



**Indian Institute of Science (IISc)
Bangalore - 560012**

Physical Sciences and
Supercomputer Education and Research Centre (SERC)
IISc

Notice Inviting Tender (NIT) in ***E-TENDER mode only*** through **Central Public Procurement Portal (CPPP)** of Government of India under Two-Cover Bid System

for

**Supply and Installation of a Design built Data Centre cooling system in
Physical Sciences and
Supercomputer Education and Research Centre (SERC)
Indian Institute of Science, Bangalore**

Tender No.: [IISc/Purchase/SERC/2020/05](#)

Date: [June 8, 2020](#)

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CPPP Website for e-Tender Submission
<https://eprocure.gov.in/eprocure/ap>

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1. Preamble

Indian Institute of Science (IISc), Bangalore is India's leading institution of advanced education and research in the sciences and in engineering. IISc has a vibrant and diverse campus and carries out research across 42 departments in most areas of the basic and applied sciences.

2. Schedule of Requirements

The tender has data center requirements for two departments: Physics and SERC:

Physics: The first proposed Data centre cooling system infrastructure will be housed in the Ground floor of the existing New Physical Sciences extension building. Details regarding the existing support infrastructure are given in Annexure 1.

SERC: The second proposed Data centre cooling system infrastructure will be housed in the Ground floor of the existing SERC building.

In both cases, bidders must clearly understand the existing support infrastructure available and propose accordingly.

The solution proposed by the bidders is expected to be a total turn-key solution operated by a single bidder meeting all the stipulated requirements. Design, Supply, installation and commissioning along with on-site warranty services for a period of five years.

2.1 Physics

The bidder may visit the site to inspect the facilities in the Physics department before quoting for the tender for the below requirements.

2.1.1 Civil works:

False ceiling and window closing: Must be all metal and Fire resistant.

2.1.2 Electrical Works:

Electrical Cabling, Panel, Cable Tray, Lighting etc

2.1.3 42 U Server Racks:

10 Numbers of 42 U Racks with accessories required.

2.1.4 Cooling:

Precession Air Condition Server Room: Liquid Cooling

No of PAC: 2 Nos (with N+N Redundancy)

Max. Cooling Output 50 KW

Complete Low side piping work

Hot Aisle containment CRCA Fabricated at least 2mm thickness.

2.1.5 UPS System:

120 KVA capable modular UPS Frame with following.

- a. 20 KVA x 3 modules
40 VA output load. One 20KVA for redundancy.
- b. C10 rating pure lead Batteries.
Must support 40 KVA UPS full load for 15 Minutes backup.

2.1.6 Fire Safety:

VESDA Fire safety system with Gas based Suppression

2.2 SERC

2.2.1 Civil works:

- 1) Fire resistant raised floor with perforated tiles at appropriate locations.
- 2) Hot aisle containment using dedicated insulated return hot air duct to the false ceiling.
- 3) Ducting from the PAC room to the compute server room.
- 4) Installation of fire resistant main door to the room.

2.2.2 42 U Server Racks:

6 Numbers of 42 U Racks with accessories required.

2.2.3 Cooling:

Precession Air Condition Server Room: Liquid Cooling

No of PACs: 3 Nos PACs of exact same configuration and capacity with N+1 Redundancy. The combined total capacity of any two working units must be minimum 42 TR.

Complete Low side piping work

Hot Aisle containment CRCA Fabricated at least 2mm thickness.

2.2.4 Electrical

- 1) Low side works.
- 2) Emergency heavy duty exhaust fan for hot aisle.

2.2.5 Fire Safety:

VESDA Fire safety system with Gas based Suppression, Rodent repellent system, water leak detection system, camera for CCTV

2.2.6 Buyback of existing PACs and AHU:

Buyback of

- 1) 3 Nos. Stultz PACs
- 2) 1 No Trane AHU

The solution quoted by the bidder for meeting the above stated requirement may require best in class point products/systems from multiple OEMs in order to ensure that all the stipulated requirements are met, and the solution is optimal and cost-effective

The bidders fulfilling the criteria as per this tender document are invited to submit their bid in **e-tender mode only** through Central Public Procurement Portal (CPPP) of Govt of India, for which website address is as follows:

<https://eprocure.gov.in/eprocure/app>

Note: No hard copy bids should be submitted.

The bidders will be required to register themselves with the CPPP, in order to participate in the bidding, for which above website may please be consulted.

3. Technical Details

3.1 SERC

The bidder may visit the site to inspect the facilities in SERC before quoting for the tender for the below requirements.

3.1.1 Civil Works

SERC has identified two adjoining rooms, both of size 20 feet x 18 feet, for the data center facility specified in this tender document: **a compute server room and a PAC room**. The compute server racks will be installed in the compute server room and the PACs that will be procured as part of the tender will be installed in the PAC room. Raised (false) flooring will have to be provided only in the compute server room. Refer the layout given in Section 3.1.7.

- 1) Raised flooring in place of existing wooden panels in the compute server room. Must be all metal and Fire resistant.
- 2) Necessary ducting from the PACs in the PAC room to the compute server room.
- 3) Hot aisle containment with zero leakage of return air from false ceiling using a dedicated insulated return hot air duct. The duct should be fitted with low pressure drop grills to facilitate return of hot air into the PAC unit.
- 4) The ceiling ducts or diffusers should have a minimum of 60% porosity to facilitate exhaust of hot air from the aisle.
- 5) PAC unit must deliver air into the cold aisle using perforated tiles placed at appropriate locations in the compute server room in the vicinity of the racks. The minimum height of the raised floor should be 600 mm or 2 ft with clear obstruction free unrestricted air flow movement height of 300 mm or 1 ft in the raised floor.
- 6) The entire Access floor system in the compute server room shall be made from high density Calcium sulphate / cementinous board and provide Class O and Class 1 Fire Ratings tested as per CIRC 91/61 or BS 476 Part 6 & 7 fire resistance up to 60 min as per NFPA. System should have antistatic property and air leakage resistance.

- 7) The panels for the raised floor in the compute server room shall be coated with epoxy coating on the exposed surface. Have an infill of light weight cementitious material. Insulated against heat and noise transfer. Panels shall be finished with High Performance Anti-Static Laminate. The bottom of the panel shall be of 0.05 mm Aluminum foil to create a fire and humidity barrier and this should provide floor's electrical continuity. The Panels will be UL listed/ FM/DM approved. Panels will remain flat through and stable unaffected by humidity or fluctuation in temperature throughout its normal working life. Panels will provide for impact resistance top surfaces minimal deflection, corrosion resistance properties and shall not be combustible or aid surface spread of flame. Panels will be insulated against heat and noise transfer. Panels will be 600 x 600mm x 30 mm height fully interchangeable with each other within the range of a specified layout. Panels shall be finished with anti-static 0.9 mm Laminate and 0.45 mm thick plastic edge material that is self-extinguishing and will be PVC free.
- 8) Installation of a fire-resistant main door.

3.1.2 Server Racks

Qty 6 Nos

Approved Makes : APC

600mm W X 2000mm H X 1200mm D with Front and rear perforated sheet steel door. Racks with PDUs and Cable Managers. Each Rack must have 2 PDUs, each PDU must have 18 no's of C13 and 4 Nos of C19 Sockets. The racks supplied should be equipped with blanking panels to where servers are not installed to prevent mixing of hot and cold air.

3.1.3 Cooling

Precession Air Condition Server Room: Liquid Cooling

PAC: Qty 3 Nos (with N+1 Redundancy)

Approved Makes : Flaktgroup / Emerson / APC / Rittal / Schnieder / Liebert / Stulz / Trane

No of PAC: 3 Nos PACs of exact same configuration and capacity with N+1 Redundancy. The combined total capacity of any two working units must be minimum 42 TR.

Complete Low side piping work.

Hot Aisle containment CRCA Fabricated at least 2mm thickness.

The PAC units should have:

- 1) Backward vane composite low noise EC fans preferably DC voltage driven
- 2) NVH level should be less than 65 DB (air noise) at 1 m from the PAC at rated speed corresponding to 50 Hz operation.
- 3) All refrigerant lines up to the condensing unit should be insulated and aluminium cladded.
- 4) The condensing unit should be equipped with variable speed low noise fan.
- 5) The A-Frame HEX in the PAC should have a drip tray for condensate collection with the drain pipe with adequate hydraulic gradient to allow the condensate to drain outside the DC room.

- 6) The PAC should deliver a minimum of 16,500 CFM of air at operating speed with modulation from 12,500 to 18000 CFM. The air flow rates are calculated based on the pressure drop the vendor would provide with proposed cooling solution. The air flows should be measured with a flow grid or a flow hood at the time of commissioning.
- 7) Provision should be made to allow automatic opening of hot aisle doors in the event of power failure or unanticipated temperature rise in case of cooling failure.
- 8) The hot aisle containment doors should automatically close once normal operation is restored. All safety precautions pertaining to automatic opening and closing of containment doors should be exercised by use of appropriate sensors and control system. Preferably, these sensors should be wired to the PLC in the PAC unit.
- 9) The PLC in the PAC should be fully equipped to log all data pertaining to the operation of the PAC unit such as power consumption, alarms, fan speed, air inlet and outlet temperatures, humidity etc. It should allow remote monitoring and login facility in addition to sending alarms anomalies via email/SMS etc.
- 10) The vendor should provide 5 years of AMC and warranty for the PAC unit which includes replacement of spares/labour/consumables that may be required. In addition, the vendor should provide performance guarantee for the PAC based on the proposed solution.
- 11) Provision for mounting network trays in the hot aisle should be provided with adequate sealing of the air passage to prevent leakage of hot air through the network cable bays and openings.
- 12) Adequate sealing between racks and gaps in the hot aisle should be ensured by use of high-density foam or other suitable demountable material to facilitate service of rack and servers.
- 13) The PLC in the PAC should have a provision to switch between the units to provide N+1 redundancy in a pre-programmed manner by the user or on cooling need basis when there is need for extra cooling or in the case of high return air temperatures.
- 14) Units should operate in DX Mode. Coefficient of performance (COP) should be greater than 3, and Energy Efficient Ratio (EER) should be greater than 10.5
- 15) Hot Aisle containment CRCA Fabricated: The containment unit will accommodate 10 standard 42U racks in two rows separated by hot aisle containment with 5 racks in each row. Each rack is of dimension 42 U, 600mm W X 2000mm H X 1200mm W. Four of the racks will be provided by the department while the other six racks to be provided by the bidder.
- 16) Aisle containment curtains must be provided from the top of the racks to the ceiling in soft wall panel format. Gaps between the racks and other such aisle entry ways and gaps must be sealed with appropriate materials to prevent mixing of hot and cold air. The materials for ceiling should have good fire rating and should be able to withstand air pressure. These parameters should be explained in the technical bid.
- 17) Likewise, any gap between the top of the PAC units and the ceiling should be contained for return air.
- 18) Direct expansion air-cooled Precision AC units version A with internal compressor(s) matched with external air-cooled condenser. Each unit must have double circuit with two compressors in each circuit.
- 19) Inverter Scroll Compressor, R410A GAS , Frontal Throw / Top with EC Fans, EEV with back time
- 20) Water level sensors in the condensate tray and connected to the unit controller.
- 21) PAC units should be QMS Certified .9001/14001/18001 , CE Certified and AHRI certified Heat exchanger.
- 22) Motorized Damper with Actuator over the units to avoid short cycling. Damper to be powder coated matching with the color of the units.
- 23) The Outdoor Condenser unit shall comprise of Condenser **EC fans** & motor, Condenser cooling coil.

3.1.4 Electrical

- 1) Only the power panel will be provided by the department. All other low side electrical works will have to be provided by the bidder.
- 2) One Emergency Heavy duty exhaust Fan in the Hot Aisle (UPS connected). The exhaust fan should be started on power failure and shut off when the power is restored.

3.1.5 Safety and BMS Features

- 1) VESDA Fire safety system with Gas based Suppression using NOVEC 1230 fire suppression.
- 2) Rodent repellent system
- 3) Addressable water leak detection system
- 4) One IP based camera for remote monitoring

3.1.6 Buyback of Existing PACs and AHU

Buyback offer for the existing

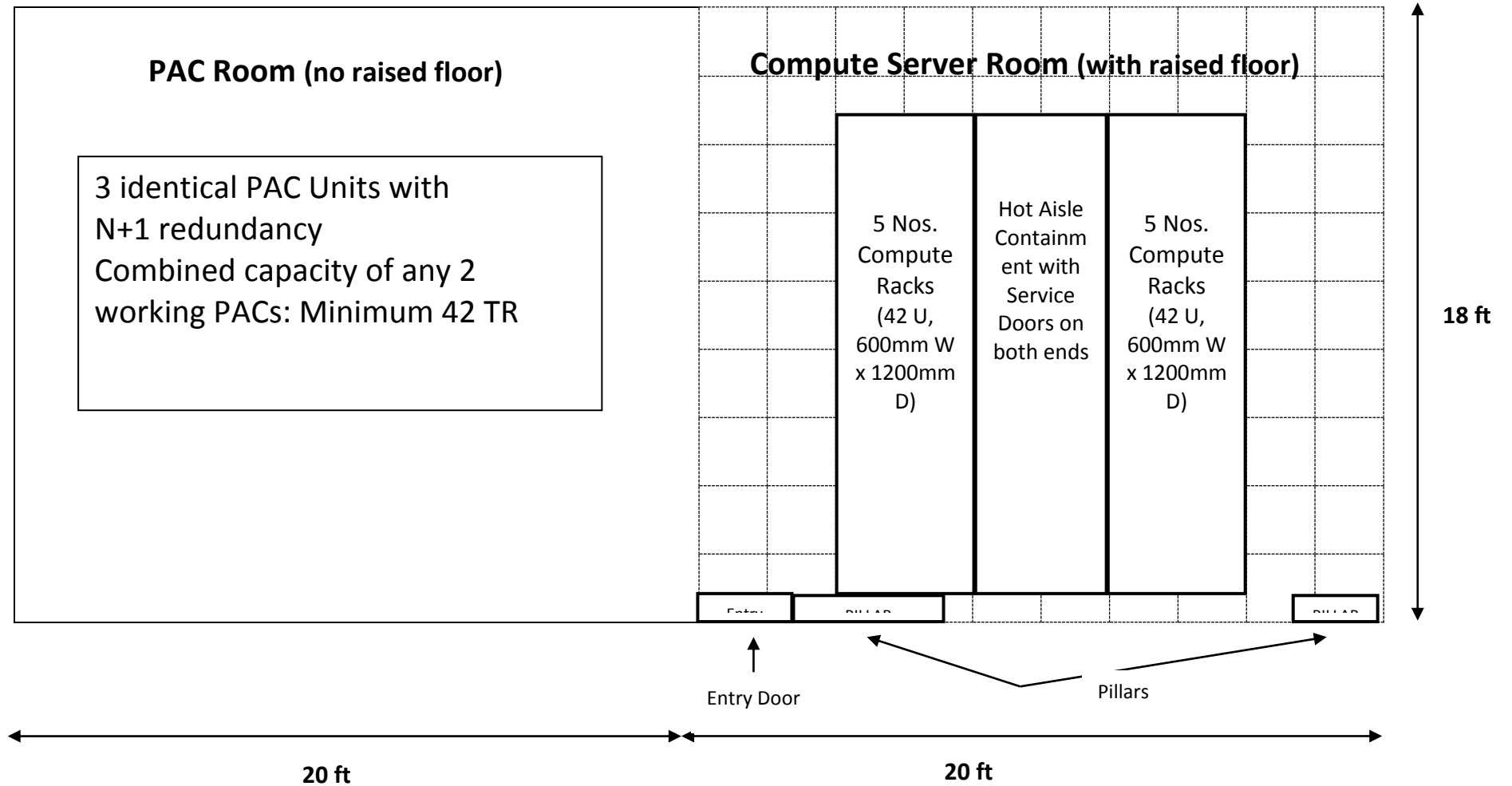
- 1) Stulz Make PACs. 26 TR x 3 Nos. with heater and humidifier (Model – BAS 1002A – 26 TR – 13500 CFM).
- 2) Trane Make AHU. Model : CLCP. Tonnage : 80TR. CFM : 32000. Motor : 18.5kW. Runs with chilled water with an external chiller. Refrigerant: R134A

The bidder may visit the site to inspect these buyback items.

