

PONDICHERRY UNIVERSITY (A Central University)

MADANJEET SCHOOL OF GREEN ENERGY TECHNOLOGIES

CENTRE FOR GREEN ENERGY TECHNOLOGY

Tender Notice for Scientific & Laboratory Equipments and Items.

S.No	Name of the Equipment/Instrument	Qty
1	Laboratory Island tables	6
2	Laboratory Wall tables	6
3	Empty Cylinders with double stage regulators	12
4	Liquid Nitrogen Container	4
5	Cylinder Trolleys	3
6	pH meter	3
7	Magnetic Stirrer with hot plate	6
8	Mechanical stirrer	4
9	Die & Plunger with mechanical system	1
10	Incubator shaker- refrigerated	1
11	4-Probe Resistivity measurement unit	1
12	Double distillation water plant	1
13	DC Voltage Source (Keithly)	1
14	Autoclavable micro pipettes	6
15	Light Meter	1
16	Bench top UV Transilluminator	1
17	Electric Shaker	1
18	Viscometer	1
19	Muffle Furnace 1200 ⁰ C	1
20	Rotary Evaporator	1
21	Teflon lined autoclaves	6
22	Digital Thermo Anemometer	1
23	Ultra sonicator (Probe type)	1
24	Diesel Engine	1

Tender No. Ref: - PU/GET/XII Plan/Tender/Minor Eqpts./M.Tech/2013-14/852
Date: 22 .07.2013

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TERMS AND CONDITIONS (UNDER TWO BID SYSTEM)

I. Instructions to the Bidder: -

1. Purchase of Tender Document

The Tender document can be either downloaded from the University website www.pondiuni.edu.in or procured from the Information Facilitation Counter, Dr. Ambedkar Administrative Block, Pondicherry University on payment of tender document fee as specified below, by means of a Demand draft drawn in favor of the Finance Officer, Pondicherry University, payable at Puducherry. In case of downloaded documents, it should be submitted along with the tender document fee in the form of Demand draft drawn as mentioned above.

2. Tender Document fee and EMD to be submitted

- a). Quotation / Tender Document fee Rs. 100/-
- b). If the quoted Unit price for any item is above Rs. 50,000/-, 2.5% of quoted price should be submitted as EMD (in the form of Account Payee Demand Draft).
- c). Two bid systems have to be strictly followed.
 One for Technical bid and another for Commercial bid and each bid should be submitted in separate sealed covers.
- d). However, the tender document fee and EMD as specified above should be remitted by each firm/bidder, collectively for all their bids advertised under this tender.

3. Last Date & Time for submission of Tender Documents

12.08.13 at 3.00 p.m. and they will be opened on the same day at 3.30 p.m.

4. Submission of tender Document

Tender/ quotation (**separately for technical bid and price bid**) must be submitted in sealed cover super-scribing thereon Bidder's name, and Name of the Item, along with tender document and EMD. Any tender, submitted **without tender document fee, will not be accepted**. This is to be dropped in the Tender Box placed at the Information Facilitation Counter, Pondicherry University, or sent by Registered post / courier service addressed to "**The Registrar, Pondicherry University, R.V.Nagar, Kalapet, Puducherry – 605 014, India.**" positively before the tender bid closing time. Tenders sent through Fax will not be accepted.

5. Quoting the Core price & Tax, Duties, Discount etc.

The taxes / duties / discounts, if applicable, are to be explicitly and separately shown in the bid and under no circumstances these components shall be added to the basic price and shown as single price. All the components of taxes, if applicable, should be shown explicitly and separately.

6. The validity of the Quotation

The validity of the quotation should be for at least 180 days from the closing date of the bid.

7. Late Bids

The offers will not be considered if received after the bid closing date and time.

8. Invalid quotes

The offers received through telex / tele-fax / e-mail will not be accepted by the University under any circumstances.

9. In case of Postal loss

The University shall not be responsible for any delay / loss or non-receipt of tenders by post / courier service.

10. No unsolicited correspondence

No unsolicited correspondence shall be entertained after the submission of the offer.

