



केन्द्रीय प्रौद्योगिकी संस्थान कोकराझार
CENTRAL INSTITUTE OF TECHNOLOGY KOKRAJHAR

(A Centrally Funded Institute under Ministry of HRD, Govt. of India)
BODOLAND TERRITORIAL AREA DISTRICTS :: KOKRAJHAR :: ASSAM :: 783370
Website: www.cit.ac.in

DOUBLE BID SYSTEM

To

All Interested Vendors

- Ref: CITK/Mechanical Engg. Equip/138/2019/ 627
- Date : 27/09/2019

SUBJECT: Notice Inviting Tender for supply and installation of Lab Equipment for Department of Mechanical Engineering (Green Energy).

Dear Sir/Madam,

The Director, Central Institute of Technology Kokrajhar invites tender for **supply and installation of Lab Equipment for Department of Mechanical Engineering (Green Energy)** as per technical specification attached herewith. The quotation as per the 'Reference, Annexure, and 'Type of Bid (Double Bid), is to be submitted in sealed envelopes to the undersigned on or before **17/10/2019**.

Please note:--

Tender document is divided into three parts i.e.

- (1) Instruction to Bidders,
- (2) Terms & Conditions
- (3) ANNEXURES:
 - a) Technical specification of the required items
 - b) Format for quotation annexure I, II & III
 - c) Compliance Certificate
 - d) Format for vendor's detail

Kindly read the Instructions, Checklist and Terms properly and see that instruction and terms are fully understood and compiled. No correspondence shall be entertained in case your quotation is rejected in ground of not compiling with our instructions, terms and conditions.

In case of further queries, contact us at 03661-277143.

Thanking you.

Yours faithfully,

(Ms. Chaitali Brahma)
Registrar, CIT, Kokrajhar
E-mail: registrar@cit.ac.in

INSTRUCTION TO BIDDERS

- 1) **Important date, time and place:**
 - (i) **Last date & time of submission:** 17/10/2019 (Thursday), 15 hrs.
 - (ii) **Date & time of opening:** 17/10/2019 (Thursday), 16 hrs.
 - (iii) **Place of opening quotations:** Registrar's Conference Hall of CIT

- 2) **Mode of Bid:** For mode of Bid (single/double) please refer to the **CHECK LIST**

Double Bid: In case of **double bid** Technical Bid and Price Bid must be separately quoted as per format provided, in two separate properly sealed covers and both these covers will have to be again put in to a single sealed cover

 - i. **In technical Bid the vendor must provide the followings:**
 - (a) Details of the technical features of the offered equipment **in the format at Annexure I**
 - (b) Standard Technical literature on each of the items offered;
 - (c) Up-to-date Authorized Dealership Certificate on the offered products in case of dealer/s;
 - (d) Details of nature and maximum period of **warranty** offered
 - (e) Vendor and list of service centre detail and TIN number as per format at **Annexure IV**
 - (f) Up-to-date GST certificate must be enclosed.
 - (g) An Earnest Money Deposit
 - (h) List of reputed organizations/Institutions, where similar orders have been executed, if any (copies of the purchase/work orders will have to be enclosed);
 - ii. **Price Bid must be submitted as per Annexure II**

- 3) **Address for correspondence:** The address of the firm submitting the quotation and the Officer to whom the quotation is addressed must appear distinctly on sealed covers. Further, on sealed covers. Further, on sealed cover, the following are to be written:

<p>QUOTATION FOR SUPPLY OF (item name) Individual NIQ Ref. No.(please consult Check list) LAST DATE OF SUBMISSION: 17/10/2019 (15 HRS)</p> <p style="text-align: center;">To,</p> <p style="text-align: center;">The Registrar, Central Institute of Technology Kokrajhar, P.O. & Dist-Kokrajhar, BTAD, Assam – 783370</p> <p>From: _____ M/s _____ Phone No: _____ Email ID: _____</p>
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- 4) **Bid not Transferable:** The bid documents are not transferable
- 5) **The seal and signature** of the authorized official of firms must appear on all the papers and envelopes.
- 6) **Late and delayed tender:** Late and delayed tender will not be accepted. In case any unscheduled holiday occurs on the prescribed closing/opening date the next working day shall be the prescribed date of closing/opening.
- 7) **Conditional tenders not accepted:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Printed conditions mentioned in the tender bids submitted by vendors will not be binding on CITK.