3.1.7 SERC Data Center Layout

SERC DATA CENTER LAYOUT

OUTDOOR (Outside Building)



4.

4. Bidder's Eligibility Criteria

1. The bidder must have implemented a HPC data center cooling system solution at least one in the past year in the reputable educational research institutions. If the bidder happens to be a system integrator either the bidder or one of the OEMs should meet the above condition; the bid should include the authorization letters from the OEMs. The technical bid should clearly demarcate the responsibilities between the bidder and the OEMs. Complete details of the same must be submitted with the bid.
2. The bidder must have a proven record of maintaining and managing at least one HPC data center cooling system for a period of 1 (one) year. Appropriate documentary evidence with a letter from the customer reporting the details of the maintenance/management responsibilities and the performance of the bidder should also be included in the technical bid of the proposal. IISc shall independently obtain inputs from the provided referees before arriving at a final decision.
3. The bidder is expected to be a company with an annual turn-over of at least Rs. 1 Crores in each of the last 3 financial years.
4. The bidder (along with their OEM) should have proven record of having demonstrated their competence and capability, as a team, to deliver all the services expected during the contract period.

Supporting Documents: For item (1): A copy of the P.O.; For item (2), a letter from the customer site stating clearly the duration of contract, scope, and satisfactory delivery of services; For item (3), annual audited balance sheet for 3 years.

Compliance to conditions 1 to 3 above are mandatory and are not relaxable.

5. Earnest Money Deposit (EMD)

1. The Bidder shall furnish, as part of his tender, earnest money deposit (EMD) of Rs. 3,00,000 (Rupees Three lakhs only) through RTGS / NEFT only. Necessary Bank details of IISc is enclosed with the tender. Other modes of payment for EMD are not acceptable. The bidder must attach e-receipt of the RTGS / NEFT payment as proof of payment of EMD.
 - a. The entire EMD amount for the tender has to be paid in a single transaction through NEFT / RTGS.
 - b. Bid received without EMD will be rejected.
2. The EMD of unsuccessful Bidders will be returned to the respective bidder(s) through bank / RTGS transfer without any interest within a period of 60 (sixty) days after placing the order / awarding the contract on the successful bidder.
3. The EMD of successful bidder will be refunded through bank / RTGS transfer without any interest only after receiving Performance Security / Performance Bank Guarantee (PBG) / Security Deposit.
4. The EMD may be forfeited:

- a. If the Bidder withdraws or amends or modifies or impairs or derogates the bid partly or fully or any condition of it after tender opening, during the period of tender validity (six months from the date of opening of the technical bid);
 - b. If the Successful Bidder fails within the specified time limit to:
 - i. Furnish order acceptance within one week of the order, or
 - ii. Furnish the required Performance Security / Performance Bank Guarantee (PBG) /Security deposit within two weeks from the issue of the Letter of Intent / Purchaser Order, or
 - iii. Fails to deliver/provide the item/installation/service as per the order's terms and conditions within stipulated period
5. EMD can be exempted for MSME bidders as per GFR. In this case, the MSME bidder should provide a valid MSME certificate from a competent authority in the technical bid.

6. Performance Security or Performance Bank Guarantee (PBG)

The successful bidder(s), on whom order will be placed, has to submit a performance security of 10% of the total order value at the earliest as per Purchase Orders (PO) terms within two weeks from the date of PO. Performance security has to be submitted in the form of RTGS / NEFT / Bank Guarantee/Demand Draft/FDR from any Nationalized/Scheduled commercial Bank in India (as per RBI list) in favour of the Registrar, IISc, Bangalore. The security deposit must be submitted within two weeks of the issue of the Purchase Order, otherwise EMD may be forfeited and order may be cancelled. IISc will issue a formal purchase order to the successful Bidder upon furnishing of the PBG / Security deposit.

Performance security should remain valid for a period of three months beyond the date of completion of all contractual obligations (including warranty period) of the successful bidder. No interest will be payable by IISc, Bangalore on the Performance Security deposited. In case the contractor fails to provide satisfactory service or supply, the Performance Security submitted by the bidder is liable to be forfeited. The PBG will be forfeited in case of violation of any terms & conditions of the purchase order or agreement done thereof by the successful bidder. An undertaking to this is to be submitted.

7. Acceptance Criteria

1. As part of the technical proposal, the bidder must submit a comprehensive document giving complete details of Installation, commissioning, configuration, and testing of the proposed solution that would be carried out at our site.
2. During the acceptance, the bidder must demonstrate the performance of the system as specified in the bidder's technical bid.
3. It is to be noted that maximum of two weeks will be available (after Installation & Commissioning) to the bidder to conform to this acceptance test criterion set out.
4. Any delay in commissioning or conformance to the acceptance beyond the stipulated time will result in extending the warranty: each day of delay would result in 3 additional days of warranty.

5. This penalty clause is only applicable for solutions which are considered as technically meeting the requirements, as evaluated by the technical committee. The clause cannot therefore be used as an argument to qualify any solution, which the technical committee considers as not meeting the requirements.

8. SERVICE LEVEL AGREEMENT

1. The bidder must ensure that the solution proposed, as a total turnkey solution operated by a single bidder, to meet the stated requirements, delivers an uptime guarantee of 95% of the entire system, measured on a monthly basis.
2. In the event of a failure of any of the sub-systems or components of the proposed solution, the bidder must ensure that the defects are rectified before end of the next working day.
3. Failure to meet the above requirement will result in extension of the warranty services by 3 days for delay of each day during the warranty period.
4. Therefore, the bidder along with the OEMs must put systems and processes in place to address the above during the period of the contract.

9. General Terms and Conditions

1. **Warranty:** Warranty services for the whole system should be comprehensive and valid for a period of **5** years from the date of installation of the equipment. The warranty on all components should be included in the quoted costs. The quotes prices must be inclusive of the warranty costs. During the warranty period, the bidder shall attend to all the hardware problems on site and shall replace the defective parts at no extra cost to the purchaser.
2. Offer must be submitted under TWO-BID system i.e. “Techno-commercial (i.e. Technical) bid” and “Price (Financial) bid” in **e-tender mode through CPPP only** within the stipulated period. Bids sent through Email / Fax or submitted in hard copy format will not be accepted and such bids will be treated as non-responsive bids.
3. IISc reserves the right to cancel the tender at any time without assigning any reason whatsoever.

10. Technical Details / BoQ Compliance Sheet (to be submitted with Technical Bid)

Note: DO NOT MENTION THE PRICES IN THIS BoQ COMPLIANCE SHEET. THIS WILL LEAD TO AUTOMATIC DISQUALIFICATION OF THE BIDS.

| SNo | Item Description | [Only answer YES/NO in this column. DO NOT MENTION THE PRICE] | Remark |
|-----|---|---|--------|
| 1 | Physics - Civil Works: False ceiling and window closing: Must be all metal and Fire resistant | | |
| 2 | Physics - Electrical Works: Approved Makes : Legrand / OBO BETTERMANN a) UPS Panel b) AC Panel c) Cable Trey d) Motion Sensor Lights e) UPS output power cable mts | | |
| 3 | Physics - Server Racks: Qty 10 Nos Approved Makes : APC 600W X 2000H X 1200D with Front and rear perforated sheet steel door Racks with PDUs and Cable Managers Each Rack must have 2 PDUs, each PDU must have 18 no's of C13 and 4 Nos of C19 Sockets. | | |
| 4 | Physics - Precession Air Condition Server Room: Liquid Cooling PAC: Qty 2 Nos (with N+N Redundancy) Approved Makes : Flaktgroup / Emerson / APC / Rittal / Schnieder / Liebert / Stulz No of PAC: 2 Max. Cooling Output 50 KW | | |

| | | | |
|---|---|--|--|
| | <p>Complete Low side piping work Hot Aisle containment CRCA Fabricated at least 2mm thickness</p> <p>Direct expansion air-cooled Precession AC units version A with internal compressor(s) matched with external air-cooled condenser</p> <p>Invertor Scroll Compressor, R410A GAS , Frontal Throw / Top with EC Fans, EEV with back time</p> <p>PAC units should be QMS Certified .9001/14001/18001 , CE Certified and AHRI certified Heat exchanger</p> <p>The Outdoor Condenser unit shall comprise of Condenser EC fans & motor, Condenser cooling coil</p> | | |
| 5 | <p>Physics - Modular UPS System: Approved Makes : APC / Delta / Emerson / Schnieder / Legrand / Liebert /Numeric</p> <p>UPS with 120 KVA Base frame and installed with 3 Modules of 20 KVA Scalable up to 120 KVA.</p> <p>True Online configuration double conversion UPS. DSP (Digital Signal Processor) / Microprocessor based control, using SCR/IGBT devices and high switching frequency PWM. PFC controlled rectifier with Active power factor Correction (APFC). Capability to operate in N+1 / N+X PRS -Parallel Redundant Configuration. Capability of independent or common battery bank operation of the UPS when operated in PRS</p> <p>Generator Compatibility: Compatibility to existing Genset supply required</p> <p>Input Protection (Thru In-built 3P MCCB) : Input to Rectifier, Input to Bypass, Manual Bypass (In-built)</p> <p>Display Panel (In-built LCD Display / LED): Input: Voltage / Frequency Bypass: Voltage / Frequency Output: Voltage / frequency / Current Battery: Voltage / Capacity Load: In kVA / kW / Percentage</p> | | |

| | | | |
|---|---|--|--|
| | <p>Temperature: STS/Inverter/PFC</p> <p>Battery Makes: Leoch / Enersys Backup Time: 15 Minutes @ full load</p> | | |
| 6 | <p>Physics - Fire Safety System:</p> <p>Approved Makes :</p> <p>VESDA Fire safety system with Gas based Suppression</p> <ol style="list-style-type: none"> 1) Rodent repellent system 2) Addressable water leak detection system 3) system NOVAC1230 4) One Emergency Heavy duty exhaust Fan in the Hot Aisle (UPS connected). 5) Electrically operated automatic main door with biometric system and emergency manual override mechanical key (UPS connected). 6) Main door must automatically open when the mains power fails and start the exhaust Fan and shut both when the power is restored. 7) One IP based camera for remote monitoring | | |
| | | | |
| 7 | <p>SERC – Civil Works</p> <p>Raised flooring with floor panels for the compute server room, necessary ducting from the PACs in the PAC room to the compute server room, dedicated insulated return hot air duct for hot aisle containment, fire resistant main door as detailed in Section 3.1.1 of this tender.</p> | | |
| | | | |
| 8 | <p>SERC – Racks</p> <p>6 server racks with blanking panels as detailed in</p> | | |

| | | | |
|----|--|--|--|
| | Section 3.1.2 of the tender. | | |
| | | | |
| 9 | <p>SERC – Cooling</p> <p>3 No. PACs of identical configuration and capacity with N+1 redundancy, combined total capacity of any two working units must be minimum 42 TR and with hot aisle containment as detailed in Section 3.1.3 of this tender.</p> | | |
| | | | |
| 10 | <p>SERC – Electrical</p> <p>Low side electrical works, emergency heavy duty exhaust fan as detailed in Section 3.1.4 of this tender.</p> | | |
| | | | |
| 11 | <p>SERC – Safety and BMS features</p> <p>Fire safety system, rodent repellent system, water leak detection system and IP based camera as in Section 3.1.5</p> | | |
| | | | |
| 12 | <p>SERC – Warranty for PAC</p> <p>Cost for 5 year warranty for PAC, if any</p> | | |
| | | | |
| 13 | <p>SERC – Installation</p> <p>Installation and comissioning cost, if any</p> | | |
| | | | |
| 14 | <p>SERC – Buyback</p> <p>Buypack of existing 3 Nos. Stulz PACs and 1 No Trane AHU as given in Section 3.1.6.</p> | | |

11. Technical Bid – Terms and Conditions

1. The technical bid must contain the following information. Bids without the following information will be automatically disqualified.
 - a. Earnest Money Deposit must be paid in the payment modes (RTGS), as specified in this tender. The e-receipt of the RTGS must be attached with the technical bid.
 - b. Executive summary of the proposal.
 - c. Technical details of the system.
 - d. Technical compliance statement stating compliance against each item in the technical specifications given in the enquiry.
 - e. Terms and conditions of the offer.
 - f. Supporting technical materials, including brochures, highlighting unique characteristics.
 - g. BoQ compliance sheet and a copy of the masked Commercial bid of the bill-of-materials.
 - h. One reference where the bidder has carried out supply, installation and support of similar system in the past one year.
2. Vendors who include price information in the technical bids will be automatically disqualified.
3. Technical bids will be opened first. IISc may seek clarifications after opening of technical bids. Vendors may be required to give presentations.

12. Technical Presentation

1. The bidders have to give technical presentation at Physics Department, IISc (Exact schedule will be intimated to the bidders separately by e-mail only).
2. The bidder must submit all the Original Documents submitted for Technical bid (hard copy, properly spiral bound in one volume only preferably in A4 size minimum 75 GSM paper), which are uploaded in e-procurement portal (CPPP), to IISc for verification at the time of presentation. Non-submission of the hard copy of the technical bid at the time of presentation will lead to disqualification for subsequent state. However, in case of any discrepancy in the hard copy of the bid, the documents submitted on CPPP will only be considered as final. Also in case of any such discrepancy in hard copy bids or mismatch in hard copy bid and CPPP bid, the bid may be treated as non-responsive and will not be considered further process.
3. The exact schedule of the presentation will be intimated by email to the bidders separately via e-mail only. Any request for change in date, time or venue of the presentation will not be considered. If a bidder does not appear for presentation, its bid will be treated as non-responsive and will not be considered for further process. **EMD will not be refunded, if bidder does not present for presentation as per the schedule given by IISc.**

13. Commercial Bid – Terms and Conditions

1. Priced Bill of Quantities; through **online e-tender mode in the specified format on CPPP only**, no hardcopy of commercial bids should be submitted.
2. Price bids of only technically qualified vendors will be considered. Commercial bid shall be opened for the technically qualified bidders after the technical evaluation. The Institute will communicate by email provided in the technical bid the date and time of opening of the commercial bid to the qualified bidders. Commercial bids will be opened on the said date and time, irrespective of the presence of the bidders / authorized representatives.
3. The commercial bid should contain among other things, payment terms, warranty, installation, commissioning etc. as per requirements of IISc mentioned in the tender document. All such conditions must be in line with the tender. In case of any deviation or conditional offer, the bid may be treated as non-responsive and not be considered for evaluation.
4. Prices should be quoted only in INR.
5. IISc is registered with DSIR in order to get concession / exemption in Custom Duty / IGST (for import). Also only 5% GST (for indigenous items) is applicable for IISc purchases as per DSIR registration. IISc will provide necessary documents required for availing concession / exemption in Custom Duty / IGST for import or 5% GST for indigenous items. Bidders should consider these facts while offering their price bids for this tender.
6. Indigenous order should be with GST only and must be on FOR basis. In such cases, any kind of custom duty exemption certificate will not be provided. IISc will only provide relevant documents for availing concession / exemption in GST subject to submission of documents (viz. Proforma Invoice, acceptance of the order) required from vendor side.
7. The component of tax, and any other statutory levies should be shown separately and not included in the total amount, to enable us to avail exemption.
8. Proposals should contain the name and contact details, viz., phone, fax and email of the designated person to whom all future communication will be addressed. The contact details should also be mentioned on the overall envelope.
9. Prices should be quoted in detail, for all the subsystems given in the Technical Specifications part of the tender. Further, bid and price validity should be for six months from the date of opening of the technical bids.
10. IISc will place the purchase order only on the successful bidder as per the decision of IISc. In this regard, decision of IISc will be final and binding.