11. Purchase Agreement

If an order is placed with the firm, the purchase shall be governed by an agreement as per the University rules in force at the time.

12. Additions in terms and conditions

Additional terms and conditions will be incorporated in the purchase order, if needed, to safe guard the interests of the University.

13. Non-transferable

Tender is not transferable.

14. Power to reject the offer

Any offer containing incorrect and incomplete information shall be liable for rejection.

Pondicherry University reserves the right to accept / reject any offer in full or in part or accept any offer other than the lowest offer without assigning any reason thereof. However, deficiencies on any one or, more of the following crucial criteria will be a material factor, for consideration other than the Lowest Quotation: -

- 1. Total Number of installations of the similar Equipment in the premier Research Institutes in India.
- 2. Availability of Service Network in India, especially in Chennai or Bangalore.
- 3. Valuable feedback from the present users about the performance, service support, accuracy of result, etc.
- 4. Any other techno commercial information which is deemed fit to be important in the opinion of the University.

II. Price Schedule

- 1. The bidder who is capable of supplying the entire solutions for the instrument quoted as per the list of ITEMS/EQUIPMENTS mentioned in the schedule, is alone need to submit their quotation.
- 2. The rates should be quoted for a single unit.
- 3. The price should include the delivery and installation at the **Centre for Green Energy Technology**, Pondicherry University, Puducherry and training charges (if any).

III. Eligibility:

- 1. The firm must have the requisite domain expertise with regard to supply, installation and post-sale service of the items they are quoting.
- 2. The firm should have been in existence for at least six years as on the date of this document and must have executed at least three orders for this kind of equipment during the last five years.
- 3. The firm should have sufficient number of installations of the similar Equipment in the premier Research Institutes in India.
- 4. The firm should have nation-wide Service Network all over India, especially in Chennai or Bangalore.
- 5. The feedbacks from the present users of the similar equipment about the performance, service support, accuracy of result, etc. are to be submitted along with the Tender Document.
- 6. Any other techno commercial information, pertaining to this particular Equipment, principal suppliers, technical background and capability, local agents' background on Scientific Equipment Business, etc. may also be appended along with testimonials and documentary proof.

IV. Conditions of Contract: -

- 1. The offer must be in English. The rates should be indicated both in figures and words against item specified in the given Annexure. It is preferable that the price be quoted in Indian Rupees.
- 2. The total cost **should be quoted for FOB as well as CGET** Pondicherry University, Puducherry.
- 3. The price quotes under FOB and CIF should also include the expected installation cost in the University Laboratory at Puducherry and also cost of consumables which are required for the main equipment for initial operation up to a reasonable period.

- 4. In case of the Principal supplier of foreign country unable to meet the conditions, the local agent / dealer should fulfill the above said conditions in respect of Local Insurance, Freight, safety transport and installation, etc.
- 5. The prices quoted shall remain firm until equipment is supplied to the Centre for Green Energy Technology, Pondicherry University, R.V.Nagar, Kalapet, Puducherry
- 6. The University has been granted the benefit of exemption from the payment of the Central Excise Duty and Customs Duty by the Department of Scientific and Industrial Research (DSIR), India, vide their Notification No. 10/97 dt. 01-03-1997 and 51/96 dt. 23.07.96 respectively.

In respect of

- a. Scientific and technical instruments, apparatus, equipment including computers.
- b. Accessories and spare parts of goods specified in (a) above and consumables.
- c. Computer software, compact disks, CD ROM, Recording magnetic tapes, microfilms, micro-chips etc.
- d. Prototypes.

Customs duties at Indian port, if any, will be to the account of the University.