TERMS & CONDITIONS

01. **Rates:** Rates quoted for indigenous items should be FOR CIT Kokrajhar, on **DOOR DELIVERY basis**, with break-ups as per details given in the format, **Annexure II**.
02. **Validity of Quotation:** Quoted rates must be valid for **120 days** from the last date of submission of quotation.
03. **Warranty:**
 - i. The quoted equipment and components must be warranted for a minimum of one year.
 - ii. Additional Warranty for two (2) years over standard one-year warrantee must be quoted optionally. If accepted, payment for the same will be released in advance annually against production of proforma Invoice.
 - iii. This warrantee charges will be added while evaluation cost status of the concerned equipment.
04. **Literature a must:** All the quotations must be supported by the printed technical leaflet/literature and the specifications mentioned in the quotation must be reflected/supported by such printed technical leaflet/literature. The model and specifications quoted should invariably be highlighted in the leaflet/literature for easy reference.
05. **After Sales Service:** In case of imported goods, vendors should clearly state the available nearest after sales service centre and detail address in India, preferably in Guwahati, without which their offers shall be liable for rejection.
06. **Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must enclosed valid dealership certificate.
07. **Quality Certificates:** Valid certificate to prove that the products are genuine and of International standard, as mentioned below, must be enclosed: (a) Manufacturer's certificate; (b) ISO/IS1 certificate.
08. **Earnest Money:**

For quoted value above Rs.5 laes, in each case an Earnest Money deposit (EMD) **Rs.50,000.00** in the form of Bank Guarantee **OR** an Account payee Demand Draft from a Commercial Bank drawn in favour of the "**CIT Kokrajhar**", will have to be submitted along with the quotation. For item treated as part of the same unit the total values of all items taken together will be treated as the value of EMD amount. Offers received without Earnest Money or valid Certificate shall be summarily rejected.

EMD of unsuccessful bidder will be returned within one month of placement of Purchase Order. In case of successful bidder the EMD will be returned on receipt of the PBG.

If exemption is sought from production of EMD, the same should clearly be mentioned indicating the clause under which exemption is sought. Submission of EMD is exempted under the following conditions:

- (i) If the quoted value is less than Rs.5 laes.
- (ii) Firms which are specifically registered for the required items with DGS & D or with NSIC. Copy of valid registration must be enclosed along with the quotation.

09. **Performance Bank Guarantee:**

"In case of PO value Rupee 10 lakhs (INR) and above, the successful bidder, to whom the PO is placed, shall furnish an unconditional Performance Bank Guarantee or an Account payee Demand Draft OR Fixed deposit receipt from a commercial bank in favour of the Registrar, CIT, Kokrajhar for 5 % of the Purchase Order value, within 21 days of placement of order. The format for PBG, unless otherwise approved by the competent authority, shall be as per the format enclosed at **ANNEXURE-V**. In case of foreign purchase the local Agent shall submit the PBG. Where the PBG is to be necessarily given by a foreign bank it shall be endorsed by its counterpart in India. Validity of the PBG, which shall be effective from the date mentioned therein, shall be *warranted period + 2 months*."

In exceptional case or on the request of the indenting officer competent authority may allow starting of PBG Period from the date of installation, in which case submission of PBG valid for *warranty period + 2 months* may be made within 21 days from the date of installation.

- (i) **By submitting the PBG, the vendor is understood to have guaranteed that,**
 - (a) The Purchase Order (PO) shall be executed as per terms and conditions mentioned therein.
 - (b) The equipment shall function satisfactorily validity period of PBG.
 - (c) The equipment and components are free from poor workmanship, bad quality, and faulty designs.
 - (d) The vendor shall at his/their own cost rectify/replace the defects, if any, during the warranty period
- (ii) **Condition for invoking PBG:** In case of failure to comply with the guarantees above, CIT Kokrajhar may terminate the contract / purchase order in whole or in part and forfeit the PBG. In addition, CIT Kokrajhar may, at its discretion, procure upon such terms and in such manner as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier/vendor shall be liable to compensate CIT Kokrajhar for any extra expenditure involved."

10. **Delivery:**
- a) **Time Limit:** Maximum within 45 (forty-five) days from the date of issue of purchase order.
 - b) **Safe Delivery:** All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination site, the package will be opened only in the presence of CIT user/representative and vendor's representative. The intact condition of the package and the seal/indicators for not being tempered with shall form the basis for certifying the receipt in good condition.
 - c) **Insurance:** The supplier is to establish 'All Risk Transit Insurance' coverage till door delivery at CIT Kokrajhar.
 - d) **Part Delivery:** Part delivery is not allowed.
 - e) **Penalty delay delivery:** The date of the delivery should be strictly adhered to otherwise the Director, CITK reserves the right to accept delivery in part or full.
11. **Genuine Pricing:** Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold, particularly to IIT/NIT/Institutes and other Government Organization. Copy of the latest price list for the quoted item, applicable in India, must be enclosed with the offer.
12. **Road Permit & Entry Tax:**
- (a) Road permits: Road Permits (E-Waybills) shall be managed by the vendors itself for delivery of materials against receipt of Order Acknowledgement and Proforma Invoice.
 - (b) Entry Tax: Assam Govt. Entry Tax if any – shall be included in the Price Bid by the vendors will be added while evaluating cost status of the concerned equipment to be supplied by vendors from outside the State of Assam.
13. **GST:**
Up-to-date GST Registration Certificate must be provided.
14. **Payment:**
- (a) 100% Payment within 45 days from the date of successful delivery, installation and commissioning of goods at CIT Kokrajhar, generally through A/c payee cheque/ RTGS/NET Banking.
Please note as per Institute's norm advance payment is not allowed for indigenous purchase.
15. **PENALTY FOR DELAYED DELIVERY:**
The date of delivery should be strictly adhered to. In the event of delayed delivery, installation & commissioning, the vendor shall be liable for a penalty deduction at a percentage of the value of the undelivered equipment subject to a maximum of 10% (ten percent) as detailed below:
@ 1% up to one week;
@ 2.5% up to two weeks;
@ 5% up to three weeks;
@ 10 % for four weeks and above
For the purpose of this clause, part of the week is considered as a full week. In case of delayed delivery, the Director, CIT Kokrajhar reserves the right not to accept the subject consignment.
16. **Custom and Excise Duty Certificate:** Custom and Excise duty exemption certificate as applicable will be issued against receipt P.O. Acknowledgement.
17. **Enquiry during the course of evaluation not allowed:** No enquiry shall be made by the bidder(s) during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative (CIT Kokrajhar) can make any enquiry/seek clarification from the bidders. In such a situation, the short period notice, as such the bidders have to be ready for the same.
18. **Acceptance of quotations:** The acceptance of the quotation will rest solely with the Director, CIT Kokrajhar, who in the interest of the Institute is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reasons.
19. **Force Majeure:**
If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows:
- i. Any law, statute or ordinance, order action or regulations of the Government of India,
 - ii. Any kind of natural disaster, and
 - iii. Strikes acts of the Public enemy, war, insurrections, riots, lockouts, sabotage.

20. **Termination for default:** Default is said to have occurred
- If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.
 - If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by CIT Kokrajhar.
 - If the supplier fails to perform any other obligation(s) under the contract.
 - Under the circumstances the penalty term under PBG clause 9(ii) shall be invoked. Besides, the Director, CITK reserves the right to impose any other form of penalty as deemed fit including blacklisting of the vendor.
21. **Applicable Law:**
- The contract shall be governed by the laws and procedures established by Govt. of India subject to exclusive jurisdiction of Competent Court and Forum in Kokrajhar.
 - Any dispute arising out of this purchase shall be referred to the Director, CIT Kokrajhar, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Director of the Institute. The decision of such Arbitrator shall be final and binding on both the parties.
 - Training: The Vendor will provide free training at CIT Kokrajhar after successful installation of the Machines/Equipment.
22. **ADDITIONAL TERMS FOR IMPORTED GOODS**
- Following terms besides the fore mentioned terms (1 to 21) will be applicable in case of foreign purchases:
- Rates:** Rates quoted should be on **FOR CIT, Kokrajhar or DOOR DELIVERY** basis, with break-ups as per details given in the format, **annexure -II** as applicable.
 - Exchange rate:** Rate of foreign exchange shall be the rate prevailing on the date of quotation opening.
 - Delivery:**
 - Period:** Delivery of goods at CIT Kokrajhar, will have to be maximum within 95 (ninety-five) days from the date of issue of the Purchase Order.
 - Delivery must be made at Kolkata or Guwahati Airport only
 - While transshipment will be allowed, part shipment will not be allowed.
 - Payment:**
 - 100% Payment shall be made after successful delivery, installation, commissioning and demonstration of goods at CIT Kokrajhar, generally through A/c payee cheque/RTGS/NET Banking.
 - Agency Commission:**

The percentage of ex-works value to be paid to Indian agent in equivalent Indian currency as agency commission as applicable will have to be clearly stated in the quotation.
 - Country of Origin:**

While Country of Origin will have to be stated in the Original Invoice fro payment through LoC.
 - LoC Amendment:**

LoC/FDD amendment charges due to mistake on the part of the supplier, if any, will be borne by the supplier.

Encl: ANNEXURE – I, II, III, IV & V

(Ms. Chaitali Brahma)
Registrar, CIT, Kokrajhar
Email – registrar@cit.ac.in

CHECK LIST

**FOR GREEN ENERGY TECHNOLOGY DEPARTMENT
TECHNICAL SPECIFICATION OF LAB EQUIPMENT**

Sl. No.	Name of item with specification	Make/ Model	Qty.
1.	<p>Flash and Fire Point Apparatus:</p> <ul style="list-style-type: none"> • Automatic Flash point detection • Automatic Barometric Pressure correction • Automatic flash point search mode for unknown samples • User set able heating and flashing profile • Automatic heating profile setting depending on initial sample temperature and expected flash point • Automatic cutoff at 30°C beyond expected flash point or at maximum temperature limit set by the user • 2 preset test modes as per ASTM method A & B • 16x4 line Black Lit Alpha numeric display • In-built key pad for setting and Data entry • Audio visual indication of end of test and Alarms • Over temperature safety cutoff and Alarms • Last reading stored until report is printed or next test is initiated • Series printer interface for Automatic printing of Test report at press of a button • Electric ignition instead of Gas (Optional) • Resolution: 0.1 °C • Controller Accuracy: 0.5°C • Flash detection Accuracy: ± 1°C • Load: 1 kw • Operation on 230V 50 Hz single phase 		3 Nos.
2.	<p>Orsat Gas Analyzer:</p> <ul style="list-style-type: none"> • Three Gas absorption pipets • One manifold with stop cocks • One manifold • One Gas buret with jacket • One Leveling bottle 250 ml • One U tube • One Rubber bulb • One Rubber balloon for safety • One Rubber tube 		3 Nos.
3.	<p>Digital Hot Air Oven:</p> <ul style="list-style-type: none"> • Capacity 27-355 Ltrs • Temperature Range: 5°C above ambient to 225°C above ambient • Single door type • No of shelves: 1-3 • Power: 1000 W to 2000 W • Material: Inside- Standard model stainless steel 304, GMP model stainless steel 316; Outside- standard model powder coated mild steel, GMP model stainless steel 304 • Internal Dimension: (30x30x30)cm to (60x60x90)cm • Audio visual alarm warning • PC and printers interfacing facility with RS 485 port interface • Air circulation for uniformity of temperature through motorized blower and fan arrangement 		2 Nos.
4.	<p>Solar Water Heater –flat plate collector type:</p>		2 Nos.

	<ul style="list-style-type: none"> • Material : Copper-Copper • Size: 2120+10X 1040+10 X 100+10mm • Absorber Area: 2.00 Sq. m • Type of welding: Ultrasonic welding. • Absorber coating: Selectively –NALSUN coated, Black Chromium with Nickel undercoat, Copper(Grade DHP, as per IS:191) • Frame material: - Material: Extruded Al sections. Welded Channel Box with top cover. Material – Al (Gr.63400) tempered to HE9 (WP)... Top joints sealed with silastic sealant & bottom sealed with Fevicol Channel Box: 1.6mm thick Bottom Sheet: 1.5mm thick STUCCO embossed, 0.71mm thick • Riser: 09 Nos; Material-Copper, Diameter-12.5mm (1/2"),Thickness:24 SWG • Header: Material-Copper,Diameter-25.4mm (1"),Thickness-22 SWG • Absorptivity>0.95 • Emissivity <0.15 • Front Glazing: Toughened Glass, Thickness- 4mm, Material- Aluminum Angle Frame. Size- 25x25x1.5 mm • Hardware: SS-304 • Grommet: Neoprene Rubber • Glass beading: EPDM • Insulation: Rockwool, 50 mm. Thick • Density: 48Kg./cum • Cladding: Aluminum foil • Finish spray painting: BHEL standard color Powder COATED • Header & Outlet Joints: Copper Flange • Class Pipes: 2" -16 Meters. (Uninsulated); 1" -77 Meters.(Insulated) • Pipe Insulation: VIDOFLEX THERMAL INSULATION DENSITY: 60.10 kg/m³ Thermal Conductivity: 0.034 W/mk at 200 C -600 C to 1050 C • Solar Panel Make: BHEL make • Required Test Certificates: Vidoflex – density and thermal conductivity. Solar Panel – Absorptivity and Emissivity. • Overhead cold water tank: 5000 LPD – with support structure to a height of 10 ft. • Supply & installation of hot water pipe: 1" Diameter Supply & installation of cold-water pipe: 2" Diameter • Standards accessories for non-domestic solar water heaters: Gate valve – 1.5" Air relief value Temperature gauge] Water meter • Solar insulated hot water tank capacity: 200 LPD • Minimum temperature of heated water Around: 75 degree Celsius • Type of hot water storage tank: Graded Stainless Steel • Electrical Back-up: 2 kW 		
5.	<p>ETC Solar Water Heaters: Tubes Specifications:</p> <ul style="list-style-type: none"> • Vacuum Tube outer diameter: 47mm/58mm • Vacuum Tube inner diameter: 37 mm&47mm • Tube Length: 1800 mm/2100 mm. • Tube Weight: 30kg.(For 220 LPD) • Tank Specifications: • Tank Insulation: PUF 50m (Polyurethane foaming). • Inner Tank Material: Stainless Steel 304 L grade 0.5 mm. • Outer Tank Material: Galvanized Powder coated/Stainless steel. • Inner tank Diameter: 380 mm. • Outer tank Diameter: 480 mm • Tank Volume: 100 liters to 500 liters. 		1 No

	<ul style="list-style-type: none"> • General Specifications: • Temperature: 65 degrees C to 85 degrees C • Stand frame: Galvanized Powder coated • Method of Welding: Seamless and Non welding Technology. • Type of Fasteners: Stainless Steel / galvanized • Type of Grommets: Silicon rubbers • Type of Circulation: Thermosiphon. • Electrical Back Up: 2 KW & 3kw (optional). • Type of inlet feeding: Using gravity feeding tank for non-pressure, low mixing of hot and cold water, and long life of the inner tank • Total Space Required For Installation: 2 x 2.5m (W x L) • Stand Dimensions: • 1050 x 1150 x 2160mm (H x W x L) 		
6.	<p>Solar Cooker Box Type:</p> <ul style="list-style-type: none"> • Dimension of outer box: (640 x 640 x 200) meter cube • Material for outer casing of SBC: Fibre • Aperture area: (485 x 515) Sq. m • Glazing: (522 x 548) Sq. m. • Depth of the tray from glazing: 80 mm • Emissivity of absorber plate (Al made and blackened): 0.90 • Thickness of absorber plate: 0.60 mm • Thickness of glass cover: 2 mm • Spacing in between glazing (double glaze): 10 mm • Emissivity of the Glass: 0.91 • Insulation: Glass-Wool • Thermal Conductivity of Insulation: 0.05 W/m°C • Thickness of insulation from all sides: 50 mm • Cooking vessel height (Al made and blackened) and diameter: 65 mm and 160 mm • Mirror Booster: (522 x 548) Sq. meter 		1 No
7.	<p>Solar cooker – concentrating type:</p> <p>Reflecting Bowl: Parabolic dish made of single/ multiple reflectors fixed firmly to a rigid frame. The size and shape of the reflectors is such when joined/fixed they automatically form a parabolic dish</p> <p>Minimum Dish area: 1 Sq. meter</p> <p>Reflecting mirrors:</p> <ul style="list-style-type: none"> • Material: Bright anodized aluminum sheets/ glass mirrors/ polymer film/ any other better and durable material with protective layers of coating on back surface and sides to protect from exterior weathering effect. For coastal and colder regions, special protections to be made • Reflectivity: 80% minimum with a maximum degradation of 10% over its life span. Warranty/ guaranty to be provided for a period of five years. To be replaced immediately if found deteriorating during this period. • Mirror Fixing: With positive locking or sticking by good quality adhesives. Due protection of mirror coatings to be taken while fixing the mirrors. Tying of mirrors with wires not acceptable. For high wind areas special protection to be made. <p>Concentration ratio: Over 80</p> <p>Bowl supporting frame: The supporting frame for the reflecting bowl will be made of MS rings supported by MS strips or FRP material/ thick MS wire-mesh structure. It will be rigid enough to avoid any deformation of the bowl shape during manual/ handling or under wind pressure. The MS structure will have epoxy/ ant-rust coating.</p> <p>Bowl stand: Of mild steel epoxy/ powder coated. With arrangement to hold cooking vessels of different sizes. With suitable provision for securing the cooker to the ground.</p> <p>Tracking mechanism:</p>		1 No

	<ul style="list-style-type: none"> • Manual or automatic • Designed to enable unrestricted 360o rotation to parabolic dish around its horizontal axis passing through its focal point and center of gravity and also around its vertical axis, for adjustment of the cooker in the direction of the sun. • With simple locking arrangement to hold/ fix the bowl at a particular position • With pointer/ other arrangement to facilitate users positioning of the bowl exactly in the direction of the sun. <p>Cooking vessel: ISI mark pressure cooker of suitable capacity. Resistant black powder coated bottom. In case, no vessel is supplied, the user needs to be told to paint the bottom of his vessel black</p> <p>Other requirements:</p> <ul style="list-style-type: none"> • The entire structure will be strong enough to withstand wind of 150 km per hour without any damage • All parts/components will be of weather resistant design/specifications to withstand natural weathering outdoors under local climatic conditions, for a minimum period of 15 years. Warranty for a minimum period of 5 years will be provided by the supplier. Necessary spares will also be provided so that the user do not face any problem atleast during the warranty period 		
8.	<p>Solar Dryer:</p> <p>Technical Specification:</p> <ul style="list-style-type: none"> • Sun Light hitting area (Open mouth area): 2.7 Sq. ft. Area: 20.5 X 19=390 Sq. in = 2.7 Sq. ft. • Drying area (Drying material placing area):2.3 Sq. ft. Area: 17.5 x 19 = 333 Sq. in=2.3 Sq. ft. • Heating volume inside dryer: 0.96 C ft. <p>Materials required:</p> <ul style="list-style-type: none"> • TV or Computer packing box - (Computer 14 x 11 Inches Packed paper box, of size Length: 17.5, Breadth: 19, Height: 14.5) • Axa blade • Transparent plastic. • Needle& Thread. • Mosquito net • Card Board. • Black paint. • Painting brush • Scissor. 		1 No
9.	<p>Solar Air Heater :</p> <p>Technical Specification:</p> <ul style="list-style-type: none"> • Sun Light hitting area (Open mouth area): 2.7 Sq. ft. Area: 20.5 X 19=390 Sq. in = 2.7 Sq. ft. • Drying area (Drying material placing area):2.3 Sq. ft. Area: 17.5 x 19 = 333 Sq. in=2.3 Sq. ft. • Heating volume inside dryer: 0.96 C ft. <p>Materials required:</p> <ul style="list-style-type: none"> • TV or Computer packing box - (Computer 14 x 11 Inches Packed paper box, of size Length: 17.5, Breadth: 19, Height: 14.5) • Axa blade • Transparent plastic. • Needle& Thread. • Mosquito net • Card Board. • Black paint. • Painting brush • Scissor. 		1 No
10.	<p>Digital Temperature Indicator:</p> <p>Minimum Technical Specifications:</p>		1 No.

