



## AGRICULTURAL RESEARCH COUNCIL

### Specification

**ELECTRICAL SERVICES TO SUPPLY, INSTALLATION AND COMMISSIONING OF A SWITCHGEAR AT OVR-BOIKHUTSONG**

**THE DETAILS AND CONTENTS OF THIS DOCUMENT ARE CONFIDENTIAL AND FOR CONSIDERATION AND RESPONSE BY BIDDING CONTRACTORS ONLY**



## **PART A: ARC SITE STIPULATIONS FOR CONTRACTORS**

### **1. GENERAL CONDITIONS**

A professional service provider with electrical engineering is required in ARC: OVI for supply, installation and commissioning of a Switch Gear at Boikhotsong residence.

### **2. SITE INSPECTIONS**

The service provider shall inspect and examine the sites and its surroundings and satisfy himself/herself before submitting his/her quotation as to the nature of the building complex so far as is practicable, the form and nature of the site, the quantities and nature of the work, the means of access to the site and in general shall himself/herself obtain all necessary information as to the risks, contingencies and other circumstances which may influence or affect his/her work.

It remains the service provider's responsibility to arrange for labour, transport, off-loading, storage and safe keeping of the material, workshop, equipment and tools required for the execution of the work in general. No claims arising (money wise or time) from a lack of knowledge in this regard will be considered.

The service provider shall be deemed to have satisfied himself/herself before submitting the quotation as to the correctness and sufficiency of his/her quotation for the works, rates and prices he/she has stated in the quotation shall cover all his/her obligations under the work to be done for the proper completion of the work/project.

### **3. GUARANTEES**

The service provider shall guarantee the installation, workmanship and materials being used under this project for a period of twelve (12) months and for the mechanical equipment, installations and workmanship for twelve months. The guarantee will commence on the date of receipt of the total and complete installation.

### **4. OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 AS AMENDED**

The refurbishment and installation of the work must be in accordance with the conditions as set out in the Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.

### **5. SITE MEETINGS AND PROCEDURES**

The Institute shall reserve the right to convene a site meeting at any time required. The service provider and site manager shall promptly attend all site meetings and shall also ensure that all interested persons under his/her jurisdiction, etc. are notified timely of site meetings.

## **6. PROGRESS SCHEDULE**

A provisional project plan is required as part of the bid that clearly indicates major deliverables and their associated dates. Within one (1) week after the site has been handed over, the service provider shall submit the representative with a full detailed project plan in which all aspects of the works have been taken into consideration.

Strict adherence to the provisions of this plan shall be required and the service provider shall report any deviations and/or future deviations to the Project Manager and submit a new programme indicating the variations.

If the service provider wishes to deviate from the contract period specified, he/she shall obtain the written permission of the Institute and a penalty clause of 5% of the total value of the contract will be initiated for each additional week.

## **7. LOSS**

The contractor shall be liable for any loss through theft, damage, etc. of materials for the project from the time the site is handed over. Therefore the service provider shall take the necessary precautions for protection against such losses.

## **8. INJURY TO PERSONS**

The service provider will be responsible for injuries to persons and indemnify the Institute against any liability, loss, claim or law-suit of any nature in accordance with the **Common Law or Acts of the Republic**, on an account of an injury, death of anybody, due to the acts of the person undertaking the service except where the injury arises on account of actions undertaken by personnel of the Institute.

## PART B:

### RFQ SPECIFICATIONS: ELECTRICAL SERVICES TO SUPPLY, INSTALLATION AND COMISIONING OF A SWITCH GEAR AT BOIKHOTSONG.

#### 1. SITE INFORMATION

- 1.1. The switch gear is fed from OBP campus and will be erected at Boikutsong.
- 1.2. The supplying cable from OBP to Boikutsong is 70mm PILC cable 11kv.
- 1.3. The new switchgear will be supplying Boikhutsong, TAD facility and TAD houses.

#### 2. TECHNICAL SPECIFICATIONS

NO	DESCRIPTION	COMPLY (YES / NO)	DETAILS TO OFFER
2	The bidder is required to supply, install and commission a switch gear that is trip free and suitable for outdoor application		
2.1.	The switch gear shall have a normal current and breaking current of 630A		
2.2.	The switch gear shall be of a manner that is interlocked and only when is off then the cover or door can be open.		
2.3.	The switch gear shall be of an infused isolator with three feeders with a maximum fuse rating of 90A		
2.4.	The switch gear shall be suitable for the rated voltage of 11kv as specified in the project specification,		
2.5.	The switch gear shall be supported by means of a concrete that is sabs approved or be designed to carry load of such switch gear and only soft soil shall be used for back filling the trench made for joints and termination.		
2.6.	The bidders shall trace and identify the cable to be installed inside the switch gear and label them accordingly		
2.7.	On completion of erection and installation the bidders shall perform all tests that may be required to ensure the work is ready for handing over. <ol style="list-style-type: none"><li>1. Ensure correct polarity, phase rotation and load balance between phases.</li><li>2. Continuity and resistance of earth conductor including bonding all conductors</li><li>3. Insulation resistance test on 11kv</li><li>4. The contractors shall check that all</li></ol>		

NO	DESCRIPTION	COMPLY (YES / NO)	DETAILS TO OFFER
	protection relays and overload devices are properly set to protect the switch gear and components.		
2.8.	The bidders shall provide all test done by the manufacture that complies with sans 10142 and IEC.		
2.9.	The bidders shall ensures that danger signs and notices are mounted in conspicuous manner prohibiting unauthorized persons from entering the area and procedure on how to resuscitate when one is electrocuted.		
2.10.	All equipment's shall be provided with manufactures name plate that is easily accessible showing the following data. 1.The manufactures name 2. Operated voltage 3. Degree of protection 4. Maximum current capacity on Burs bars. 5. Maximum current capacity on Equipment. 6. Short circuit strength in KA.		
2.11.	The bidders shall ensure that labelling on the switch gear are engraved with screwed in an approved guide rail.		
2.12.	Bidders shall ensure that indication equipment's are flush mounted type and meters are protected with suitable fuses.		
2.13.	Bidders to ensure that earth conductor to earth bar is 70mm bare stranded copper conductor. Earth rod (solid cooper) to be at least 16mm diameter and 1.5m long. The earth bar shall comprises of 50mmx6.3mm copper section 500m with pre-drilled 10mm diameter.		
2.14.	Bidders to ensure that all protective relays are equipped with means to indicate overcurrent, earth fault and over voltage		
2.15	Bidders shall ensure that all measuring relays be equipped with built in test facilities for measuring of current, voltage without disturbing any connection		
2.16	Bidders shall upon the completion of the project ensure that switch gear is fenced, it must comply and adhere with the switch gear and medium voltage regulation sans 10142		

### 3. SPECIAL CONDITIONS

NO	DESCRIPTION	COMPLY (YES / NO)	DETAILS TO OFFER
3.1	Bidders shall include with the bid proposal detailed electrical/wiring drawings/diagrams that comply with the relevant legislation in terms of the work outlined in this RFQ document		
3.2	This quotation shall include supply and installation of components with a subsequent training session at handover		
3.3	Bidders shall be responsible for the taking of measurements. ARC shall not be liable for any inaccurate measurements related to this tender document		
3.4	The construction must be done in a way that it will not disrupt the electrical supply to the building. If required, the contractor must inform the ARC at least 10 days in advance for arrangements to be made. Work will only be allowed during official working hours.		
3.5	Bidders are required to ensure the services are rendered by a qualified and licensed electrical contractor that is registered with the Electrical Conformance Board (ECB) and/or Electrical Contractors Association (ECA). Proof of qualification, licencing and registration must be supplied with the bid proposal.		
3.6	Bidders shall include in the bid proposal a certified copy and valid Registration Certificate from department of labour as a company for performing electrical work.		
3.7	Certificate of compliance (COC) must be issued prior to any payments processed for the work performed in terms of this tender document. Valid proof must be included with the tender proposal of the company/person that will issue the certificate. The competent person is required to approve design and complete the additional test report because of the voltage above 1KV		
3.8	Bidders shall include at least 3 reference letters from contactable technical references of projects completed during the last 5 years that are related to medium voltage electrical work strictly on switch gear (11KV)		
3.9	The work shall be executed as stipulated in the installation code in accordance with the Occupational Health and Safety Act, 1993 (as amended)		
3.10	Valid current certificate issued by the Compensation for Occupational Injuries and Diseases Act (COIDA) must be attached to the RFQ		
3.11	The project is estimated to be completed within 4 weeks (working days) between 7:30 and		

NO	DESCRIPTION	COMPLY (YES / NO)	DETAILS TO OFFER
	16:00.		
3.12	Construction Industry Development Board (CIDB) grading of 1 EP or higher		
3.13	Bidders shall include a workmanship warranty of at least 5 years.		
3.14	Warranty on material to be at least 12 years.		
3.15	Main electrician/technician must have at least 10 years' experience in medium voltage 11kv (switch gear), termination, testing and installation.		

#### 4. EVALUATION CRITERIA

The 80/20 principle will apply in terms of the Preferential Procurement Policy Framework Act 5 of 2000.

80 Points will be allocated to price and 20 Points will be allocated to the BBBEE status level.

**BBBEE points in terms of the Preferential Procurement Policy Framework Act Regulations will be allocated as follows:**

B-BBEE Status Level of Contributor	Number of Points
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant Contributor	0