- 7. Infra-structural, power and any other requirement for satisfactory installation and commissioning of the whole system must be provided, at least 120 days in advance of the installation to be commenced. All drawing for electrical connections, electrical safety items piping work etc. must be provided in detail.
- 8. Complete technical specifications and literature, including process flow, to be included with the quotation. Manufacturers of various major parts/equipment must be mentioned explicitly.
- 9. A clear statement regarding availability of after-sales service and availability of spare-parts for next 5 to 10 years should be included.
- 10. Please give a recent customer list (within last five years) with contact details including email address.
- 11. If you have an authorized representative in India, you are requested to inform his technical ability to take care of the problems in the system, if developed later within the warranty and outside the warranty period. The responsibility of the Indian agent must be clearly specified.
- 12. The bidder from abroad shall obtain, if required, export permission from the appropriate authorities in his country or the country of origin for items to be shipped to India in case of items to be imported. The University shall provide necessary information if required for this purpose.
- 13. The bidder from within India shall obtain the requisite approval for Imports etc., if required.

- 14. Warranty: The material covered under the purchase order, when installed, shall be warranted for the quality, workmanship, trouble free operation and performance for a period of at least 36 months from the date of putting the system into operation at the Pondicherry University, or at least 42 months from the date of receipt of the last lot of the consignment in India. (A signed Bidder's Warranty as per Annexure I has to be submitted along with the Bid Document) If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including shipping cost both ways.
- 15. **Payments terms:** Normally a letter of Credit will be opened for 100% FOB price on receipt of order acknowledgement, however, 90% of the LC amount will be paid on proof of the shipment of the consignment with necessary documents to be detailed at the time of placing of the purchase order.

Balance of 10% of the LC amount shall be made after satisfactory installation and commissioning and against submission of the Installation & Commissioning certificate, duly accepted by the purchaser, and a performance bond of 10% of the total contract / purchase value in the form of bank guarantee (obtained from Nationalized Bank of India) for the duration of the Warranty period. (Refer Annexure – II for Bank Guarantee Format).

Bank charges in India shall be borne by the purchaser and outside India shall be borne by the contractor / supplier.

- 16. In case of any dispute in respect of the tender, all legal matters shall be instituted within the jurisdiction of the place where the purchaser ordinarily resides.
- 17. No Agency commission will be paid to any authorized agent in India.
- 18. Liquidated damages: Timely supply of the ordered items, installation, commissioning (wherever is applicable) and training etc. is the essence of the contract. In case of failure to supply within the time specified in the Purchase order, a penalty/LD of 0.5% of the total value per week or a part thereof shall be levied subject to a maximum of 7.5% in respect of items which are not supplied. The decision of Pondicherry University shall be final in this regard.
- 19. The training should be provided by the firm on the specimen and operation of the equipments for a minimum period of three weeks from the date of installation with an expert team for two persons.

For any clarification with respect to technical specifications, please contact Dr. P. ELUMALAI, Centre Head, Centre for Green energy Technology, Pondicherry University, Puducherry.

Email: cgetlab@gmail.com or drperumalelumalai@gmail.com

Ph : 0413-2654 606/867 **Mob**: +91-9751645895

Name of the Instrument and specification

S.No	Name of the Instrument	Specification of the item/equipment	Qty
1	Laboratory Island tables	 3000LX1500W X 900H(mm) Material of construction: 19mm thick good plywood with post formed finish Under bench modular: These modules should be provided with top drawer and bottom cupboard with horizontal removable inner partition at the centre and a vertical partition below the horizontal partition to make compartments and with lockable doors and aesthetic stainless steel handles. The under-bench modules are to be arranged alternatively, leaving sufficient space in between for knee space. The base of the modules should be provided. All the drawers and cupboard should have locking arrangements. Minimum 2 Nos. of Reagent Racks Electrical arrangements: 4 Nos of 15/5 amps 3 pin socket cum switch Electrical Outlet should be provided. Amenities: Must have acid resistant sinks, 1 No. of FRP Sink (18" x 12") with three way water tap. 	6
2	Laboratory Wall tables	 <u>Dimension:</u> 6000Lx750W x900H (mm) <u>Material of construction:</u> 19mm thick good plywood with both side laminated post form finishing. <u>Under bench modular:</u> These modules should be provided with top drawer and bottom cupboard with horizontal removable inner partition at the centre and an vertical partition below the horizontal partition to make compartments and with lockable doors and aesthetic stainless steel handles. The under-bench modules should be arranged alternatively, leaving sufficient space in between for knee space. The base of the modules has to be provided. All the drawers and cupboard should have locking arrangements. Top: 18mm(±mm) thick well-polished Black Granite should be provided. 	6
3	Empty Cylinders with double stage regulators	 Carbon steel cylinder 47 liter capacity SS regulators (for N₂, O₂ and Helium) 	12
4	Liquid Nitrogen Container 10ltr – 2No's. & 5ltr – 2 No's.	 5 & 10 liter containers with cap Trolley for carrying 	4
5	Cylinder Trolleys	 Standard trolley for carrying 47 liter capacity gas cylinder Double Gas-Cylinder Trolley with 3 wheel type – 1No. Single Cylinder Trolley fixed with 3 wheels – 2 No. 	3
6	pH meter	 Digital pH meter with essential accessories Measuring range -2.00 to 14.0 In built temperature indicator Temperature range -5 C to 100C Accuracy 0.01pH & 0.2 C Readability 0.001pH & 0.1 C Auto calibration, 2points or 3 points 	3