	<ul style="list-style-type: none"> • Feed water Flow: 8 m³/h • Brine reject: 5 m³/h • Distillate Production: 3 m³/h • Seawater Flow at Condenser: At 10°C : 8 m³/h At 25°C : 20 m³/h • Output Salinity: 50 ppm TDS • Number of Cells: 14 • Heat source energy consumption: 190 kW • Performance ratio: >9 • Vacuum system: Hydroejectors (Sea water at 3 bar) • Top Brine Temperature: 70°C • Condenser temperature: 35°C 		
11.	<p>Digital Temperature Indicator: Minimum Technical Specifications:</p> <ul style="list-style-type: none"> • Temperature Range: -20°C to 600°C (J type) Fe/ constant -50°C to 1200°C (K type) Cr/ Alumel -50°C to 199.9 °C RTD (Pt-100) -50°C to 300 °C RTD (Pt-100) • Display: 3 ½ Digit 12.5 mm Ht Red LED • Resolution: 1°C for T/C and RTD -50 °C to 199.9 °C. 0.1°C (Pt-100) RTD • Accuracy: ± 0.5% of FSD ± 1 count • Power Supply: 230 V AC ± 10% 50 Hz • Compensation: Automatic Cold junction compensation using solid state circuitry (built in) over a range of 0°C to 50°C for T/C type 3 wire system for RTD • Open sensor: Display shows "1" at MSD • Overall Dimension: 96 x96x 110 (D) mm • Panel Cutout: 92 x 92 mm 		4 Nos.
12.	<p>Digital Weighing Balance: Minimum Technical Specifications:</p> <ul style="list-style-type: none"> • Weighing Range: 0 - 100 gm • Readability: 0.01 gm • Linearity : ± 0.02 gm • Repeatability: 0.01 gm • Weighing pan: stainless steel • Weighing units: g, oz., ct , gn • Display: backlit LCD display • Enclosure: ABS plastic • Dimensions: Scale: approx. 120 x 80 x 25 mm Weighing Pan: approx. 62 x62 mm • Weight : 170 gm • Power : 2AAA batteries (for 70 hours of continuous operation) 		3 Nos.
13.	<p>Biomass downdraft gasifier Minimum Technical specifications:</p> <ul style="list-style-type: none"> • Plant type: Portable Biomass Gasifier Downdraft • Material of plant: Mild steel with aluminum spray & SS 304 (drain tube, Air nozzles, Bottom portion of gasifier) • Size of the plant: (2 x 0.8)m² (H x W) • Raw material: Wood chips/ Agriculture stalk/ coconut shells& Mustard stalk • Capacity: 10 kg/ hr • Primary & secondary air blower: 1 HP • SS Burner: 1 No. • Biomass size: 25-50mm • Rated gas flow 25 Nm³/hr • M S fabricated hopper to hold biomass: 1 No. 		1 Nos.
14.	Biomass Cutter :		2 Nos.

	<p>Minimum Technical specifications:</p> <ul style="list-style-type: none"> • Output (depends upon diameter of stalk): (50-100) kg/h • Motor size: 5 HP • No of Blades: 1 • Blade size: 16" diameter • Blade Speed: 2800 RPM 		
15.	<p>Gas Analyzer:</p> <p>Minimum Technical specifications:</p> <ul style="list-style-type: none"> • Biogas analyzer should be portable and easy to use and calibrate. • Gases measurable should include CH₄ (0-100%); CO₂ (0-100%); O₂ (0-25%) • Optional additional extra gases to be quoted include: H₂ (0-1000ppm); NH₃ (0-1000ppm); • H₂S (0-5000 ppm). The analyzer should be easily configurable for these gases. • The analyzer should have accessories for flow measurement. • The analyzer should be accompanied with software for easy operation and data management. • The analyzer should be ISO certified. • Digital display of the data. • Response time must be less than 20 seconds. 		2 Nos.
16.	<p>Junkers Gas Calorimeter:</p> <p>Minimum Technical specifications:</p> <ul style="list-style-type: none"> • Governor Type: Pressure Governor (2 numbers) • Water flow meter: Non-recording 1 liter flow meter and is supplied with 2 liters and 50 ml measuring jars (each item 2 numbers) • Gas flow measurement :Volumetric gas meter with gas pressure regulator (2 numbers) • Temperature Measurement: Three thermometers and flexible tubing • Thermometer range: 0-300°C • Calorific value range: 1000-26000 kcal/m³ • Bunsen burner: 3 nos. 		2 Nos.

NIQ ref: -----

Dated: -----

ANNEXURE – III

COMPLIANCE CERTIFICATE

(A certificate of compliance to NIQ term to be enclosed)

Certify that we have carefully examined the terms and fully understood its implications and do hereby agree to comply with all the terms, and hereby submit this compliance certificate

Sl. No.	General Terms and Conditions	Yes/No	Page No.
1.	Details of the technical features of the offered equipment vis-à-vis NIQ specification		
2.	Rate quoted as per instruction		
3.	Standard Technical Literature on each of the items offered		
4.	Warranty period agreed		
5.	AMC rate provided as instructed		
6.	Validity of quoted rate agreed		
7.	EMD submitted (as applicable)		
8.	PBG term agreed		
9.	Delivery terms agreed		
10.	Certificate of Up-to-date Sale Tax clearance, VAT, TIN and Service Tax Provided		
11.	Payment term agreed		
12.	Penalty clause for delay agreed		
13.	Literature: Printed Literature with highlight and tag on the quoted item provided		
14.	Manufacturer/Authorized certificate submitted		
15.	Quality certificate as claimed submitted		
16.	After Sale service term agreed and detail address & contact provided		

Signature:

Name & Full Address of Vendor: M/s

.....

.....

Phone Nos.:

.....

Email:

Official seal of the vendor.

ANNEXURE – IV

BIDDERS DETAIL

Sl. No.	Name of the Company/Firm	To be filled by vendor (documentary proof must be attached as applicable)
1.	Registered office name & Address Details of contact person Name Designation Telephone Number e-mail	
2.	Name and Address of service centre in Guwahati Contact person/s Name Designation Telephone Number e-mail Details with contact no. of staff who will be involved in this project	
3.	TIN number Up-to-date Sale Tax clearance certificate/VAT Registration Certificate	
4.	Is the company/firm registered for service tax with Central Excise (Service Tax Cell)? If, submit valid service tax registration certificate.	
5.	List of Major clients with whom your organization has been associated and submit documentary proof/PO	

ANNEXURE - V

PERFORMANCE BANK GUARANTEE

To,
The Registrar,
Central Institute of Technology,
BTAD, Kokrajhar, Assam – 788303.

WHEREAS (Name of Supplier) hereinafter called "the Supplier" has undertaken, in pursuance of Contract No:
Dated:20..... to supply
(Description of Goods and Services) hereinafter called "the order".

AND WHEREAS it has been stipulated by you in the said order that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the order.

AND WHEREAS we have agreed to give the Supplier a Guarantee:
THEREFORE WE hereby affirm that we Guarantors and responsible to you, on behalf of the Supplier, up to a total of (Amount of the Guarantee in Words and Figures) and we undertake to pay you upon your first written demand declaring the Supplier to be in default under the order and without cavil or argument, any sum or sums within the limit of (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the Day of 20.....

Signature and Seal of Guarantors
.....
.....
.....
Date20.....
Address:
.....
.....

All correspondence with reference to this guarantee shall be made at the following address:

**The Registrar,
Central Institute of Technology Kokrajhar,
P.O.& Dist-Kokrajhar,
(BTAD), Assam – 783370.**