

**KCA UNIVERSITY**



**TENDER DOCUMENT**

**PROCUREMENT OF SOLAR INFRASTRUCTURE**

**TENDER NO. KCAU/SOLAR INSTALL/01/2022**

**KCA University  
Thika Road, Ruaraka  
P.O. Box 56808, 00200 Nairobi.**

**Tel: (+254 2) 8070408-9  
Cell: (+254) 734888022/0710888022**

**2<sup>ND</sup> DECEMBER, 2022**

## **SECTION 1: INVITATION FOR TENDERS**

KCA University **KCAU/Solar Install/01/2022** Invites Tenders from Interested Companies to Tender for the following Materials as indicated below:

**Tender Name: Supply, Delivery, Installation and Commissioning of Solar Infrastructure**  
**Tender No: KCAU/Solar Install/01/2022**

### **PROPOSED GRID-TIED SOLAR POWER PROJECT**

The completed bid documents should be deposited into the tender box located at Procurement Office at Main Campus, Ruaraka not later than 12<sup>th</sup> December 2022 at 11.00am.  
And addressed to:

**The Vice Chancellor &CEO,  
KCA University,  
P. O. Box 56808 - 00200,  
Nairobi, Kenya**

The tenders will be opened on 12<sup>th</sup> December 2022 at 11.00am in the presence of the Firms' representatives who choose to attend.

KCA University will award the contract to the successful bidder whose quote has been determined to be substantially responsive and has been determined to be the best-evaluated quote, provided further that the bidder is determined to be qualified to perform the contract satisfactorily.

We reserve the right to accept or reject any quote and to annul the process and reject all quotes at any time prior to contract award, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the procuring entity's action. In the case that we determine that none of the bidders is responsive; each bidder who submitted a quote will be notified.

A bidder who gives false information in the quote document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment by KCA University from participating in future procurement.

**KCA University reserves the right to accept or reject any bid in whole or in part at its discretion.**

## **SECTION II: INSTRUCTION TO TENDERERS**

Note: The tenderer must comply with the following conditions and instructions and failure to do so is liable to result in rejection of the tender.

### **1. Definitions**

- a) **“Tenderer”** means any person or persons partnership firm or company submitting a sum or sums in the Bills of Quantities in accordance with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications, Drawings and Bills of Quantities for the work contemplated, acting directly or through a legally appointed representative.
- b) Any noun or adjective derived from the word **“tender”** shall be read and construed to mean the corresponding form of the noun or adjective **“bid”**. Any conjugation of the verb **“tender”** shall be read and construed to mean the corresponding form of the verb **“bid.”**

### **2. Eligibility and Qualification Requirements**

2.1 This invitation to tender is open to all tenderers who are eligible as stated in the appendix.

2.2 The procuring entity’s employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender.

2.3 To be qualified for award of Contract, the tenderer shall provide evidence satisfactory to the Employer of their eligibility under Sub clause 2.1 above and of their capability and adequacy of resources to effectively carry out the subject Contract. To this end, the tenderer shall be required to provide the following information:

- a) Details of experience and past performance of the tenderer on the works of a similar nature within the past five years and details of current work on hand and other contractual commitments.
- b) The qualifications and experience of key personnel proposed for administration and execution of the contract, both on and off site.
- c) Major items of construction plant and equipment proposed for use in carrying out the Contract. Only reliable plant in good working order and suitable for the work required of it shall be shown on this schedule. The tenderer will also indicate on this schedule when each item will be available on the Works.
- d) A draft Program of Works in the form of a bar chart and Schedule of Payment which shall form part of the Contract if the tender is accepted. Any change in the Program or Schedule shall be subjected to the approval of the employer.
- e) Details of any current litigation or arbitration proceedings in which the Tenderer is involved as one of the parties.

