

27th November 2018

TENDER NO. KGN-KIP-013-2018

**TENDER FOR SUPPLY, INSTALLATION AND COMMISSIONING OF 30KVA UPS AT KIPEVU 1 POWER STATION.**



### **ADDENDUM NO.3**

In accordance with the **TENDER FOR SUPPLY, INSTALLATION AND COMMISSIONING OF 30KVA UPS AT KIPEVU 1 POWER STATION** KenGen hereby issues addendum No. 3.

### **SUPPLY, INSTALL AND COMMISSION 30KVA UPS AT KIPEVU 1 POWER STATION.**

#### **INTRODUCTION:**

This schedule describes the scope of work for supply, install and commission 30KVA UPS at Kipevu power station.

#### **1. BASIC AND DETAILED SCOPE OF WORK**

The scope shall include:

- Supply Install and Commission of 30KVA UPS.
- Provide the UPS hardware and battery cubicle.
- After commissioning the supplier with collaboration with KenGen staff do battery test on load. (without mains)
- On battery backup to be not less than six (6) hours on load. Indicate the type, the rating and the number of batteries to achieve the backup time.
- A cable tray to be supplied to hold the cables.

#### **2. LETTER OF AUTHORIZATION BY MANUFACTURER**

The contractors shall provide a valid authorization letter from the manufacturer and attach a proof of previous related jobs/works that have undertaken.

#### **3. INSTALLATION AND COMMISSIONING**

The contractor shall install the UPS in the main Admin block and supply it with 415V mains from the mains distribution board. The output will be connected to clean power wiring distribution board in the same room.

The contractor shall provide the detailed work plan. Equipment installation and commissioning works shall be carried out by the contractor at the supervision of the KenGen staff.

#### **4. WORKS PROGRAMME**

The installation and commissioning shall be accomplished within one week.

*Technical Specifications – Supply, install and commission 30KVA UPS.*

## 5. WARRANTY

Maintenance (Preventive maintenance to be done annually) and support warranty shall be three (3) years.

## 6. TAKING OVER CERTIFICATE

On satisfactory completion, the Employer shall issue a Taking over Certificate. This shall show the effective date of Taking Over which shall be the date of commencement of the Defects Liability Period (Warranty).

## 7. TRAINING

On site hands on training for KenGen staff shall be offered by the contractor during the commissioning. This training will give emphasis on equipment usage.

## 8. ACCOMMODATION AND TRANSPORT FOR CONTRACTOR'S EMPLOYEES

The Contractor shall be responsible for his/her staff's food, accommodation and transport for the whole period of the contract.

## 9. TECHNICAL DOCUMENTATION

The contractor will prepare and supply comprehensive installation and maintenance manual documents hard copies.

## 10. TECHNICAL REQUIREMENTS

Nominal Rating in kVA	30
<b>RECTIFIER UNIT</b>	
Input nominal voltage	3x400V(3x380V,3x415V)
Operating Range	340V-460V
Frequency	50/60Hz±10%
Input current in A at nominal load	56
Charging characteristic to IEC 478-10	IU
Nominal DC voltage	220V
Rectifier type	6 pulse
<b>INVERTER UNIT</b>	
DC input	216V ±20%
Nominal AC voltage	3x400V(3x380V,3x415V)
Output voltage static response	<±1%
Output voltage dynamic response	<±2%
Recovery time	1ms
Frequency	50/60Hz
Frequency tolerance without mains	±0.1%
Frequency synchronization range	±1% (±2%, ±3%)
Power factor range	0.0 lagging to 0.0 leading
Output phase current in A	43

*Technical Specifications – Supply, install and commission 30KVA UPS.*

Voltage wave form	sinusoidal
Voltage distortion	≤3%
Crest factor	Max.3
Overload response 1min.	150%
Overload response 10min	125%
Short circuit response	>3x1nominal
<b>STATIC BYPASS SWITCH</b>	
AC voltage	3x400V(3x380V,3x415V)
Frequency	50/60Hz
Nominal power in kVA	30
<b>GENERAL DATA</b>	
Efficiency (AC to AC)	Up to 90%/>95% with ECO mode
Noise level depending on rating	<55-70dB(A)
EMC compatibility	EN62040-2
Air cooling with redundant and monitored fans	yes
Operating temperature range min./max. (without de-rating)	-5°C/+40°C
Storage temperature range min./max.	-30°C/+75°C
Maximum altitude without de-rating	1000m
Protection degree IEC 529/EN 60529 standard system	IP20, IP21 and IP43 (>IP43 possible)
<b>DIMENSIONS</b>	
Height(mm)	1800≥1920
Width(mm)	850≥950
Depth(mm)	800≥900

## 11. TENDER EVALUATION CRITERIA

### 11.1 Compliance to the KenGen General Bidding Requirements

REQUIREMENTS:		CRITERIA:	COMPLIANCE
1.	Duly Signed Price Schedule(s)	Mandatory	
2.	Price Validity Period – ≥90 days	Mandatory	
3.	Duly Signed Tender Form	Mandatory	
4.	Manufacturer’s letter of Authorization	Mandatory	
5.	Valid Tax Compliance	Mandatory	
6.	Sequential pagination/serialization of all pages in the tender document.	Mandatory	
7.	Delivery Period - ≤ Three (3) weeks from the date of signing the contract	Mandatory	
8.	Proof of Previous implemented related jobs – attachments	Mandatory	

Technical Specifications – Supply, install and commission 30KVA UPS.

9.	Catalogues and technical data sheets for the equipment	Mandatory	
10	Site Visit- provide a signed site visit certificate.	Mandatory	

**11.2 Compliance to the Technical Specifications**

**12. Price Competitiveness.**

- The most competitively priced bid meeting required criteria.

**ALL OTHER TERMS AND CONDITIONS IN THE TENDER DOCUMENT REMAINS THE SAME**

**ACKNOWLEDGEMENT OF ADDENDUM NO.3**

We, the undersigned hereby certify that the addendum is an integral part of the document and the alterations set out in the Addendum have been incorporated in the tender proposal.

Signed.....

Tenderer.....

Date.....