7	Magnetic Stirrer with hot plate	 2 liter capacity, single stirring, upto1400 rpm or higher Upto300 °C or higher with built in high temperature safety Temperature 0.5 °C control, 0.1 °C resolution, display of actual and control temperature Digital display With all essential accessories for temperature control unit, probe, probe holder and clamps etc. along with set of stirring bars 	6
8	Mechanical stirrer	 Speed range : 30 - 1500rpm Dimension : 71 x 250 x 172mm Viscosity : 40,000 mPa·s 	4
9	Die & Plunger with mechanical system	 Die Diameter inner 10 mm (2 Nos) and 20 mm (1 No) Non corrosive Mechanical system should have necessary pressure range with indicator (1 No) 	1
10	Incubator shaker- refrigerated	 Refrigerated Universal clamp 2 liter to 100ml flask with interchangeable holders Temperature range: 15 °C to 60 °C with 0.2°C stability above ambient PID based temperature control Floor space: 40cm X 40cm minimum. Speed: 30-350rpm, with 25mm amplitude With visible, fluorescent and ultraviolet illumination included Audible & visual Alarm for temperature deviation Timer for temperature RPM, temperature display 	1
11	4-Probe Resistivity measurement unit	 Resistivity range: 1 milliohm to 10⁶ Ohm Accuracy = ± 0.2% Sample stage with X-Y movement Manual/auto sampling, Multi-height option 	1
12	Double distillation water plant	 All quartz Temperature & Water level sensor control Rate of production 5 liters/hr Quartz Container for II stage Water Taping facility for I stage 	1
13	DC Voltage Source (Keithly)	 Keithly voltage source 24000-C ±5μV (sourcing) and ±1μV (measuring) to ±200V DC and current from ±10pA to ±1A. Computer control software, UPS 	1
14	Autoclavable micro pipettes	 Autoclavable, variable pipettes 3No. each for 0.2ul, 20ul, 200ul, 1000ul, Autoclavable, constant value pipettes 3No. each 1ml and 10ml. 	6
15	Light Meter	 0 to 2000 with 1lux resolution 2000-20,000 with 10lux resolution 20,000-50,000 with 100lux resolution Accuracy of 5% in all ranges Multiple display units with data acquisition system included 	1

16	Bench top UV Transilluminator	 6 lamp illumination ~ 8 watt total power Effective illumination area ~ 20cm x 20cm UV Face Shield Power Cable, Spare Fuses One set of spare uv lamps kit and fuses 	1
17	Electric Shaker	 Table top shaker 40cm X 40cm or more Tray size Clamps/ holders for test tube, petriplates and small beakers ~ 200rpm, variable range, ~ 10mm amplitude Digital display of RPM 	1
18	Viscometer	 Rotational advance viscometer cone plate geometry, operational at controlled rate & controlled stress, RPM both. Viscosity range: 1 to 3 Million cP Minimum sample volume detection (less than 2 ml). Speed: 0.01 to 1000 rpm. Torque range: 0.05 to 50 mNm, angular resolution: 15.7 micro radian, optical encoder for detection of very low deformation. Minimum two varied ranges of different cone plate spindles for wide range detections of viscosity ranging from 1 – 3200000 cP at minimal volume. Fully computer controlled using software with data analysis, flow curves, viscosity behavior, static yield, thixotropy, math models, power law, Bingham plastic, Newton's law etc. on line plots of viscosity Vs variables. Full viscosity and rheology data within 2 minutes. Compatible with temperature control water bath (-50°C - 250°C or better range). The supplier should offer suitable system, printer for operation of the main equipment. 	1
19	Muffle Furnace 1200 ⁰ C	 Muffle Furnace, Inner Chamber volume: 20x20x20 cm Maximum operable temperature 1200C Stability +- 1C, and Uniformity < 8C Programmable heating/cooling Digital display Including the Accessories: High temperature gloves 1 pair, tongs 1 set, Alumina boats 6 No. Alumina crucible 6 No. (25 ml) 	1
20	Rotary Evaporator	 Bath temperature : 5°C - 150°C Bath capacity : 5 Litres Rotation speed range : 5 to 250rpm Evaporation flask size : 100ml to 1000ml Lift mechanism : motorized condenser Type : Diagonal evaporators Dimension : 32-19/32"W x 22-7/8"H x 15-3/4"D (83x58x40 cm) 	1
21	Teflon lined autoclaves	 50 ml and 100 ml Teflon lined autoclave bombs along with spanner set. 50 mL- 3 Nos.& 100mL- 3 Nos. 	6
22	Digital Thermo Anemometer	 Range: Field selective 0-30m/s Temperature: 0 to 90°C Probe Dia: Below 12mm Probe length: Above 25cm 	1

23	Ultra Sonicator (Probe type)	 Frequency: 20-25 KHz (Frequency Tracking) Adjustable pulse On/Off: 1 sec – 1 min Ultrasonic Power:650W or 750W or better Including probe Φ 6mm Optional probe Φ2,3,10,12mm Crushing capacity 0.5 - 500ml Duty ratio: 1-99% Power 220/110V ± 5% Working Environment: Indoor (non-humid, no sunlight, no corrosive gases) Programmable real time display: Time, pulse, energy, temp measurement. Integrated Temperature Controller Programmable timer - 0-10-hrs Elapsed Time Indicator Sound Abating Chamber Laboratory Jack 	1
24	Diesel Engine	 Engine type: 4-stroke, water-cooled, single-cylinder Speed: 1500 rpm Bore (mm): 80 Stroke (mm): 110 Compression ratio: 17.5 : 1 Rated power (kW): 3.5 Cooling fluid: Water No. of cylinders: One Flue gas collection: engine should have provision to collect flue gas without filtration and purification. 	1

ANNEXURE - I

BIDDER'S WARRANTY

The Registrar, Pondicherry University, Puducherry invited Bid Document for Supply of Equipments at Centre for Green Energy Technology , Pondicherry University and	•
M/s	
There in after referred to as "The Bidder" having carefully studied all the bid document Specifications, etc. accompanying the tender for supply of the	nts,
(Name of the Instrument) and desirous to submit the bids as per the Tender Documed vide Notification -Tender No PU/CGET/XII Plan/Tender/MinEqpts./M.Tech/2013-14/852, Dt: 22.07.2013.	

DO HEREBY WARRANTY THAT

- 1. The bidder is familiar with all the requirements of the bid documents.
- 2. The bidder has investigated the site and satisfied, he regarding the character and scope of the work and local conditions that may affect the supply or its Performance.
- 2. The bidder is satisfied that the supply can be performed and completed as required in the contract.
- 4. The bidder accepts all risk directly or indirectly connected with the performance of the contract.
- 5. The bidder has had no collusion with other contractors, with any of the men of Pondicherry University, Puducherry, or with any other person in preparation of the bid.
- 6. The bidder has not been influenced by any statement or promise of the Officials of Pondicherry University, Puducherry but only by the bid documents.
- 7. The bidder is financially solvent.
- 8. The bidder is experienced and competent to perform the contract to the satisfaction of the Centre Head, Centre for Green Energy Technology, Pondicherry University, Puducherry.
- 9. The statements submitted with the bid are true.
- 10. The contractor is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
- 11. All the terms & conditions of the Supply Order will bind the bidder once his quote is accepted and supply order issued.

Signature of the Bidder

ANNEXURE - II

BANK GUARANTEE

Pondicherry University Bharat Rathna Dr. B R Ambedkar Administrative Building R Venkataraman Nagar Puducherry 605 014

This guarantee made this		
Bank having its Registered Office at _		
(hereinafter referred to as "the Guarantor" which	•	1 0
the subject, meaning or context thereof, be deen		
and assigns) in favour of the Pondich	•	<u> </u>
represented by its Registrar, having his off		
hereinafter referred to as the "Uni		
successors in office for an amount not exceeding		
(Rupees (more fully d	only) at the	request of
M/s(more fully d	escribed nereunder)	
2. Whereas the University has placed work	Order No: PU/	
datedfor		
M/s		
at	and herein	nafter referred to as
at the "Contractor" which expression shall include the	eir successors and assig	gns.
-		
3. And whereas the Contractor has accepted	and agreed to execute	the work as per the
work order as per undertaking / agreement dated		
and in the manner specified therein.		•
-		
4. And whereas the University has called upo	on the Contractor to furn	ish Bank Guarantee
for the sum of Rs(Rupees		only)
for fulfillment of the said work as specified in	the work order and as	agreed to by the
Contractor.		
5. And whereas the Contractor has reque	sted the Guarantor he	erein to furnish an
irrevocable and unconditional Bank Guarantee in	favour of the University	ity for an amount of
Rsas guarantee towards execution of	the work as agreed to	by the contractor to
the University.		
6. Now, therefore, we	Bank, the Guarantor	herein, do hereby
irrevocably and unconditionally Guarantee the	payment to the Univ	versity the sum not
exceeding Rs(Rupees		only) in
the event of any breach, failure, neglect or in	ability on the part of	the Contractor in the
execution of the said work, on demand without re-		
without any prior consent of the Contractor, at all	times throughout the pe	eriod of execution of
the work, without demur, cavil or argument or del		

7.

The Guarantor agrees and undertakes that the decision of the University as to whether

the contractor has committed any breach of the obligation with respect to the wok to be executed, and the quantum of amount therefore payable by the Contactor to the University in that regard, shall be final, binding and conclusive as against the Guarantor and the Guarantor shall make payment accordingly, on demand by the University.
8. The Guarantor further agrees and undertakes to pay to the University the amount demanded by the University irrespective of and not withstanding any dispute raised by the Contractor in any suit or proceeding before any judicial forum relating to the Contracted work and the Guarantor's liability under this Guarantee shall be absolute and unequivocal.
9. This Guarantee is issued subject to the condition that the liability of this Guarantor under this guarantee is limited to the maximum of Rs. (Rupees only) and the guarantee shall remain in full force up to and cannot be invoked otherwise than by a written
demand or claim by the University for the payment of the said amount by the Guarantor on or beforeor any extended date as decided by the University.
10. This University shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the contracted work or to extend time for performance of the work by the Contractor. Any change to the contracted work shall not in any way release the Bank (Guarantor) from liability under this Guarantee and we waive notice of any such change. The University shall have full liberty to forbear or enforce any of the terms and conditions of the contracted work.
11. This Guarantee shall not be affected by any legal limitation, disability or other circumstances relating to the Contractor or the Guarantor.
12. This Guarantee shall be valid for the period up toand shall extend further and beyondfor such period as determined by the University.
13. The Guarantor undertakes not to revoke this guarantee except with the previous consent of the University in writing.
14. Notwithstanding anything contained herein:
 Our liability under this guarantee shall be limited to Rs
In witness where of this Guarantee has been executed byfor an on behalf of the Bank (Guarantor) on the day, month and year first above written.

SIGNATURE AND SEAL

NAME OF THE BANK (GUARANTOR) ADDRESS: