E-5

Mechanical

PROCUREMENT OF GOODS

UNDER

NATIONAL SHOPPING

PROCEDURES

Solar Food Dryer

Bid Price: Nil/-

No. / Category of quotation

COEP/TEQIP-II/ CoE-SRES/ March2016 /NS/30

INVITATION FOR QUOTATIONS FOR SUPPLY OF

Solar Food Dryer

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	Solar Food Dryer	In India, market demand of processed foods such as pickles, fruit-jams, dry-fruits, candies, roasted foods, and dried medicinal herbs is rising. Most of the food products require an air temperature up to 90°C for their processing. In this area, simple and cost effective solar cabinet dryers offer a prospective business opportunity to masses. Solar cabinet dryers can be made to fulfill the demand of 90°C. Aim of the project is to develop efficient solar dryers and demonstrate a commercial model suitable for farmers, small entrepreneurs and women self-help groups.	Please refer to the Annexure A

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 11th **April 2016. Please indicate *"Quotation for CoE-SRES/ March2016 /NS /30" 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 up to 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 “as per 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

Detailed technical specifications for the Solar Food Dryer set up

Natural convection cabinet type dryers are common in low temperature utilization of solar energy. However solar dryers are not available in the standard sizes or capacities in the market. The designs are generally custom made and cater to specific applications. Efficiencies of nonstandard dryers vary from 35 to 45%. The aim of this project is to modify the existing the existing design of natural convection solar cabinet dryers for enhancement of efficiency and yield and also to estimate theoretical performance.
The detailed specifications for the Solar Food Dryer to be manufactured, supplied, commissioned and installed at COEP are given below:

SR. No.	Equipment	Remarks/specification
1	**Solar Food Dryer**	• Dryer broad sizes 2 m width, 25 m length, 1.6 m height • Top glass size 1 m width, 2 m length, 4mm thick toughened glass Total 50 Nos. of glasses needed • MS powder coated angular frame of size 35mm x 35mm x 3mm • Internal cladding with SS sheet 0.5 mm thick, sheet uniformly painted with black board black paint on the inner face of the sheet and with red oxide on the insulation or outer face of the sheet • External cover with aluminum Composite Panel 2 mm thick, • Double glass cover with aluminum frame and rubber gaskets for glasses • Insulation: Glass wool 50 mm thick slab without air gap, Glass wool density 32 kg/m^3 • Provision of sufficient number of passages or ducts for air change/ circulation, • Auxiliary resistance type heater of appropriate rating for heat supply at the base of the dryer • Opening: on the back side, appropriate number of doors with air tight hinges, locking arrangement and handles. Double doors insulated MS framed and ACP paneled doors on the external side • 25mmx25mmx3mm MS tray frame as per the drawing. The frame is meant for holding material trays. MS frame painted with black board black paint • Stainless steel material trays as per the drawing. Appropriate numbers as per the drawing provided. • PT100 type thermocouples at minimum 25 locations in the dryer plus one thermocouple for ambient temperature measurement along with temperature indicator or interface suitable for data logging • Calibrated Pyranometer with indicator for measurement of global radiation

For detailed drawing of the solar dryer, please contact Dr. G.N. Kulkarni, 9421051963