

**E-5**

Electrical

**PROCUREMENT OF GOODS  
UNDER  
NATIONAL SHOPPING  
PROCEDURES**

**COEP/TEQIP-II/CoE-SRES/March2016/NS/09**

**For**

**Synchronous-DC-Induction Machines set with tailor made table to  
facilitate experimentation on electrical machines**

**Bid Price: Nil/-**

**INVITATION FOR QUOTATIONS FOR SUPPLY OF**

**Synchronous-DC-Induction Machines set with tailor made table to facilitate experimentation on electrical machines**

1. You are invited to submit your most competitive quotation for the following goods: -

Sr. No	Title /Name of the equipment /System	Brief description [Attach separate annexure if necessary for detailed specifications	Quantity
1	<b>Synchronous-DC-Induction Machines set with tailor made table to facilitate experimentation on electrical machines</b>	<b>Synchronous-DC-Induction Machines set with tailor made table to facilitate experimentation on electrical machines</b> Please refer to the Annexure A	4

The schedule is as follows

Date of inviting the quotations	23/03/2016
Last date of submitting the sealed quotation to TEQIP office, COEP	04/04/2016 [upto 3:00 pm]
Opening of the quotations	04/04/2016 [4:00 pm]
Validity of quotation	Min 45 days
<b>Delivery Period</b>	<b>4 months from the acceptance of PO</b>

2. College of Engineering has received the grants for establishing Center of Excellence in Smart Renewable Energy System under MHRD's Technical Education Quality Improvement Program-Phase II. The said procurement is for this center. This project is World Bank sponsored project. This procurement is being carried out using the National Shopping Process, and will observe the guidelines of Shopping under TEQIP-II.

3. **Bid Price**

- a) The contract shall be for the full quantity as described above and in the annexure. Corrections, if any, shall be made by crossing out, initialing, dating and re-writing.

- b) All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price. However, break- up of the basic price and taxes/duties shall be indicated clearly.
  - c) The bidders will be evaluated on the basic price.
  - d) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
  - e) The Prices should be quoted **in Indian Rupees** only.
4. Each bidder shall submit only one quotation.
5. **Validity of Quotation**
- Quotation shall remain valid for a period not less than 45 days after the deadline date specified for submission.
6. **Evaluation of Quotations**
- The purchaser shall evaluate and compare the quotations determined to be substantially responsive i.e. which
- (a) are properly signed ; and
  - (b) conform to the terms and conditions, and specifications.
- The Quotations would be evaluated considering all items together in this packet.**
7. **Award of contract**
- The Purchaser shall award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
- 7.1 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.
- 7.2 The bidder whose bid is accepted shall be notified of 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.
8. 80 % Payment shall be made immediately after delivery of the goods. Remaining 20 % payment will be made after successful commissioning and testing of the equipment/system.

9. Three years commercial warranty/ guarantee shall be applicable to the supplied goods.
10. You are requested to provide your offer in sealed envelope latest by **4<sup>th</sup> April 2016**. Please indicate ***“Quotation for Synchronous-DC-Induction Machines set with tailor made table to facilitate experimentation on electrical machines CoE-SRES/ March2016 /NS /09”*** at the right hand corner of the sealed envelope”
11. The bidder has to supply the material within the prescribed date. A penalty as per norms will be imposed for delayed supply upto 6 weeks. Any further delay will automatically terminate the purchase order/ contract.
12. The supplier requires supplying the store exactly as per the specifications and will be responsible to replace the defective supplies at his risk and cost.
13. The Supplier should submit deviation statement if any. The quotations simply mentioning “asper your specification and cost” shall be rejected.
14. The supplier should arrange for free demo / working trial of equipment (if required) at the Institute / Manufacturers place as the case may be at suppliers cost. The Purchase Order would be placed subject to satisfactory demonstration of the equipment.
15. Commissioning / Installation is at suppliers cost unless otherwise specified.
16. Conditional quotation will not be accepted.
17. We look forward to receiving your quotations and thank you for your interest in this project.

**Name: Prof. B. N. Chaudhari**  
Principal Investigator  
Center of Excellence-Smart Renewable Energy System

## Annexure A

Sr.	Description
1	Input Supply requirements: Three phase 5 wire (L1,L2,L3,N,EARTH) 415VAC, 50 Hz, 5 A . Power input cable, 3 meter long, with industry grade 5 pin male connector at one end. (Note : 3 phase supply with 5 pin female connector with MCB should be provided by the customer)
2	Floor space requirement: 1000 mm x 1200 mm
3	<p>Machines and control panel consisting of :</p> <p>DC Machine 375 W / 180 V / 1500 RPM DC Integrated Motor. ( without Inter poles. Inter poles are not required for this small capacity Motor). All 6 terminals of Motor ( Armature, Shunt &amp; Series Field ) will be brought out. Motor can run as Shunt, Series or Compound Motor with different configuration &amp; RPM rating. Frame 100. DC supply for armature voltage control, with voltmeter and ammeter. DC supply for field control, with voltmeter and ammeter.</p> <p>3 Phase SQIM 375 W / 415 V / 3 Phase / 1440 RPM / 50 Hz. / Delta connected with all 6 wires brought out for star delta starting / Sq. Cage Induction Motor. - Frame 100. DOL starter for 3 Phase SQIM. Variable frequency drive for 3 Phase SQIM. Three phase variac for voltage control of 3 Phase SQIM Forward / Reverse switch for change of direction for 3 Phase SQIM</p> <p>1 Phase SQIM 375 W / 230 V / 1 Phase / 1440 RPM / 50 Hz. / AC Integrated 1 Ph. Sq. Cage Induction Motor. With 8 terminals brought out for CSCR or CSIR connection. Frame 100. Single phase variac for voltage control of 1 Phase SQIM</p> <p>3 Phase Alternator 375 VA / 415 V / 3 Phase / 1500 RPM / 50 Hz. / Four Pole / Rotor Wound / Stator Excited/ Separately excited / Manually Regulated Salient Pole type Synchronous machine with damper winding for auto induction start. DC supply for excitation control, with voltmeter and ammeter. Three phase load bank with load selection switch for alternator.</p> <p>AC parameter measurement panel for single phase and three phase measurements. CT &amp; PT connections to be brought on front panel for ease of connection.</p> <p>All the connections of machines and various control and power supply connections are to be brought on front panel through shrouded banana pin sockets of 20 amp rating. Cables with banana plugs with isolation should be provided for ease of connections.</p>
4	Direct torque measurement facility using DC machine as swinging field dynamometer, with 1 % accuracy. Indirect speed measurement and provision to connect the DC tachogenerator to both induction and synchronous machine. Thus all machines should have double ended shaft. Both Torque and speed signals should be also made available to user in 0-10 V range with appropriate signal conditioning.