14. Payment Terms

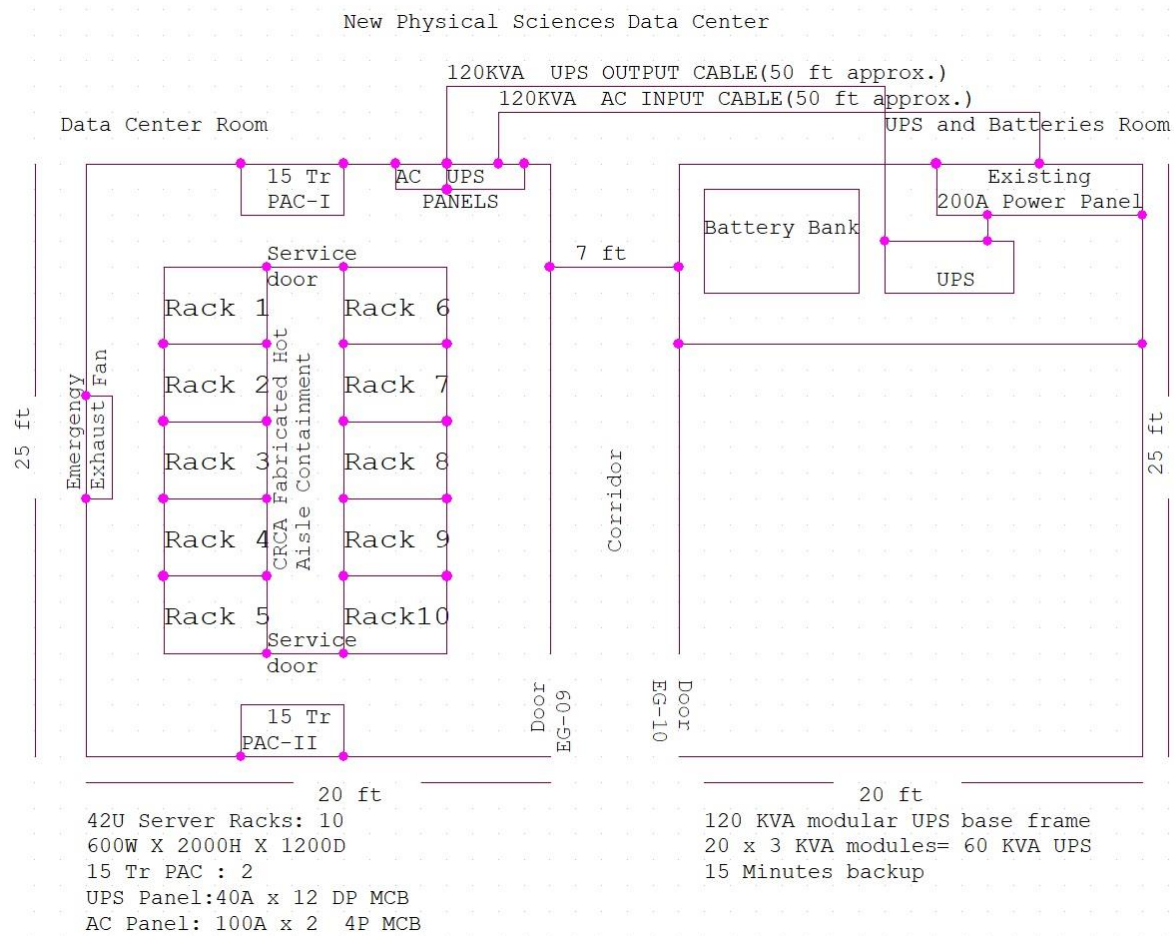
1. The total project cost will consist of Equipment supply and installation and warranty for five years from the acceptance and successful installation as decided by IISc.
2. 100% payment shall be released by IISc against delivery, inspection, successful installation, commissioning and acceptance of the equipment at IISc Bangalore in good and functional condition and to the entire satisfaction of the Purchaser (IISc) and on production of

unconditional performance bank guarantee of 10% of the total order value valid two months beyond all contractual obligations.

3. Payment will be subject to deduction of TDS as per rules / laws and any other deduction as per PO terms.
4. The total solution as per the agreed bill of materials must be supplied within 4 – 6 weeks after receiving a firm PO from IISc. The installation and acceptance must be completed within 2-3 weeks after supply of the equipment.
5. Liquidated Damage: As time is the essence for this procurement, hence the ordered materials are required to be delivered and installed in all respects within the stipulated period in the purchase order failing which penalty for late delivery and installation will be imposed at the rate 1% of the total order value per week or part thereof for the delayed period subject to maximum of 10% of the total order value and this liquidated damage will be deducted during the payment of the invoice / bill of the supplier. Earliest / expected delivery period should be clearly indicated in the technical bid.

15. Physics Data Center Proposed Layout

Annexure – I



16. Important Dates

1. Release of tender: June 8, 2020.
2. Last date for sending queries: June 22, 2020, 5 PM. Queries may be sent to chair.phy@iisc.ac.in, tender.serc@iisc.ac.in
3. Pre-bid clarification meet: June 26, 2020, 2 PM IST in Physical Sciences. No queries will be entertained after pre-bid clarification meet.
4. Release of corrigendum to the tender based on the queries, if necessary: June 30, 2020.
5. Start date for submission of the bid: July 1, 2020, 9 AM IST through online mode of CPPP.
6. Last date for submission of the bid: July 16, 2020, 6 PM IST through online mode of CPPP.
7. Opening of the technical bids: July 21, 2020, 10.30 AM IST through online mode of CPPP.
8. Technical presentation by the bidders: July 24, 2020.
9. Opening of the commercial bids: Will be intimated via CPPP.

17. Details for EMD and Security Deposit

Details of the Bank Account / PAN / GSTN of IISc Bangalore for submitting EMD / Bid Security / Performance Security / Security Deposit

For NEFT / RTGS:

Account Name – **I.I.Sc.**

Bank – **State Bank of India**

(Branch – **IISc Bangalore**, Branch Code – **02215**)

Account No. – **31728098170**

IFSC – **SBIN0002215**

MICR - **560002020**

PAN / GST No.:

PAN – **AAATI1501J**

GST No. –

29AAATI1501J2ZV

Note:

1. It is mandatory to write Name & Address of the Bidder and Tender Reference No. & Date on the back side of the Demand Draft or e-receipt of NEFT/RTGS.
2. Acceptance of the DD or e-receipt of NEFT/RTGS is subject to its realization / verification from Finance & Accounts section.

18. Format for Performance Security

FORMAT FOR BANK GUARANTEE FOR PERFORMANCE SECURITY (PERFORMANCE BANK GUARANTEE)

To
The Registrar
Indian Institute of Science (IISc)
Bangalore – 560 012 (Karnataka, India)

Subject: Performance Bank Guarantee (PBG)

Reference: IISc. Purchase Order No. _____
dated _____

Dear Sir,

1. We hereby issue a Bank Guarantee as follows: -

Bank Guarantee No. _____ Date: _____

Amount of Guarantee Rs. _____

Guarantee covers From _____ To _____

Last Date for Lodgement of Claim: _____

2. This deed of Guarantee executed by the (Name of the Bank: _____)

constituted under _____ Act, _____ having its
Central Office at

_____ and amongst other
places a branch at _____ (hereinafter
referred to as "The Bank") in favour of The Registrar, Indian Institute of Science,
Bangalore – 560 012 (hereinafter referred to as IISc) for an amount of not
exceeding Rs. _____ (in words:
Rupees. _____ only) at the request of
M/s _____ (hereinafter referred to as the
"Contractor" / "Supplier").

3. In consideration of The Registrar, Indian Institute of Science, Bangalore – 560 012
(hereinafter called IISc) having entered into an agreement vide IISc's Purchase
Order No. _____ dated _____ with M/s
_____ (hereinafter called the Supplier) to carry out the supply and
installation of the _____

_____ <Name of the
equipments/work/Job> at Indian Institute of Science, Bangalore as per their above
order, the Supplier agreed to execute a Bank Guarantee for 10% of the total order
value viz. Rs. _____ (in words: Rupees
_____ only) towards Performance
Security / Performance Guarantee obligation for a period of ____ year(s) /
month(s) from _____ to _____.

4. We, the _____ Bank, _____ Branch (hereinafter referred to as a Guarantor) at the request of the supplier, irrevocably undertake to indemnify and to keep indemnify IISc. without any demur to the extent of Rs. _____ (in words: Rupees _____ only) in the event of the aforesaid Supplier failing to comply the Warranty / contractual Obligations as per the agreed terms to the full satisfaction of the Company as mentioned in the IISc.'s purchase order.
5. NOW THIS BANK HEREBY GUARANTEES that in the event of the said Supplier failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / Machinery / service, etc. this Bank shall pay to Indian Institute of Science, Bangalore on demand and without protest or demur Rs (in words: Rupees.....only).
6. We _____ Bank, further agree that the Guarantee herein contained shall remain in full force and affect during the period that would be taken for the performance of the equipment and / or services as stated in the Purchase Order issued by IISc. and that it shall continue to be enforceable till the completion of the period and certified that warranty and contractual obligations have been fully carried out by the supplier and accordingly discharges the Guarantee subject. However, IISc. shall have no right under after the expiry of the Guarantee, i.e. _____(date).
7. We, _____ Bank undertake not to revoke this Guarantee, during its currency except with the previous consent of IISc. in writing.
8. Notwithstanding anything contained herein,
 (a) Our liability under the Bank Guarantee shall not exceed Rs. _____ (in words: Rupees _____ only).
 (b) This Bank Guarantee shall be valid up to _____.
 (c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if IISc. serve upon us a written claim or demand on or before expiry of date (i.e. _____).
9. NOTWITHSTANDING anything contained herein above, our liability under this Guarantee is restricted to Rs. _____ (in words: Rupees _____ only) our guarantee shall remain in force until. Unless a Demand or claim under the guarantee is made on our Bank in writing on or before _____ all your rights under the said guarantee be forfeited and we shall be relieved and discharged from all liabilities thereunder.
10. This Bank further agrees that the decision of Indian Institute of Science, Bangalore as to whether the said Supplier has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.
11. This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch) as following details:

| | |
|--------------------|--|
| Name of the Bank | |
| Branch Name | |
| Branch Code | |
| IFSC Code | |
| E-mail Id | |
| Phone / Mobile No. | |

Seal & Signature of the Bank