INVITATION FOR QUOTATION

TEQIP-III/WB/fetj/14

17-10-2017

To,

Sub: Invitation for Quotations for Supply of Goods

Package Code: TEQIP-III/2017/fetj/Shopping/14

Dear Sir,

1) You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications as given at Annexure - I,

Sr. No	Brief Description	Qty.	Delivery Period (In days)	Place of Delivery	Installation Requirement (if any)
1	Wind Energy Training System Kit		45	Department of Power Engineering	Yes

- 2) Government of India has received a credit from the International Development Association (IDA) towards the cost of the Technical Education Quality Improvement Programme [TEQIP]-Phase III Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
 - 3) Quotation:
 - a) The contract shall be for the full quantity as described above.
 - b) Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.

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- c) All duties and other levies payable by the supplier under the contract shall be included in the total price.
- d) Applicable taxes shall be quoted separately for all items.
- e) The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- f) If you require any "waybill" for transportation of goods to Kolkata, you have to apply in advance separately with a copy of Invoice enclosing a copy of order.
- g) The Prices should be quoted in Indian Rupees only.
- 4) Each bidder shall submit only one quotation for most suitable one for the item mentioned only, without any optional item.
- 5) Validity of quotation: Quotation shall remain valid for a period not less than 45 days after the last date of quotation submission.
- 6) Evaluation of Quotations:

The Purchaser will evaluate and compare the quotations found to be substantially responsive i.e. which

- a) are properly signed; and
- b) Conforming to the terms and conditions, and specifications.
- 7) The Quotations would be evaluated for all items together.
- Quotations will be compared on the basis of quoted price (Total Cost including all taxes) for goods at its final destination.
- Past performance & experience may be furnished to consider the credential of the bidder
- 8) Award of contract: The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
- a) Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

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- b) The bidder whose bid is accepted will be notified for the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
- 9) Delivery:
- 9.1 Delivery period mentioned in the Purchase Order received by the vendor must be maintained. In case of failing the delivery within stipulated date the order maybe canceled if proper justification is not received from the vendor in time.
- 10) Payment:
- 10.1) Payment shall be made in Indian Rupees as follows:

100% of the total cost after delivery, satisfactory installation along with demonstration and testing of the goods and also acceptance by the department.

- 10.2) Payment will be done by online transfer to the bank account of the vendor by NPIU, New Delhi after formalities. Vendor must provide the following details for bank transfer. (a) Account holder Name, (b) Account No., (c) Bank Name, (d) Branch Name, (e) IFSC No., (f) PAN, (g) TAN, (h) GSTIN, (i) TIN, (j) Mobile number.
- 11) All supplied items are under normal commercial warranty/ guarantee of not less than 12 months from the date of successful acceptance of items, unless specified of warranty for longer duration in the specification.
- 12) Rate of AMC may be furnished separately, which will be applicable at the end of the normal commercial warrant period.
- 13) You are requested to submit your offer on or before **15:30** hours on **02-11-2017**. Bids will be opened on the same day at 16:00 hours.
- 14) Detailed specifications of the items are at Annexure I.
- 15) Training Clause (if any) Demonstration at the time of Installation are to be confirmed.
- 16) Testing/Installation Clause (if any) Satisfactory Installation & Testing is required
- 17) <u>Submission of video footage of the successful installation and testing along</u> with Model No. & SL. No. is preferred.
- 18) Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

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19) Sealed quotation to be submitted/ delivered, within 15:30 hours of 02-11-2017, at the address mentioned below,

TEQIP CELL, 2nd Floor, Aurobindo Bhavan, Jadavpur University, 188, Raja S. C. Mallick Road, Kolkata-700 032.

We look forward to receive your quotation and thank you for your interest in this project.

Prof. Sanjib Acharyya

Nodal Officer, Procurement

TEQIP, Phase-III, JU

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Annexure I

Package Code: TEQIP-III/WB/fetj/14

Sr. No	Item Name			Specifications		
		The System Configuration: Wind Generator Generated Electric Power w				
		be fed to the close loop	type cl	narge controller to regulate DC Power outpu		
				g Boost, Trickle mode of operation).		
		Finally the DC-Power will be fed to the suitable DC-Loading arrangement				
		through resistive as well as Inductive load (I.e Inverter).				
		Technical Specifications of the Wind Turbine and Wind Charge Controller				
		Rated output	:	400 Watt at 28mph (12.5 m/s)		
		Rotor Diameter	:	1.2 m		
		Startup wind speed	:	8.04 mph (3.6 m/s)		
		Voltage	:	24VDC		
		Turbine Controller	:	Microprocessor - based smart internal		
		regulator with Peak Powe	er Trac			
		Body	:	Cast Aluminum		
	Wind	Blades	:	Carbon fiber composite (3 Nos.)		
		Over Speed Protection	:	Electronic Torque Control		
1	Energy	Survival Wind Speed	:	112 mph (50 m/s)		
1	Training System	Wind Charge Controller				
	Kit	Wind Charge Controller:				
		The total electronic efficiency should be at least 85%.				
		The system should adopt PWM charging mode for wind turbine charging.				
		Protection Function: Wind Turbine Current limiting, Wind Turbine over				
		speed protection, over load protection and short circuit protection.				
		The controller should adopt feedback close loop control according to features				
		of wind power.				
		Electronics should operate at 24 V and should have temperature				
		compensation for proper charging of the battery throughout the year.				
		Parameter Measurement: Measurement of all critical parameters i.e Lin				
		Input, Output AC, DC Voltage, Current, Power, Power factor, Speed Vs. Energy generation, Distribution, Utilization, Checking of start up speed, over speed and all protective systems.				
		Nodal Officer (Procurer TEQIP Phase-III				

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Components:

1	Wall mounted mimic type control panel.			
2	24 V 100 Ah battery bank			
3	Wind turbine brake switch			
4	Inverter suitably rated			
5	Anemometer and air direction indicator			
6	Battery bank connecting / disconnecting switch / Isolator			
7	Stand-by battery charger for emergency backup			
8	Resistive type Dump-Loading			
9	Wind charge controller 24 V / 400 W			
10	Wind Generator: 24 V / 400 W			
11	Wind Turbine rotary driving system including speed regulator and			
11	indicating arrangement.			
12	Tachometer with sensor			
13	Anemometer			
14	DC Voltmeter / Ammeter			
15	AC Voltmeter / Ammeter			
16	Cables & wires			

Salient Features:

- Wind speed can be controlled externally.
- Turbine can be replaced
- System can be expanded to develop a hybrid system
- Performance can be evaluated from low wind speed to high wind speed

List of Experiments:

- Evaluation of charge controller efficiency
- Evaluation of cut-in speed of wind turbine
- Evaluation of Tip Speed Ratio (TSR) at different wind speeds
- Evaluation of Coefficient of performance of wind turbine
- Characteristics of turbine (power variation) with wind speed
- Curve between TSR and coefficient of power
- Power curve of turbine with respect to the rotational speed of rotor at fix wind speeds

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FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

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To:

	Date:	
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WB/fetj		

Applicable Taxes	In figures	
Applic	In %	
Total Price (A)		
Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)		Total Cost
Qty. Unit		
Description of	Specifications)	
SI.	No.	

We confirm that the normal commercial warranty/ guarantee of ---- months shall apply to the offered items and we also (Amount in figures) (Rupees -----amount in words) within the period specified in the Invitation for Quotations. We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. -Gross Total Cost (A+B): Rs. confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Supplier			
Signature of Supplier	Name:	Address:	Contact No: