| Tender No:  | _   |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|
| KDU/PRO/CAP/B/120/2023  |   | General Sir John Kotelawala Defence University,<br>KandawalaEstate, Ratmalana,<br>Sri Lanka.<br>T: Phone: 2632028, 2622995<br>Fax: 2622504, 2623599<br>Web:www.kdu.lk                        |  |  |  |  |  |  |
|   |   | 19/09/ 2023  |  |  |  |  |  |  |
| INVITATION TO BID AND GENERA  | AL CONDITIONS OF TENDER   | <u>R</u>   |  |  |  |  |  |  |
|   | tive Bidders for supply of item/s ed in Annex "B".  The tender will close | e University, as the Chairman, Department Procurement s listed in the schedule in Annex "A". The relevant e at 1000 hrs. on 03 / 10 /2023. Any Bid submitted after e returned to the bidder. |  |  |  |  |  |  |
| 3. <u>VALIDITY OF BID.</u> from the date of closing of tender.  | The bid submitted under this  | tender <b>must be valid for a minimum period of 90 days</b>  |  |  |  |  |  |  |
| 4. BID BOND / GUARANTEE.  (a) If the quoted bid value exceeds Rs: 2,000,000.00, such Bids should be accompanied with 1% of Bid Value an "on demand" and "unconditional" Bid Bond/Guarantee for a sum of Rs: |   |  |  |  |  |  |  |  |
| (b) Submission of insuffici<br>offer will not be considered for further p   |   | period will be considered as a " <b>major deviation</b> " and such ected.  |  |  |  |  |  |  |
| must be shown separately in the price sci   | hedule in Annex "A" and VAT re  | ed items must have the VAT registration. The VAT portion gistration number must be indicated. If the quoted item is rence number and date of relevant Act number/Gazette                     |  |  |  |  |  |  |

6. **BID SUBMISSION.** The **bidder must duly sign at the bottom of Annex 'A' of this document** indicating the name of the signatory and the name of the company & place the company common seal to confirm the acceptance of tender conditions. The Bid/s that do not include authorized signature will be rejected. The Bid/s duly signed by the bidder enclosed and sealed in an appropriate cover addressed to the following address should be sent by registered post or could be deposited in the appropriate tender box placed at General Sir John Kotelawala Defence University, Kandawala Estate, Ratmalana (at the Main Entrance of General Sir John Kotelawala Defence University) on or before the time & date specified for the closing of tender. The

notification/a certificate (as applicable) issued for the current financial vear from the Commissioner General of Inland Revenue to

tender reference number, date & time of closing tender should be indicated & underlined at the top left corner of the envelop.

| Tender Ref No :       | The Chairman,                                  |
|-----------------------|--|
| Closing Date & Time : | Department Procurement Committee,              |
|                       | General Sir John Kotelawala Defence University |
|                       | Kandawala Estate, Ratmalana,                   |
|                       | Sri Lanka.                                     |

- 7. The Bid/s must be submitted in the attached schedule of prices in Annex "A" as applicable. However, bidders could use similar formats prepared with their own letter heads with all the details mentioned therein and submit in <a href="https://two.org/thee.com/the
- 8. <u>SUBMISSION OF SAMPLES/PAYMENT OF TESTING CHARGES</u>.

When it is required to submit samples, <u>every offer</u> must be accompanied with pre - marked samples. The marking of samples <u>indicating the Bidder & Offer number</u> must be done and the samples must be handed over to the officer at same place where tender box is placed <u>on or before the closing date & time of the Bid</u>. Samples submitted after closing time of the Bid will be rejected. The documents such as Air Way Bills etc, will not be accepted in place of samples. When the testing charges are required to be paid, bidders shall pay testing charges separately <u>for all offers</u> indicated in their bid/s.

| (1 | L) | Sampl | es. | Ple | ease sul | omit |  |  | samp | les. |
|----|----|-------|-----|-----|----------|------|--|--|------|------|
|----|----|-------|-----|-----|----------|------|--|--|------|------|

- (2) **Testing Charges**. A sum of Rs. ..... **per offer** must be paid to the Bursar of KDU, prior to the submission of bid and a copy of the receipt must be annexed to the bid. It is the responsibility of bidder to inform the Cashier of the Account Office to note the tender number on the receipt issued for such payments.
- 8. **BID OPENING.** All duly received bids **will be opened immediately after the scheduled closing time of Bids at the same venue**. Bidders or their accredited agents could be present at the time of opening of bids.

