GOVERNMENT OF TAMILNADU
DEPARTMENT OF TECHNICAL EDUCATION
GOVERNMENT COLLEGE OF ENGNEERING BODINAYAKKANUR-625 582
Telephone No.: 04546-282 555

NOTICE INVITING E-TENDER

Tender Inviting Authority	The Principal, Government College of Engineering, Bodinayakkanur-625 582. Theni District Tamil Nadu Phone:04546-282555

Tender No: GCEBN/ 01779 / A3 / EEE / 2021 **Dated: 24.06.2021**

E-Tenders are invited through online under two Bid system for the **Supply of Hybrid Wind Solar Module** for **Renewable Energy Systems Laboratory** of **Electrical and Electronics Engineering Department** as detailed below at Government College of Engineering Bodinayakkanur-625 582. Detailed Technical Specification of the equipment's to be supplied are given in the Annexure.

TERMS AND CONDITIONS:

1. The Bidders interested in participating the e-Tender must be registered with Tamilnadu e-procurement system portal and also should have Digital signature certificate.
2. Bidders should submit their bids in two bids system through online (www.tntenders.gov.in) in prescribed format only.
   (i) Technical Bid – shall be submitted along with self-attested scanned copies of necessary documents in .pdf format.
   (ii) Financial Bid –
   a) In xls format only (Excel format).
   b) Rate & Tax per unit (**for single unit only**)should be mentioned separately
   c) Rates quoted by Bidders should be firm & Final
   d) Prices should be quoted only in Indian Rupees (INR).
   e) Price should be inclusive of all Freight, Insurance, Packing, Loading & Unloading, Delivery charges etc.
3. Tenders in any other manner will not be accepted.
4. Bidders should have local office in Tamil Nadu.
5. Bidders must not be blacklisted by Government of Tamil Nadu.
6. The Bidders must have valid
   a) PAN
   b) Valid GST Registration Number. (Bids without GST registration Copy will be rejected).

7. Each bidder should clearly specify that the bidder agrees to abide the conditions of this tender document on their printed letter head duly sealed & signed by an authorized person
8. Bidders should upload PAN, GST & Authorization letter / Certificate from OEM in Technical bid cover
9. Validity of the bid should not be less than **90 days**
10. Warranty should not be less than **1 year** (It will start after the date of Successful Installation).
11. Delivery of the item should be done at Government College of Engineering Bodinayakkanur-625 582
12. Mode of payment through ECS of supplier's bank account (100% payment will be given only after the goods are received in good condition and installation is completed).
13. No Advance payment will be made.
14. As per Tamilnadu Transparency in Tender Act 1998 and Tamilnadu Transparency in Tender Rules 2000
    a) Government College of Engineering Bodinayakanur -625 582 reserves the right to modify reduce and increase the quantity required.
    b) Withhold any amount for the deficiency in service aspect of the ordered items.
15. The Final decision would be based on the Technical Capacity and pricing of the bidder.
16. The Principal, Government College of Engineering Bodinayakkanur-625 582 reserves the right, not to accept lowest price or to reject any or all the tenders without assigning any reasons.
17. The Principal, Government College of Engineering Bodinayakkanur, reserves the right to call off tender process at any stage without assigning any reasons.

(Tender Inviting uthority)
Principal
Government College of Engineering
Bodinayakkanur-625 582

N.V.

HOD / EEE

ANNEXURE

S.No	Detailed Specification	Quantity Required
1	**Hybrid Wind Solar Module** **24Watts PMSG based Microwind+Solar Generation Trainer** **a. 24W Wind Turbine with Blower setup** A Blower and a 200Watts, peak, 24W continuous Wind Turbine are mounted on a Mechanical Frame for Simulating Wind Power Generation for laboratory use. ✓ Performance Parameter • Rated Electrical Power : 24W@8.2m/s • Rated Wind Speed :12m/s • Cut-in : 3.5m/s • Start-up Wind : 2.5m/s ✓ Generator • Type : PMSG • Voltage (V) : 3Phase/24VAC • Watts @ Rated wind speed :24 Watts **b. Solar Panel:** (20+20) W **solar panel – 1No** **c.100 W Hybrid DC-DC Buck-Boost Converter** • 3 Phase full wave uncontrolled rectifier provided for current AC to DC from wind mill • Microcontroller based Buck-Boost with MPPT algorithm • Switching device IGBT • dv/dt protection is available for IGBT (Snubber circuit) • Input – I (Wind) ▪ I/P voltage range 12VDC - 24VDC ▪ O/P voltage range 24VDC • Input – II (Solar) • I/P Voltage Range 12VDC - 30VDC • O/P Voltage Range24VDC • All the I/P & O/P are sensed through isolated sensors • Proper termination provided for input and output with MCB protection. • 4 keys provided to select the type of control program • 20x4 LCD displays all the I/P / O/P data • Over current, Over voltage & temperature protection. • 34pin FRC & 26 pin FRC provided for external controller interface. • One RS232 port provided to interface with PC **d. Battery : 24V/26AH, Maintenance free** **e. 100W, 1Φ, 2 Level Inverter (PEC16HV4MC1A)** • I/P Voltage : 48V DC • O/P Voltage: 230V AC / 0.5A (max) • Sine wave output with LC Filter • 34 pin FRC & 26 pin FRC provided for controller interface	01 set

	• 4 Numbers of High speed Opto - isolator provided for PWM isolation • 4 Number of IGBT with Heat sink provided as power circuit • 2 Hall Effect current sensors provided for output current & DC current measurement & protection. • Op-amp signal conditioner circuit provided for current sensors & output terminated in front panel for current wave measurement. • One number of LED provided to indicate TRIP Status • One number of Reset Switch provided to reset the Trip Function • One number of MCB provided at the input of Inverter for over current protection. • One analog DC voltmeter to indicate the DC-link voltage. • 10 Numbers of test points provided in control section for wave form measurement in CRO • Resistive Load – 100W Max.	

N.V.Rao

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