2.4 To qualify for contract awards, the tenderer shall have the following:

- a) Necessary qualifications, capability experience, services, equipment and facilities to provide what is being procured.
- b) Legal capacity to enter into a contract for procurement
- c) Shall not be insolvent, in receivership, bankrupt or in the process of being wound up and is not the subject of legal proceedings relating to the foregoing.
- d) Shall not be debarred from participating in public procurement.

### **3. Cost of Tendering**

The tenderer shall bear all costs associated with the preparation and submission of his tender and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

#### **4. Documents Comprising the Tender**

4.1 The tender to be prepared by the tenderer shall comprise:

- a) The form of tender and appendix thereto.
- b) A tender security which shall be at least 2% (percent) of the tender price
- c) The priced Bill of Quantity and Schedule.
- d) The information on eligibility and qualification.
- e) Detailed Compliance to The Technical Requirements
- f) Catalogues and Manufacturers Brochures
- g) Manufacturers Authorization for all items
- h) Manufacturer's Warranty for all items
- i) Financial Capability
- j) List of Previous Customers
- k) Any other materials required to be completed and submitted in accordance with the instructions to tenderers.

4.2 The Forms, Bills of Quantities and Schedules provided in the tender documents shall be used without exception

4.3 Your technical offer should be concisely presented and structured in the following order to include, but not necessarily be limited to the following information:

- a) Understanding of the requirements for services work plan and assessments, company's capacity, proposed approach, solutions, methodology and outputs.
- b) Demonstrate how the work will be achieved and provide and estimated timeframe / schedule for completion of the activities.
- c) Project implementation plan and detailed activities; design, supply, construction, testing and commissioning, operation, and maintenance.
- d) Detailed description of proposed materials and services:
  - Comprehensive Health-Safety-Environment (HSE) Plan that shall guide the implementation.
  - List and technical specifications and origin of the proposed material
  - Warranty offered including warranty period / good performance guarantee.

e) Submission of detailed simulation report for the complete power system:

- Submission of detailed simulation report for the complete solar PV system showing: The KWp of the solar panels, System Energy yield (KWh/KWp/Year) Storage Capacity, System layout, Total Energy Produced and total energy output, Systems Single Line Diagram

4.4 Preference will be given to the contractors with the most responsive technical offer, delivery schedule and financial offer.

### **SECTION III: EVALUATION CRITERIA**

#### **A. MANDATORY REQUIREMENTS**

<b>No.</b>	
1.	Attach Copy of tender purchase receipt.
2.	Tender Security from a local bank
3.	Company certificate of Registration
4.	CR12 showing the Shareholders of the company not issued more than 3 months from tender closing date
5.	PIN Certificate (With both VAT and Income Obligations)
6.	Tax Compliance certificate (Valid)
7.	Business Permit
8.	Valid OSHA License
9.	Registration with National Construction Authority (Electrical) -Minimum NCA4
10.	Registration with National Construction Authority (Building) -Minimum NCA4
11.	EPRA Electrical contractor license certification A1
12.	EPRA Solar contractor license certification V1
13.	EPRA Solar importer license certification C1 & V2
14.	Manufacturer Authorization for PV Modules & Inverter



## B. TECHNICAL PROPOSAL

				Score																								
Two (2) grid tied solar PV systems projects with 100 KWp and above, at least 1 project with 200 KWp and above. These shall be subject to verification				200KW (10 Marks) 100KW (5 marks)																								
<table border="1"> <thead> <tr> <th>Position/ specialization</th> <th>Relevant academic qualifications</th> <th>No.</th> <th>Minimum work experience (years)</th> </tr> </thead> <tbody> <tr> <td>Resident Project Manager</td> <td>Degree in Electrical or Mechanical Engineering or Renewable Engineering</td> <td>1</td> <td>10</td> </tr> <tr> <td>Construction Engineer</td> <td>Degree in Electrical or Mechanical Engineering</td> <td>1</td> <td>7</td> </tr> <tr> <td>Design Engineer</td> <td>Degree in Electrical Engineering</td> <td>1</td> <td>7</td> </tr> <tr> <td>Solar PV Specialist</td> <td>Degree/Diploma in Electrical or Mechanical or Renewable or Energy Engineering and (EPRA) Solar PV System Class T3 license or equivalent</td> <td>1</td> <td>10</td> </tr> <tr> <td>Technicians</td> <td>Diploma in Electrical Engineering</td> <td>1</td> <td>5</td> </tr> </tbody> </table>				Position/ specialization	Relevant academic qualifications	No.	Minimum work experience (years)	Resident Project Manager	Degree in Electrical or Mechanical Engineering or Renewable Engineering	1	10	Construction Engineer	Degree in Electrical or Mechanical Engineering	1	7	Design Engineer	Degree in Electrical Engineering	1	7	Solar PV Specialist	Degree/Diploma in Electrical or Mechanical or Renewable or Energy Engineering and (EPRA) Solar PV System Class T3 license or equivalent	1	10	Technicians	Diploma in Electrical Engineering	1	5	2 Marks for each CV
Position/ specialization	Relevant academic qualifications	No.	Minimum work experience (years)																									
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Technicians	Diploma in Electrical Engineering	1	5																									
The Personnel proposed in the above section must be physically available during the project implementation																												
Technical capability: at least 5 years in operation				5-10 years (2 marks) 10-15 years (3 marks) 15 years and above (5 marks)																								
Description of your organization's understanding of the requirement in a format of. • Project implementation plan and detailed civil, electromechanical, and testing and commissioning activities.				10 marks																								
Submission of templates/examples of all proposals and forms of the reporting mechanism for systems operation and maintenance				5 Marks																								

<ul style="list-style-type: none"> <li>• Monthly O&amp;M Schedule and Agenda (Proposal)</li> <li>• Monthly system cleaning agenda (Proposal)</li> <li>• Preventive maintenance schedule (Proposal)</li> </ul>	
Company health and safety policy	5 Marks
Detailed description of proposed materials and services including. <ul style="list-style-type: none"> <li>• Components Data Sheets</li> <li>• Equipment warranty offered including warranty period/good performance guarantee.</li> </ul>	5 marks
Compliance to PV Module technical specifications	20 marks
Compliance to Grid-tie inverter technical specifications	10 marks
<b>TOTAL</b>	80 marks
<b>PASS MARK</b>	70 marks

**SECTION IV: BILLS OF QUANTITIES**

**PROPOSED GRID-TIED SOLAR POWER PROJECT**

**Bill No. 1: Solar Equipment**

<b>Bill No. 1: Solar Equipment</b>					
Item	Description	Unit	Qty	Rate	Amount
	Supply, Install, Test, Commission and set to work the following				
1.1	PhotoVoltaic approximate 2m <sup>2</sup> 450W <b>Solar Panel</b> : 450 Rated Maximum Power (Pmax) 47V Open Circuit Voltage (Voc) 40V Maximum Power Voltage (Vmp) 11.9A Short Circuit Current (A) 11.25A Maximum Power Current (Imp) with minimum 15% efficiency Tempered glass with anti-reflection coating	No.	585		

	NB. 560 pcs to be installed, 25 pcs to be spares				
1.2	20KW PV Gid-Tie <b>Inverter</b> with 1,080V Max. input voltage 160V~950V Operating voltage range 200V Start-up voltage 600V Rated input voltage 22A Max. input current per MPPT 30A Max. short-circuit current Multiple Number of MPPT trackers Communication RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE, 4G / 3G / 2G via Smart Dongle-4G	No.	10		
1.3	Smart Energy Manager Meter RJ45 output port for direct remote data monitoring Intelligent measurement of generated PV power and AC power 50Hz, 415V with IP22 protection	No.	1		
1.4	DC Surge Arrester class type 2, max 12.5kA discharge current, 500Vdc 25ns response time, IP20 protection	No.	3		
1.5	DC Combiner Box 1,000V , 40amps, 5strings, complete with the disconnect switch louvered, powder coated with DIN rail mounts for control circuit	No.	5		
1.6	AC Combiner Box as manufactured by Specialized power system or Schneider Electric. IP54 Form1b, metal clad, cubicle pattern, comprising of Schneider electric or ABB or Equal and approved switchgear, with suitably rated main incomer MCCB, bus bars & suitable MCCBs to the inverters Dimensions: Approximate ;400mm height* 1000mm width* 250mm depth. Include phase presence indicator lamps& digital multimeter.	No.	2		
1.7	Cable tray 200mm by 50mm complete with cover	LM	100		

1.8	Supply and install flexible unipolar rope copper wire, FG7R type for energy, insulated by high module ethylene-propylene rubber, sheath of special PVC (in compliance with IEC 60332-1, IEC 60332-3 and IEC 60754-1), section 1x6 mm <sup>2</sup> .	LM	10000		
1.9	16mm <sup>2</sup> 4-C PVC/SWA/ PVC /Cu armoured cable from the PV inverter to the AC combiner box	LM	100		
2					
2.1	70mm <sup>2</sup> 4-C PVC/SWA/ PVC /Cu armoured cable	LM	500		
2.2	25mm * 3mm SC PVC CU earthing copper strip and associated accessories.	LM	40		
2.3	Roof mount structure (structure to securely hold the solar panels)	Lot	1		
2.4	Electrical Certification and Testing and Commissioning of the entire Solar PV power plant	Lot	1		
2.5	Cable walkways for ease maintenance and inspection.	LM	322		
3	Allow for a monitoring platform of the Solar PV power plant to include laptop (specs: Corei7 , 10th generation) and any other necessary equipment to allow client view plant performance	LOT	1		
<b>Bill No. 2: Civil Works</b>					
1	Cable ducts				
1.1	Excavate level ground and remove unwanted material to spoil in an underground trench (1200 x 1200) mm size.	LM	202		
1.2	Ditto on soft ground	LM	202		
1.3	Supply and install UPVC Pipes class E heavy duty 200mm Diameter in above trenches	No.	34		
1.4	Provide, lay to level 300mm thick layer of well graded sand to cover the duct above	LM	202		
1.5	Provide and lay to level HATARI slabs on top of the sand layer in the cable trench	No.	606		
1.6	Cover above trench and duct above with soft soil only	LM	202		

1.7	Establish 300 * 550 *700mm deep standard power manhole complete with internal plaster and heavy duty EAFW steel cover	No.	7		
1.8	Load cart away surplus excavated material from site	LOT	1		
	<b>Allow 10% Contingency (Kshs)</b>				
	<b>New TOTAL (Kshs)</b>				
	<b>Add 16% VAT (Kshs)(Where applicable)</b>				
	<b>GRAND TOTAL (Kshs)</b>				

**SECTION V: STANDARD FORMS**

- Declaration Form
- Confidential Business Questionnaire
- Form of Tender
- Form of Tender Security

**DECLARATION FORM**

Date \_\_\_\_\_

To \_\_\_\_\_

The tenderer i.e. (name and address) \_\_\_\_\_ declare the following:

Has not been debarred from participating in public procurement.

Has not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement.

Tenderer  
Name & Title of authorized signatory  
Signature  
Date

(To be signed by authorized representative and officially stamped)

**CONFIDENTIAL BUSINESS QUESTIONNAIRE**

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 2 (c) and 2 (d) whichever applies to your type of business.

You are advised that it is a serious offence to give false information on this Form.

**Part 1 – General**

Business Name: .....

Location of business premises; ..... Country/Town .....

Plot No..... Street/Road .....

Postal Address..... Tel No.....

Nature of Business.....

Current Trade License No..... Expiring date.....

Maximum value of business which you can handle at any time: K.sh .....

Name of your bankers.....

Branch.....

**Part 2 (a) – Sole Proprietor**

Your name in full.....Age.....

Nationality..... Country of Origin.....

\*Citizenship details .....

**Part 2 (b) – Partnership:**

**Give details of partners as follows:**

*Name in full    Nationality    Citizenship Details    Shares*

- 1.....
- 2.....
- 3.....
- .

**Part 2(c) – Registered Company:**

Private or public.....

State the nominal and issued capital of the Company-

Nominal Kshs.....

Issued Kshs.....

Give details of all directors as follows:

Name in full .    Nationality.            Citizenship Details\*. Shares.

- 1.....
- 2.....
- 3.....
- 4.....

**Part 2(d) – Interest in the Firm:**

Is there any person(s) in ..... (Name of Employer) who has interest in this firm?

Yes/No..... (Delete as necessary)

I certify that the information given above is correct.

.....  
(Title)

.....  
(Signature)

.....  
(Date)

\* Attach proof of citizenship



**FORM OF TENDER**

TO: *[Name of Employer]* \_\_\_\_\_

\_\_\_\_\_ *[Date]*

*[Tender name &No.]* \_\_\_\_\_

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to Supply,
2. Construct, Install and Complete such Works and remedy any defects therein for the sum of
3. Kshs. \_\_\_\_\_ *[Amount in figures]* Kenya Shillings \_\_\_\_  
 \_\_\_\_\_ *[Amount in words]*
4. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably
5. possible after the receipt of the Project Manager’s notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.
6. We agree to abide by this tender until \_\_\_\_\_ *[Insert date]*, and it shall remain binding upon us and may be accepted at any time before that date.
7. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.
8. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Signature \_\_\_\_\_ in the capacity of \_\_\_\_\_ duly authorized to sign tenders for and on behalf of \_\_\_\_\_ *[Name of Employer]* of \_\_\_\_\_ *[Address of Employer]*

Witness; Name \_\_\_\_\_

Address \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

**FORM OF TENDER SECURITY**

WHEREAS ..... (hereinafter called “the Tenderer”) has submitted his tender dated ..... for the construction of ..... (*name of Contract*)

KNOW ALL PEOPLE by these presents that WE ..... having our registered office at .....(hereinafter called “the Bank”), are bound unto .....(hereinafter called “the Employer”) in the sum of Kshs..... for which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the

Common Seal of the said Bank this ..... Day of .....20.....

THE CONDITIONS of this obligation are:

- a) If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instructions to tenderers
- Or
- b) If the tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:
  - I. Fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
  - II. Fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;
  - III. Rejects a correction of an arithmetic error in the tender.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the said date.

\_\_\_\_\_  
[date]

\_\_\_\_\_  
[signature of the Bank]

\_\_\_\_\_  
[witness]

\_\_\_\_\_  
[seal]

**(Amend accordingly if provided by Insurance Company)**

**MANUFACTURER’S AUTHORIZATION FORM**

**(To Be Submitted On Manufacturer’s Letterhead)**

**To:**

(Name & Address of procuring entity)

WHEREAS WE ..... (*Name of the manufacturer*) who are established and reputable manufacturers of ..... (*name and description of the goods*) having factories at ..... (*full address and physical location of factory(ies) where goods to be supplied are manufactured*) do hereby confirm that ..... (*name and address of Supplier*) is authorized by us to transact in the goods required against your Tender ..... (*Insert reference number and name of the Tender*) in respect of the above goods manufactured by us.

WE HEREBY extend our full guarantee and warranty as per the Conditions of Contract for the goods offered for supply by the above firm against the Invitation to Tender.

**DATED THIS..... DAY OF..... 20.....**

\_\_\_\_\_  
Signature of duly authorized person for and on behalf of the Manufacturer.

\_\_\_\_\_  
Name and Capacity of duly authorized person signing on behalf of the Manufacturer

**NOTES TO TENDERERS AND MANUFACTURERS**

***Only authorized person in the service of the Manufacturer should sign this letter of authority.  
Manufacturers Shall stamp/seal the manufacturer’s authorization***