carried out under daywork in terms of clause 37(2) of the General Conditions of Contract will be issued at the discretion of the Engineer. Some or all the items priced under daywork in the schedule of quantities may possibly not be required for this contract.

Before ordering any material, the Contractor shall submit quotations to the Engineer for his approval, and shall submit such receipts or vouchers to the Engineer as may be necessary for proving the amount claimed.

**PSA9 Existing Services**

**PSA9.1 Cross cut and Locating existing services**

A Provisional Sum must be included in Schedule B for cross cutting and locating of existing services. The contractor is to ensure that the provision sums for the existing services is not exceed. The contractor is to take care when pricing as the provision sum allowance is fixed.

In addition to the abovementioned amount, provision is made in Schedule B for a mark-up on the amount to be paid. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract

**PSA9.2 Relocating existing services**

The contractor is to ensure that the provision sums for the relocating of existing services is not exceeded. The contractor is to take care when pricing as the provision sum allowance is fixed.

All due care must be taken not to damage unknown services. Reference must be made to wayleave agreements/existing drawings for possible services in the areas of construction. All available wayleave agreements will be issued to the successful bidder if they exist. Drawings are to be used as a guide and may not be the exact position of the services illustrated.

Use of detection equipment for the location of underground services

It is anticipated that detection equipment will be required for the location and mapping of underground cables/services on the site, the contractor shall make due allowance in his rate for the use of his own equipment.

Treatment of existing services

Existing cabling will need to be exposed by hand and temporarily relocated during the construction phase, this may involve the extension/ support/protection/ re-termination



of the cables until such time that they can be routed to the planned permanent location.

#### **Damage to services**

The contractor shall at his own cost effect the repairs to any electrical services or any other service previously indicated to him damaged by himself, his employees or any subcontract worker employed on this contract.

The contractor shall record all damages in the site diary and shall also report any incidents which result in a loss of supply (electricity, water, sewer) to the Eskom control immediately. Photographs of the damage shall also be taken for record purposes.

Where the damage has also resulted in an injury the necessary safety steps and reporting procedures shall be followed.

#### **Reinstatement of services and structures damaged during construction**

Once the electrical circuit has been made safe and the damages inspected by the employer or his representative, the contractor will be advised to complete the repairs with immediate effect in order that power may be restored to any affected areas as soon as possible.

Damage to other services shall also be repaired as soon as possible to avoid any disruption to other users.

### **PSA9.3 Facilitation of Wayleave extension**

A Provisional Sum must be included in Schedule B for Facilitation of all Wayleave extension services. The contractor is to ensure that the provision sums for the relocating of existing services is not exceeded. The contractor is to take care when pricing as the provision sum allowance is fixed.

In addition to the abovementioned amount, provision is made in Schedule 2 for a mark-up on the amount to be paid. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract

### **PSA10 Community Requirements**

#### **PSA10.1 CLO/LDO remuneration**

A Provisional Sum must be included in Schedule 2 for the appointment and payment of a community liaison officer (CLO). The appointment of the CLO is to be approved by the local councillor and Project steering committee. If required, the contractor is to also obtain approval from the municipal mayoral committee.

In addition to the abovementioned amount, provision is made in Schedule 2 for a mark-up on the amount to be paid. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

**PSA10.2 Accredited and approved training courses for Local personnel**

A Provisional Sum must be included in Schedule B for payments to be made to facilitators for the training of unskilled persons in generic skills. Payment to the Contractor will be based on invoices certified by the Engineer and issued by training facilitators with the certificates of the personnel's trained to the Contractor for work undertaken in terms of this item.

The training facilitations services should be sourced from within the Local community 1<sup>st</sup>, should the service not be available within the local community, then only is the service to be outsourced.

In addition to the above amount, provision is made in Schedule B for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

**PSA11 Specialist Services**

**PSA11.1 Specialist training**

A Provisional Sum must be included in Schedule 2 for payments to be made to specialists for the training of unskilled or semi-skilled persons in industry accredited management and generic skills. Payment to the Contractor will be based on invoices certified by the Engineer and issued by training specialists to the Contractor for work undertaken in terms of this item.

The personnel's services should be sourced from within the Local community 1<sup>st</sup>, should the service not be available within the local community, then only is the specialist service to be outsourced subject to the Engineers approval.

In addition to the above amount, provision is made in Schedule B for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

**PSA11.2 Land Surveyor**

A Provisional Sum must be included in Schedule 2 for payments to be made to Land Surveyor on the contract. Payment to the contractor will be based on invoices certified by the Engineer and issued by specialist to the Contractor for work undertaken in terms of this item.

The personnel's services should be sourced from within the Local community 1<sup>st</sup>, should the service not be available within the local community, then only is the specialist service to be outsourced subject to the Engineers approval.

In addition to the above amount, provision is made in Schedule 2 for a mark-up on any payments made by the Contractor in this regard. The mark-up shall be regarded as full compensation for overheads, charges and profits as provided for in the Conditions of Contract.

### **PSA11.3 Features requiring special attention.**

The existing services are to be protected or relocated as necessary to ensure continued supply to consumers throughout the project.

The entire works shall be carried out in accordance with the requirements of all the relevant Government Acts and Regulations.

The contractor shall provide suitable and safe access to all parts of the works as may be required for construction purposes or for inspection by the engineer.

All precautions shall be taken to protect both workmen and local residents/businesses in terms of the OSH Act throughout the implementation of this project. Where adequate safety measures and precautions are not being observed, the engineer may order the contractor to comply with minimum safety requirements at the contractor's expense, and compliance with such an order will not absolve the contractor from any of his responsibilities and obligations under the contract.

(a) Site maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

(b) Testing and quality control (building and Civil works)

(l) Contractor to engage services of an independent laboratory

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved independent laboratory to undertake all testing of materials, the results of which are specified in, or may reasonably be inferred from, the Contract. These results will be taken into consideration by the Engineer in deciding whether the quality of materials utilised and workmanship achieved by the Contractor comply with the requirements of the Specifications. The afore-going shall apply irrespective of whether the specifications indicate that the said testing is to be carried out by the Engineer or by the Contractor.

The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified. The Contractor shall promptly provide the Engineer with copies of the results of all such testing carried out by the independent laboratory.

For the purposes of this clause, an "independent laboratory" shall mean an "approved laboratory" (as defined in sub-clause PSA 7.2) which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

(II) Additional testing required by the Engineer

In addition to the provisions of sub-clause C3.4.2.5(b)(i): Contractor to engage services of an independent laboratory, the Engineer shall be entitled at times during the Contract to require that the Contractor arrange with the independent laboratory to carry out any such tests, additional to those described in sub-clause C3.4.2.5(b)(i), at such times and at such locations in the Works as the Engineer shall prescribe. The Contractor shall promptly and without delay arrange with the independent laboratory for carrying out all such additional testing as required by the Engineer, and copies of the test results shall be promptly submitted to the Engineer.

(III) Costs of testing

(a) Tests in terms of sub-clause C3.4.2.5(c)(i)

The costs of all testing carried out by the independent laboratory in accordance with the requirements of sub-clause C3.4.2.5(b)(i), above shall be borne by the Contractor and shall be deemed to be included in the bidden rates and prices for the respective items of work as listed in the Schedule of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of sub-clause C3.4.2.5(b)(i).

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (eg re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor's account.

(b) Additional tests required by the Engineer

The costs of any additional tests required by the Engineer in terms of sub-clause C3.4.2.5(b)(ii): Additional testing required by the Engineer, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Schedule of Quantities; provided always that the costs of any such additional tests ordered by the Engineer, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

Eskom requires for the Line works that ALL crimping tools by the contractor is to be tested by CSIR, A few crimps will need to be made of each size and an approval certificate is required by CSIR prior to the crimping tools being used on the Eskom line and substation.

(c) Opening up and closing down of designated borrow pits

Measurement and payment for opening up and closing down designated borrow pits, including removing and stockpiling overburden and restoring the Site, shall be made under item 8.3.4 of SANS 1200 D. This item applies to all borrow material required under this Contract.

The requirements of sub-clause 5.2.2.2 of SANS 1200 D regarding the opening up, maintenance and closing down of borrow pits shall be adhered to.

(d) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 17.1 of the Conditions of Contract.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding the foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

(e) Existing Industrial areas

Electricity and water supply interruptions in existing industrial areas shall be kept to a minimum. The contractor shall along with his project programme prepare a planned outage schedule, any changes to the outage schedule shall be agreed and approved 6 weeks in advance of any particular outage so that businesses in the area may be properly notified. Supplies shall be normalised by 16:00 on the same day unless by special agreement to the contrary.

(f) Labour Intensive Requirements (EPWP) Employment of local labour

This contract is specialised and requires specialist technical expertise therefore little opportunity for labour Intensive construction methods exists. However, it is the intention that this Contract should make maximum use of the local labour force that is presently under-employed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key and technically qualified personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The Contractor shall fill in the form entitled Key Personnel in the Forms to be completed by the Bidder. The data stated on the above-mentioned form will be strictly monitored during the Contract period and any deviations there from shall

be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The employment of casual labour will be done in co-operation with community leaders and local structures. The bidder shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, No 75 of 1997, as determined by the Department of Labour

(g) Monthly statements and payment certificates

The statement to be submitted by the Contractor in terms of Clause 49 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal working days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer three (3) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of sub-clause 49.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

(h) Construction in restricted areas

Working space will sometimes be restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices bidden will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment, or any claim for payment due to these difficulties will be considered.

(i) Notices, signs, barricades and advertisements

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his offered rates.



The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

**(j) Workmanship and quality control**

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times as per Eskom requirements.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates offered for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

An Eskom Clerk of Works will be designated to the project and hold points will need to be adhered to prior to proceeding with following deliverables. The Eskom Clerk of works will sign off quality, test, and check sheets on all works prior to proceeding with new items on the programme in conjunction with the Engineer.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

**(k) Nature of Ground and Subsoil Conditions**

The Geo-technical report will be provided by the contractor. After the geo-technical studies has been conducted, the contractor must determine whether any ground water seepage is encountered within any of the trial holes up to the depths investigated, or whether the water table is possibly close to the bottom of the hole.

Whether the soils present on site up to the depths investigated will it be easily excavated by normal equipment.

And lastly the report must show whether the soils encountered shall be considered suitable for use as compacted fill.

**NB; THE GEOTECH STUDY WILL BE CONDUCTED BY THE CONTRACTOR IF REQUIRED.**

**(l) Construction programme to be submitted with tender**

Timeous completion of the Works is deemed to be essential. Bidders shall, with their offers, submit a preliminary programme showing a breakdown of the civil, electrical and structural portions of the work indicating from start to finish

how the individual activities interrelate and are interdependent on and with the electrical portions of the work, in order that the whole of the works (electrical and civil) are completed on time (as required by the Conditions of Contract).

The manpower and plant resources to be provided for each section of the civil, electrical and structural portion of the works should also be provided with the programme, which may be in the form of a bar chart indicating the critical path network.

Acceptance of the Bid shall not imply that the proposed programming and planning are approved. Final details of planning and programming must be submitted to the Engineer for approval in accordance with the Conditions of Contract.

- (J) Refer to drawings and specifications provided under the Eskom functional detailed design package on Annexure B For the particular specifications relevant to this contract.

#### **PSA11.4 OEM Installation and Commissioning of Transformer Scheme**

A Provisional Sum must be included in Schedule B for the Installation and Commissioning of the Transformer 5JB-3200 & 5TM3100 Scheme which shall be installed and commissioned by Original Equipment Manufacturer (OEM). The Contractor is to ensure that the OEM installs and commissions the schemes in accordance with the Eskom standards. The OEM Provisions for supervision (Including transport, labour, accommodation and meals) shall be catered for. This contractor shall be responsible for the quality of works coupled and will take full responsibility for the workmanship. The contractor shall install the equipment and run all cabling to the equipment within the transformer bay.

#### **PSA11.5 Clerk of Works**

A Provisional Sum must be included in Schedule B for an external Clerk of works who will be designed by the Engineer to oversee the quality of works in accordance to Eskom standards completed by the contractor. Ultimately the Clerk of Works must report to the clients representative also known as the Engineer. The provision shall allow for the Clerk of works monthly remuneration and disbursements for the period of the construction until completion. The contractor shall make his own separate provision for supervision on site as part of the contract.

#### **PSA11.6 Grading of access road/ Specialized rigging**

A Provisional Sum must be included in Schedule B for an option to design and construct a temporary access road via the substation Western entrance due to clearance issues underneath the 11kV overhead busbar arrangement. Alternatively, specialised rigging equipment must be hired to lift the transformer safely into position in the yard. The provision is to complete all works related to ensuring the transformer is placed into position in the yard. Provisions should also including any environmental screening, surveying or any other additional services are required to ensure compliance and maintenance of quality in placing the transformer.



## **2.2.5 MANAGEMENT**

### **2.2.5.1 Management of The Works**

#### **a) Planning and Programming**

Within 14 days of the Commencement Date and prior to commencement of any operations on site, the Contractor shall prepare and submit to the Engineer a Project Plan that provides full details of the sequence and timing of the scheduled activities required in terms of the contract. This shall cover the entire contract period, and shall be amended and revised as necessary until approved by the Engineer.

In addition, one week before the end of each month, the Contractor shall submit a list of work to be carried out during the following month, together with the anticipated expenditure, using the relevant items from the Bills of Quantities. The list shall include both scheduled activity items and unscheduled additional work items as requested by the Engineer and shall form the basis of the work to be carried out.

#### **b) Sequence of the Works**

The sequence of work shall be carried out strictly in accordance with the project plan and monthly schedule as detailed above.

Certain other aspects of unscheduled work may be required from time to time in response to call-outs.

All works where system outages are required will have to be formally corresponded 6 weeks in advance to the ELIDZ representative otherwise known in this contract as the Engineer.

#### **c) Methods and Procedures**

Prior to the commencement of any work on the site the service provider shall submit method statements for each separate maintenance, repair or installation activity that he is required to undertake. The method statements shall be submitted to the Engineer for approval at least 10 days prior to the scheduled start of the activity. The method statements shall set out the procedures to be followed in carrying out the activity and shall include details of compliance with Occupational Health and Safety. This method statement should also include Environmental aspects where applicable.

The Contractor shall ensure that his staff and workers are properly trained in the safe and effective use of any equipment, plant or materials necessary to undertake the work.

#### **d) Quality Control**

The Contractor shall ensure that the appearance of his staff is neat and tidy, and he shall provide them with appropriate and easily identifiable uniforms, preferably with the Contractor's logo, to enable them to be recognised at all times while on site.

The Contractor shall provide whatever samples of materials are required for approval prior to commencement and shall undertake all necessary tests that are required in terms of the applicable specification to ensure that his workmanship meets the required standard.

e) **Other Service Providers**

Various other maintenance activities and construction contracts will be underway concurrently with this contract. The Contractor may be required to co-ordinate his activities together with the activities of the other contractors, and shall be notified of specific requirements by the Engineer.

f) **Testing, Completion, Commissioning**

Each separate activity included in the contract shall be fully tested and independently commissioned on completion and shall immediately thereafter be made available for use by the ELIDZ or Eskom. The tests are to comply the standard tests recommend by the IEC , Eskom DT Standards and SANS. The contractor is to engage with the Engineer and Eskom Clerk of works to give notice for request for approval at various hold points in the project prior to proceeding to the next listed activity.

g) **Communications**

All communication of whatever nature shall be through the Engineer. The procedure for call-outs shall be discussed and agreed between the Contractor and the Engineer prior to commencement.

Categorisation of call-outs and relevant response times are described in clause b) above.

h) **Key Personnel**

Within 14 days of the Commencement Date and prior to commencement of any operations on site, the Contractor shall submit to the Engineer detailed CV's of his key personnel together with their relevant contact details. Should the key personnel not be the same as those included in the tender submission, then the Contractor shall be required to provide personnel with equivalent or better qualifications and experience.

i) **Management Meetings**

The Contractor shall be required to attend a monthly meeting during which all aspects relating to the progress, scope, expenditure, OHS and general administration of the contract will be discussed. The Contractor shall ensure that his representative at the meeting has the necessary understanding and authority to make decisions regarding these issues.

j) **Payments**

All payments to the Contractor shall be by means of electronic transfer and the Contractor shall provide his banking details to the Engineer for the contractor's remuneration.

- The Contractor shall draw up and submit his claim using the agreed quantities.
- The Engineer shall check the claim and certify the amount to be paid.
- The Contractor shall provide a VAT invoice to the Engineer for the certified amount.
- The Engineer shall submit the claim, the VAT invoice and the payment certificate to the Employer.
- The Employer undertakes to make payment of all amounts due to the contractor within 30 days from receipt of an invoice from the Engineer.
- All invoices are to be submitted for the attention of the Clients Representative who will in turn deliver the authorized invoices to Accounts.

- Claims to be in to the engineer for evaluation by the 20<sup>th</sup> of each month to allow for sufficient time for processing of the claim for month end.

**k) *Records***

The Contractor shall be required to provide a detailed report following each scheduled progress inspection on an Excel spread sheet or Word document in both hard and electronic format. The report shall be in a format to be agreed with the Engineer and shall contain the following:

- A record of completed activities undertaken.
- A daily record of resources (Both personnel and equipment) utilised on site.
- Status Quo Equipment tracker outlining delivery dates for hardware and software.
- OHS and Environmental Compliance Status Quo.

The report shall be submitted within seven days of the scheduled inspection. Eskom standards and procedures in terms of reporting shall be adhered to.

**l) *Permits***

The Contractor is required to obtain identity tags and access cards from the ELIDZ for all his staff that enter the site and also from Eskom. He shall make prior arrangements with the ELIDZ and Eskom to obtain the tags timeously, as no member of his staff shall be allowed on site without the identity tag clearly displayed.

**m) *Proof of Compliance with the Law***

The Contractor shall be required to comply with all regulations and laws of whatever nature that are applicable to his operations throughout the duration of the contract, and shall produce documentary evidence when requested for all aspects, including, but not limited to:

- Valid proof of registration with the Compensation Commissioner
- Proof of registration for income tax and VAT
- Compliance with the Occupational Health and safety Act and Construction Regulations. Eskom additional OHS Regulations and Environmental regulations.

**2.2.6 Health and Safety Requirements**

**2.2.6.1 *Risk Analysis***

The Contractor shall perform a Risk Analysis to determine the severity of the risks exposed to during the course of this contract. In terms of the identified risk classification, preventative actions should be implemented. Included in this should be safe working procedures, etc.

The Risk Analysis should include all risks identified by the contractor; as well as a risk assessment of all work carried out from an elevated position. The contractor is also responsible to identify any other risks unique to the specific project that may not be part of the generic list supplied by Eskom. Risks can be evaluated by using a risk assessment matrix.

#### **2.2.6.2 Typical Risks**

- Load equipment Injury/Damage/Loss
- Travel to/from worksite Injury/Damage/Loss
- Construction stands Injury/Damage/Loss
- Install equipment Injury/Damage/Loss
- Prepare equipment for installation (off site) Injury/Damage/Loss
- Do pre-commissioning (off site) Injury/Damage/Loss
- Commissioning (on site) Injury/Damage/Loss
- Poisonous or dangerous insects like bees, spiders etc. Injury/Damage
- Poisonous and / or dangerous animals, snakes, material or objects.
- Dangerous situations and terrain e.g. hijack area, restricted area etc.

#### **2.2.6.3 Requirements for the Health and Safety File.**

The Health and Safety file contains various documents that relates to the entire history of the project. The Contractor should ensure that this file is kept up to date. On completion of the construction work, the Contractor shall hand over the file to the Employer on request.

The Health and Safety file should contain the following folders, and relevant documents should be filed under these folders:

- A copy of the OHS Act, 1993 and its regulations.
- The Tunnelling Regulations as published under the Mine Health and Safety Act, 1996, in case of tunnelling being done.
- All agreements in terms of section 37(2) between the client and principle Service Provider.
- Tender documentation.
- Copies of all health and safety plans.
- Any other risk assessment not foreseen at the time the health and safety plan was done.
- All letters of appointment.
- Copy of notification of construction work.
- Inspection registers or checklists.
- Certificates of Compliance for electrical installations.
- Monthly audit reports.
- Drawings and Designs.
- Fall Protection plan.
- Detailed structural engineering survey of structures to be demolished.
- In case of scaffolding used: a certificate of a system design for suspended scaffolding together with proof that it was forwarded to the Department of Labour.
- Inspection records of designers.
- Safe work procedures.
- Evacuation plans

#### **2.2.6.4 Acceptance of the Service Provider's Health and Safety Plan**

##### ***Intervals for periodic audits:***

The Employer may conduct periodic audits to ensure that the Contractor's Health and Safety Plan is implemented and maintained at the Construction site.

##### ***The Contractor's Agreement:***

The Service Provider agrees to implement the Health and Safety Plan as outlined above and as stipulated in the Construction Regulations (2003). In addition the Service Provider undertakes

maintain and to hand over a comprehensive Health and Safety File to the Employer on completion of the project, containing.

- Emergency contact details
- Medical records
- Maintenance records for Machinery and equipment
- Incident investigations reports and notifications thereof
- Annexure 2's (Incident recording forms)
- Material Safety Data Sheets of Chemicals
- Minutes of H&S Committee meetings
- Training Records
- Personal Protective Equipment Records
- Examination & test records of equipment

The above is not an exhaustive list. The Contractor shall add any other documentation that is regarded as reasonable and relevant.

#### **2.2.6.5 Risk Identified by Design:**

At all instances, access to high-voltage apparatus and equipment must be strictly controlled; no person shall carry out work of any description, on any part of high-voltage apparatus, unless:

- those parts are opened and,
- those parts are isolated,
- all practical steps are taken to lock such apparatus off from all live conductors;
- safety tested,
- effectively and adequately connected to earth at all points of disconnection from supply to such apparatus,
- and earthed on both sides of the workplace;
- barricaded (screened off) to prevent danger – warning notices affixed;
- Released for work by the issue of a work permit. .

The risk analysis and workers register must be completed in conjunction with the relevant Regulations to safeguard the continuity of supply and obey safety rules and operating regulations.

#### **2.2.6.6 Risk Identified on site:**

Every employee or service provider not authorized shall work under the authority of an authorized person, and take reasonable care for the health and safety of him/her and other persons who may be affected by his acts or omissions, and obey the health and safety rules and procedures.

If any situation which is unsafe or unhealthy comes to his/her attention, as soon as possible or practicable, such situation must be reported to the authorized person.

Control must be exercised over system conditions and operating procedures at all times.

#### **2.2.6.7 Possible risks for the Work at these points:**

Before attempting any work at the designated substation or premises, care must be taken that the following steps are carried out:

- Trenches, care must be taken not to be injured in open trenches.
- Electricity: 220VAC points isolated before working on SCADA equipment.
- Open or loose electric wires.
- 132/88kV and 11kV points of operation.
- Ground level: For SCADA and DC projects nobody must leave ground level at any time.

**2.2.6.8 Cardinal Rules:**

- Any person who performs any work on the distribution network shall ensure that the network has been opened, isolated, tested and earthed as per the ORHVS. All work must be performed between two visible working earths. This rule shall exclude all work being performed as live work operation.
- Any person who must for any reason perform work higher than two meters above ground level must wear a fall arrest system, and be attached to an anchor point at all times.
- Any person driving a vehicle or being a passenger whilst busy with the performance of their duties will at all times wear the seatbelt provided in the vehicle.
- Any person driving a vehicle whilst busy with the performance of his/her duties will under no circumstances be under the influence of intoxicating liquor or drugs.

## **2.3 SITE INFORMATION**

### **2.3.1 Existing Services**

### **2.3.2 Environmental Restrictions**

## **2.3 SITE INFORMATION**

### **2.3.1 EXISTING SYSTEM**

HV/MV overhead lines, MV/LV Cables and control cables exist within the site and the location of the electricals services are shown on the drawings provided. However, the exact location of the physical service on site may differ in certain instances. The contractor is to ensure that care is taken when excavating or carrying out construction works to ensure that no existing services are impacted during construction. Should there be any discrepancy on existing services on site, the contractor is to inform the project manager of this risk.

In the event of a discrepancy between physical condition and the information on a drawing, the Contractor shall notify the Project Manager immediately. Furthermore, the project manager should be informed immediately if the physical condition found on site is such that there is a deviation from the drawing which requires a change in the design of the works or result in a possible compensation event.

### **2.3.2 ENVIRONMENTAL RESTRICTIONS**

Certain areas within the ELIDZ have been designated as “Environmentally sensitive areas”. Drawings indicating the location and extent of these areas can be obtained by request from the Engineer. Under no circumstances shall the Contractor enter or use these areas for any purpose whatsoever, without the specific written approval of the Engineer. Please see Appendix D for minimum EMP compliance requirements.



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## ***APPENDICES***

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## ***APPENDIX A***

### ***OHS Regulations (Eskom)***

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## ***APPENDIX B***

### ***ESKOM FUNCTIONAL DESIGN PACKAGE (SPECIFICATIONS AND DRAWINGS – Part 1 to 3)***

***Remaining Data (To be issued to the  
successful bidder upon appointment)***

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## ***APPENDIX C***

### ***ELIDZ GUIDELINES FOR COMPLETION OF SUPPLIER DEVELOPMENT BID DOCUMENT***

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## ***APPENDIX D***

### ***Environmental Management Plan (EMP)***

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