### 9. **PRICES.**

For locally delivered items (including locally manufactured items & foreign items imported by the bidders) price must be quoted in Sri Lankan Rupees, inclusive of all charges for delivery of items to General Sir John Kotelawala Defence University Ratmalana, Faculty of Allied Health Science (FAHS) Werahera and University Hospital Werahera or Southern Campus Sooriyawewa. **Unit price, VAT and Total price should be clearly indicated in schedule in Annex "A"**. Other than VAT, all other type of taxes (eg: NBT, BTT, etc.) should not be indicated separately and should be included in unit price.

- 10. **RESTRICTED TENDERS**. Invitation to Bids are circulated a mong the registered suppliers with Ministry of Defence (MOD), only bids submitted by registered suppliers will be allowed for consideration. However, Chairman, Department Procurement Committee reserves the right to invite the bids from multiple combinations of Procurement Methods as stipulated in Chapter III of the Government Procurement Guideline, 2006 to ensure highest competitiveness.
- 11. **PERFORMANCE BOND/GUARANTEE.** A successful bidder shall f u r n i s h a Performance Bond/Guarantee in the form of "On Demand" & "Unconditional" Bank/Insurance Guarantee for asum equivalent to 10% of the contract value for every contract that exceeds Rs. 2,000,000.00 or equivalent amount in foreign currency through a recognized Commercial Bank registered in Sri Lanka or through an Insurance Company authorized by the Insurance Board of Sri Lanka to issue such Performance Guarantee for this purpose, **within two weeks from the date of notification of award. VALIDITY PERIOD OF THE PERFORMANCE GURANTEE/SECURITY SHOULD BE COVERED WARRANTY PERIOD + 28 DAYS.** The proceeds of the Performance Bond/Guarantee shall be payable to the Vice Chancellor of the General Sir John Kotelawala Defence University as compensation for any loss resulting from the supplier's failure to complete his performance obligations under the contract. If the contracted supplier fails to deliver the items on time or fails to complete the works as per the agreed contract, **THE TOTAL VALUE OF THE PERFORMANCE BOND/GUARANTEE** will be forfeited. If only partial delivery is made during the agreed contract period, the corresponding value percentage of undelivered quantity from the Performance Bond/Guarantee will be forfeited.
- 12. **SIGNING OF CONTRACT.** The notification of award will be transmitted to the successful bidder by post, by fax or e-mail. This notification constitutes the formation of the contract. The successful bidder should submit his written acceptance for the award and performance bond / guarantee (For awards over Rs. 500,000.00 without VAT) within 14 days of receipt of such notification. Upon acceptance of the award and furnishing of the Performance Bond/Guarantee, the successful bidder will have to enter into a formal contract with the Vice Chancellor of the General Sir John Kotelawala Defence University by signing the Contract.
- 13. **DELIVERY.** Preference will be given for early delivery. In case of bulk supplies for locally manufactured items, the delivery of **total quantity must be completed within 120 days of signing of contract**, unless mutually agreed for extended delivery period with General Sir John Kotelawala Defence University. **The bidder/s must indicate the proposed delivery schedule in Annex "D"**. In the event of placing a purchase order with the successful bidder, the total quantity so ordered must be supplied as one consignment unless part deliveries are agreed upon in the contract. The deliveries not made as per agreed delivery schedule will be considered as bad performances by the suppliers and **no extended delivery period will be authorized**. Under extreme unavoidable conditions too, the Chairman, Department Procurement Committee (Vice Chancellor of the General Sir John Kotelawala Defence University) reserves the right to grant or refuse delivery period extensions only within the current financial year with or without liquidated claim for delayed deliveries and that decision will be final.
- 14. **LIOUIDATED DAMAGES.** In case of delivery period extensions requested by the successful bidder, a sum equivalent to 1% of the total value of the delayed supply per delay of one week or part thereof may be deducted from the payment due to the supplier from the General Sir John Kotelawala Defence University as liquidated damages up to the maximum limit of 12% of the total value of delayed supplies.
- 15. **PAYMENT TERMS FOR LOCALLY DELIVERED ITEMS.** Payment will be made after acceptance of items which should be subjected to a pre-acceptance inspection/testing by General Sir John Kotelawala Defence University authorities. The delivery made to the General Sir John Kotelawala Defence University should not be considered as quantities taken over by General Sir John Kotelawala Defence University until items are properly accepted after pre-acceptance inspection. Any item that does not conform to the specifications or already approved sample will be rejected & it is the responsibility of the supplier to remove them from General Sir John Kotelawala Defence University stores/premises within 07 working days of such intimation (either verbal or written) at his own cost and replace them with items conforming to specification within one month of such rejection. The bidder shall allow approximately 30-45 days' period of credit from the date of acceptance of items for Account Office, General Sir John Kotelawala Defence University to obtain liquid cash from General Treasury & release the payment.
- 16. **RIGHTS OF THE PROCUREMENT COMMITTEE**. The Department Procurement Committee reserve the right to accept or reject whole or part of this tender and their decision will be final. The successful bidders will be notified. Information with regard to rejected or unsuccessful bids will not be communicated.

Thanking You, Yours faithfully,

Thanking You, Yours/faithfully, TSK Lunkeshwara, Lsc

TSK Lankeshwara Lsc Lieutenant Commander (S) for Vice Chancellor General Sir John Kotelawala Defence University SCHEDULE OF PRICES FOR LOCALLY DELIVERED ITEMS

| S/N | ITEMS  |     | QTY | PRICE<br>EACH<br>SLRS | TOTAL PRICE<br>SLRS |
|-----|--|-----|-----|-----------------------|---------------------|
|     | PURCHASE OF 10 KVA MICRO GRID SYSTEM                         |     |     |                       |                     |
|     | FOR DEPARTMENT OF EL,EN & T                                  |     |     |                       |                     |
| 01  | 3.2V 100 Ah LifePo4 Cells for 10kWh Energy<br>Storage system | Nos | 32  |                       |                     |
| 02  | Battery Management System with 2A Active balance             | Nos | 02  |                       |                     |
|     | Note: Suppliers to be visit the site prior to make bidding   |     |     |                       |                     |
|     | As per the Attached Specifications                           |     |     |                       |                     |
|     | TOTAL  |     |     |                       |                     |
|     | DISCOUNT   |     |     |                       |                     |
|     | TOTAL(AFTER DISCOUNT)  |     |     |                       |                     |
|     | VAT %  |     |     |                       |                     |
|     | GRAND TOTAL  |     |     |                       |                     |

| <b>(A)</b>   | OTHER      | DETAILS                          |                          |          |   |           |         |          |             |
|--------------|------------|----------------------------------|--------------------------|----------|---|-----------|---------|----------|-------------|
|              | <b>(i)</b> | DELIVERY PERIOD                  | -                        |          |   |           |         |          |             |
|              | (ii)       | MAKE & MODEL                     |                          |          |   |           |         |          |             |
|              | (iii)      | VALIDITY PERIOD                  | -                        |          |   |           |         |          |             |
|              | (iv)       | WARRANTY PERIOD                  | -                        | •••••    | • | •         |         |          |             |
|              | (v)        | PAYMENT TERMS                    |                          |          | • | •         |         |          |             |
|              | (vi)       | COUNTRY OF ORIGIN                |                          |          |   |           |         |          |             |
|              | (vii)      | DISCOUNT IF ANY                  | -                        |          |   |           |         |          |             |
|              | (viii)     | ANY OTHER TAXES                  | -                        | •••••    | ••••••                                  | •         |         |          |             |
|              |            | •••••                            |                          | •••••    | • | •         |         |          |             |
| <b>(B)</b>   |            |                                  | VAT DETAILS              |          |   |           | ADI     |          | TAX         |
|              |            |                                  | PERMANENT<br>EXEMPTION 1 |          |   |           |         |          |             |
|              |            |                                  | INLAND REVI              |          |   |           |         | KINIE    | MI OF       |
| <b>(C)</b>   |            |                                  | PLACE OF DE              | LIVER    | <b>XY</b> -                             | ITE       | MS      | TO       | BE          |
|              |            |                                  | DELIVERED                | TO       | THE                                     | "GENE     | RAL     | SIR      | <b>JOHN</b> |
|              |            |                                  | KOTELAWAL                | A        | DEF                                     | ENCE      | J       | JNIVE    | RSITY,      |
|              |            |                                  | KANDAWALA                |          | · ·                                     |           |         |          |             |
|              |            |                                  | THE COPY OF              | ORDE     | ER ANI                                  | D RELE    | VANT    | INVO     | ICE.        |
| <b>(D)</b> A | Any querio | es / information with regard     | to this procureme        | nt / ten | der co                                  | uld be ol | otainec | l from   | Officer     |
| (            | Command    | ing Logistics Services office at | t General Sir Johr       | n Kotela | awala I                                 | Defence U | Jnivers | sity thr | ough e-     |

mail ocls@kdu.ac.lk and by telephone number 0112622504 during working hours.

NOTE: UNIT PRICE AND TOTAL PRICE ARE TO BE INDICATED CLEARLY IN THE

TENDER, IF NOT QUOTATION WILL BE REJECTED.

Further all bidders must submit their business registration along with their quotation. Bidders who do not attach their business registration will not be

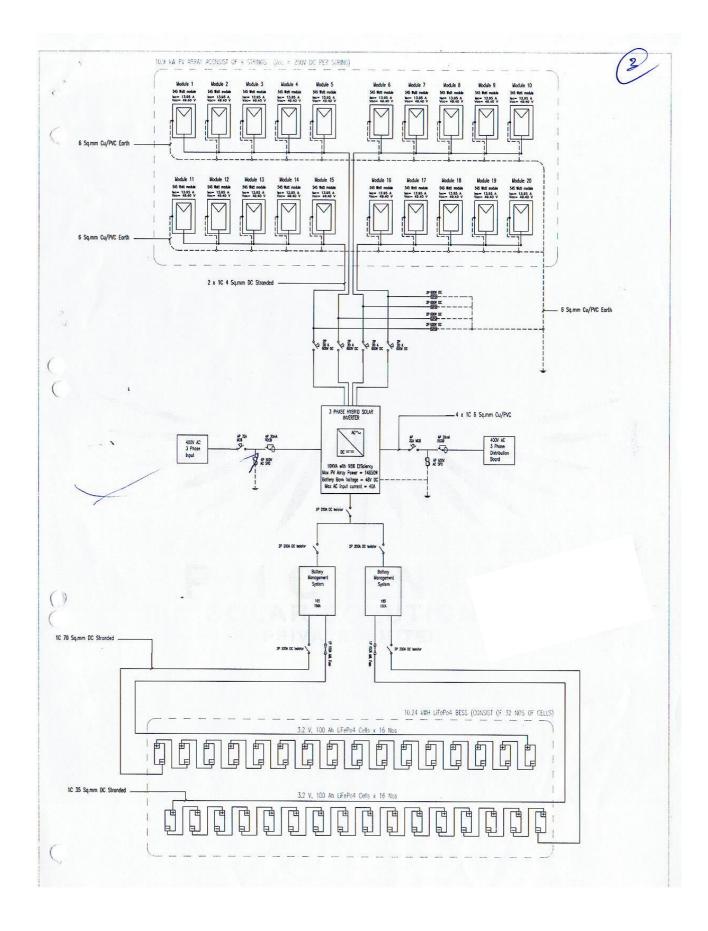
considering for evaluation.

| SUPPLIER NAME   | -         |       |              |  |  |  |  |
|---|-----------|-------|--------------|--|--|--|--|
| ADDRESS   | -         |       |              |  |  |  |  |
| CONTACT NUMBER  | -         |       | Company Seal |  |  |  |  |
| E MAIL ADRESS   | -         |       | Company Scar |  |  |  |  |
| a. Bid Reference: KDU/PRO/CAP/B/120/2023  DATE  I/We agree to abide by the condition of No 01-16 bidding document and undertake to supply the items as per delivery schedule mentioned in the contract, in the event of an order been placed with me/my firm/company as a |           |       |              |  |  |  |  |
| result of this tender.  |           |       |              |  |  |  |  |
| Sign  | ature.    |       |              |  |  |  |  |
| Nam   | eof Signa | atory | Company Seal |  |  |  |  |
|   |           |       |              |  |  |  |  |
| Date :  |           |       |              |  |  |  |  |

# RENEWABLE ENERGY RESEARCH & INNOVATION LABORATORY KOTELAWALA DEFENCE UNIVERSITY

## 10 kva micro grid system

| Item<br>No. |                                   | Qty | Unit<br>Nos                                 |  |  |
|-------------|-----------------------------------|-----|---|--|--|
| A.3         | 3.2V 100 Ah LiFePo4 Cells for 10  | 32  |   |  |  |
|             | Туре                              |     | Prismatic LiFePo4 Cells                     |  |  |
|             | Rated voltage                     | •   |   |  |  |
|             | Rated capacity                    | 1   | 100Ah or similar @ 1C discharge rate        |  |  |
|             | Minumum Charge rate               | :   |   |  |  |
|             | Minimum Discharge rate            |     | 2C  |  |  |
|             | Cycle count                       | :   | >4000 cycles at 80% DOD under STC           |  |  |
|             | Discharging temperature range     |     | -20 to 55 Degrees celcius                   |  |  |
|             | Product warranty Preferred Brands |     | 5 years or above<br>CATL, EVE or Equivalent |  |  |
| A.4         | Battery Management System wit     | 2   | Nos   |  |  |
|             | Туре                              |     | 16S 150A 48V BMS                            |  |  |
|             | Communication                     | :   | RS485                                       |  |  |
|             | Parallel operation                | :   | Minimum 6 units                             |  |  |
|             | Supported inverter brands         | :   | Deye, Solis, Solax, FoxESS, Growatt, etc    |  |  |
|             | Cell balancer                     |     | Active balancing                            |  |  |
|             | Product warranty                  |     | 2 years or above                            |  |  |
|             | Preferred Brands                  |     | Seplos, JBD, or Equivalent                  |  |  |
|             |                                   |     | Estimated Total for the components          |  |  |



#### INITIAL SCOPE OF THE LABORATORY

The initial proceedings of the proposed Renewable Energy Research & Innovation Laboratory (RERI) are to be commenced adhering to following work scope.

Installing a 10 kVA Hybrid Solar Power system with a 10 kwh LiFePo<sub>4</sub> Energy Storage system to
power the laboratory and operate independent from the National Grid

Scope of work:

- Installing a small-scale micro-grid system to facilitate the laboratory incorporating Solar PV, Wind and Grid power or diesel generator as sources of energy.
- Assembling a 10kWh LiFePo4 energy storage system as a student assignment

Research Areas:

- Developing control strategies to optimize the power harvesting from different sources during different times of the day.
- Developing forecasting algorithms to predict the power generation form different renewable energy sources such as Solar PV and wind.
- Building a mechanical structure with a manually controlled dual axis tracking system to mount the PV panels on the open area of 7<sup>th</sup> Floor of FOE building

**Future** 

 Developing an automated tracking system instead of the manual tracking system

Research Areas:

Developments:

- Efficiency analysis of PV Array with different elevations
- Economic analysis of ground mounted solar plants with the presence of a tracking systems
- 3. Design and installing a Wind Turbine which is suitable for operation in lower heads

Scope of work:

 Design and develop a Vertical Axis Wind Turbine locally as an assignment for students

Research Areas:

- Developing a water pumping mechanism by coupling of wind turbine shaft with an impeller. (For agricultural purposes)
- Incorporation of the Wind turbine to the proposed micro grid system

## INITIAL SCOPE OF THE LABORATORY

4. Solar and Hydro power combined pumped-water storage system

Scope of work:

• Installing an Overhead water tank and a hydro turbine to generate power during nighttime where Solar irradiation is not available

Research Areas:

• Develop alternative energy storage systems such as heated element storages to store energy.

## 5. Solar powered desalination plant

Scope of work:

 Installing an innovative Solar powered desalination plant to purify brackish water (Powered by solar thermal energy)

Research Areas:

- Combining both solar photovoltaics and thermal energy to increase efficiency of the plant.
- Redesigning the heating plate of the plant to increase the rate of purification

In the capacity of -----

Seal (where applicable)

|   |   | <b>SPECIN</b>   | MEN FORM O                             | F BID SE                                     | <u>CURITY</u>  |  |  |
|---|---|---|--|--|--|--|--|
| bank or insurance<br>are held and firm<br>sum ofthe Surety bind th<br>Whereas | company<br>sounce<br>nemselve<br>the auth | y) whose registered I onto s their successors and ority has invited the | y and seventher person                 | inafter called "the Bidder") and We (name of |  |  |  |
| submit the same (hereafter called '   | for the o<br>"the Bid"<br>onour ce        | consideration of the<br>") in accordance wi<br>ertain obligations to    | e Authority, and<br>th such invitation | the Bidon, the Bo                            | der proposes to submit to the Authority a Bid and shall provide security to the Authority that a the Tender in accordance with the following |  |  |
| (a)   | That it s                                 | hall remain in full f   | Force and effect                       | until the e                                  | arliest of   |  |  |
|   |   |   |  |  | e), the date stipulated by the Authority for the te above notified to the Authority by the Bidder  |  |  |
|   |   |   |  |  | the Authority, the date upon which the Bidder cordance with the terms of the contract thereby  |  |  |
| (b)<br>this Bon   |   | to this Bond being eceipt of first writte                               |  |  | e Surety shall pay the full amount specified in ority stating that.  |  |  |
|   | (i)                                       | The Bidder has wi   | thdrawn his Ter                        | nder during                                  | g the validity of this Bond, or  |  |  |
|   | (ii)<br>the term                          |   |  |  | nce security to the Authority in accordance with fintimation of award of the Tender.   |  |  |
| matter or thing co  | oncerning                                 |   | part of the Auth                       |  | e of forgiveness in or in respect of neither any<br>any objection from the bidder shall in any way   |  |  |
| effect the Authori  | ity shall 1                               | is Bond shall not be<br>return the same to the<br>be governed by the    | he Bidder.                             |  | rity and upon its ceasing to be in full force and  |  |  |
| I exect   | uted as a                                 | deed on this (  | ) day of (                             | ) 20 (                                       | )  |  |  |
| For and   | on behalt                                 | f of the Bidder   |  |  | For and on behalf of the Surety  |  |  |
|   |   |   |  |  |  |  |  |
| Signed b  | у   |   |  |  | Signed by  |  |  |
| In the ca   | pacity of                                 | f   |  |  | In the capacity of   |  |  |
| and by  |   |   |  | and by                                       |  |  |  |

In the capacity of -----

Seal (where applicable)

**DELIVERY SCHEDULE** (IT IS MANDATORY TO FILL THE FOLLOWING SCHEDULE BY THE BIDDER) TENDER NO: QTY :..... **DURATION** QTY EX STOCK QTY (WITHIN 01 WEEK) 01MONTH 02 MONTHS 03 MONTHS 04 MONTHS **TOTAL** NAME OF THE BIDDER : ..... SIGNATURE OF BIDDER DATE : .....

COMPANY SEAL : .....: