

**TENDER NO: 02/2018**  
**INVITATION OF TENDERS for**  
**PACKAGE-III**  
**FOR**  
**SUPPLY AND INSTALLATION OF BMS CONTROLLER IN NEW BUILDINGS**  
**FOR PHASE II CONSTRUCTION OF**  
**INDRAPRASTHA INSTITUTE OF INFORMATION TECHNOLOGY DELHI AT**  
**OKHLA-III, DELHI**



INDRAPRASTHA INSTITUTE of  
INFORMATION TECHNOLOGY DELHI



**Issued By:**

CE  
On behalf of  
Registrar  
Indraprastha Institute of Information Technology

IIITD Campus, Service Block, Okhla Phase III , New Delhi - 110020

**Issued to:**

M/s .....

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**Indraprastha Institute of Information Technology, New Delhi (IIIT-Delhi)**

DATED: 20.03.2018

**TENDER NOTICE**

1. Last Date & Time of issue of tender documents from 20-03-2018
2. Last Date & Time of receipt of tender 03-04-2018  
upto 3.00 p.m.

CE, IIIT-Delhi, Okhla, New Delhi-110020 on behalf of Registrar, IIIT-Delhi invites sealed item rate tenders from eligible contractors for similar works.

**Name of work: SITC of HVAC related BMS Controller in new buildings for Phase-II Construction of Indraprastha Institute of Information Technology (IIIT-Delhi) Campus, Okhla PhaseIII, New Delhi.**

Location: **New Buildings in Phase-II Construction areas**

Estimated cost of work put to tender : **Rs. 10 Lac**

Time of completion : **Two Months**

Earnest Money Deposit: **Rs. 20,000/- (Rupees Twenty thousand only)** is to be submitted with tender document as earnest money in favour of **“IIIT Delhi Collections”**

- 1) The tenders shall be placed in sealed envelopes with a name of work and due date written on the envelope and addressed to the CE, IIITD. Complete tender documents shall be submitted by the approved contractors in **two envelopes**. **1<sup>st</sup> envelope** shall contain the earnest money in the shape of Demand Draft / Pay Order of a scheduled Bank requisite shape as per condition & eligibility criteria and/ cost of tender as stated above in case of the downloaded version.
- 2) The eligible contractors who have carried out similar works in IIIT-D/Govt Deptts/PSU/Reputed Pvt sector /MNCs are to submit the experience certificates for the works and registration certificates with Govt. Depts. if any. A brief technical proposal will also be submitted by the bidder explaining the offer without pricing for evaluation by the Technical Committee. The said certificates along with the EMD and technical proposal be enclosed in **Envelope-1**.
- 3) Experience of having successfully completed similar works during last **seven** years ending on the last day of the month previous to the one in which the tenders are invited. The similar works are defined as works of supply and manufacturing installation testing and commissioning of BMS controllers .

Three similar works not less than 40% of estimated cost	Rs 4 lacs each Or
Two similar works not less than 60% of estimated cost	Rs 6 lacs each Or
One similar work not less than 80% of estimated cost	Rs 8 lacs each

- 4) The applications not supported with requisite experience certificates, valid DVAT certificate, TIN no., PAN and GST Registration No in Envelope-1 shall not be entertained.
- 5) The vendor should have been in business for similar works for at least three years.
- 6) The vendor may have preferably experience of executing similar works costing around Rs 4 lacs with Govt/PSU/autonomous bodies /reputed MNC/Private sector educational /IT parks etc.
- 7) The vendor must have a average annual turnover of Rs 10 lacs per annum during the last three consecutive financial years.
- 8) The 2<sup>nd</sup> **envelope** shall contain the financial bids including Priced Schedule of Quantities, Form of Tender, Conditions of Tender, Articles of Agreement, Brief Specifications, Condition of contract, Drawings all duly signed by the authorized signatory of the firms.  
All these envelopes are to be put in a single envelope duly super-scribed the name of work, and addressed to CE (IIITD) and with their address. In case the tenderer does not fulfill the laid down eligibility criteria or fails to deposit the earnest money in prescribed form, financial bid shall not be opened.

Tenderers shall seal the tender affix their initials and put stamp on each and every page of tender document before submission. The tender of the contractor, who submits in-complete tender document or submits more than one tender for one work, shall not be considered at all.

A prebid meeting will be held on **27<sup>th</sup> Mar 2018** at 11 AM at the Old Academic block of the IIITD Campus.

Tenders will be received by the CE up to 3.00 P.M on **3<sup>rd</sup> April 2018** and will be opened by him or his authorized representative in the office of Registrar/CE, IIITD on the same day at 3.30 P.M.

First the Technical Bids will be opened and screened. The bids shall be examined whether the EMD is in order and the bidder meets the minimum eligibility criteria specified above. . Those bidders whose EMD is in order, meets the minimum eligibility criteria, has submitted all the required documents and meet the technical requirements shall be considered for opening of financial bid. Conditional tenders would not be accepted. Financial bids in respect of contractors who do not fulfill above criterion shall not be opened.

- 9) No Xerox / certified copies of tenders shall be accepted, if submitted these tenders shall be rejected.
- 10) The applications will be screened by a Technical committee .70% weightage will be given to the technical evaluation and 30% to the financial evaluation .The parameters will constitute the meeting the eligibility criteria (10%) and the technical evaluation (90%)given

- 11) The financial bid will be opened only for the technically qualified vendors based on the recommendations of the technical committee.
- 12) IIITD reserves the right to accept or reject part or whole of one or all bidders without assigning any reasons thereof.

## CONDITIONS

1. The time allowed for carrying out the work will be 60 Days from the 5th day after the date of written orders to commence the work.
2. The site for the work is available. This would however be subject to completion /status of the civil works and the electrical works would proceed commensurate to the civil works and no extra shall be payable on any such account with regard to non-availability of fronts.
3. During execution of works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, shall not relieve the contractor from any liability or obligations under the contract and he shall be responsible for the acts, defaults and neglects of any sub-contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the contractor, his agents or workmen.
4. The Accepting Authority (IIITD) does not bind himself to accept the lowest or any other tender and reserves to him/herself the authority to reject in whole or part, any or all of the tenders received without the assignment of any reason. All tenders in which any of the prescribed conditions are not fulfilled or for any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
5. Canvassing, whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractor who resort to canvassing will be liable to rejection.
6. The Accepting Authority reserves to himself the right of accepting the whole or any part of the tender and the tender shall be bound to perform the same at the rates quoted.
7. Tenders shall remain open for acceptance for a period of 30 days from the date of opening of the tenders. If any tenderer withdraws his tender before the said period for issue of letter of acceptance, whichever is earlier or makes any modification in the terms and condition of the tender which are not acceptable to the IIITD, then IIITD shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money absolutely besides black listing of the tenderer.
8. The notice-inviting tender shall form a part of the contract document. The successful tenderer/contractor shall, sign the necessary contract documents consisting of the notice inviting tender, all the documents including additional conditions, specification and drawings, if any forming the tender as issued at the time of invitation of tender and acceptance thereof with any correspondence leading thereto within the time specified in the letter communicating the acceptance of the tender. In case of delay, the earnest money may be forfeited, and the tender cancelled, or the contract enforced as per the terms of the tender and the invitation to tender and the tenderer shall thus be bound by the condition

of contract even though the formal agreement has not been executed and signed within the specified time by the tenderer.

9. The work shall be carried out as per general of conditions of contract for central PWD works 7/8 (Tender Contract) and form part of the agreement/document.
10. Contract is liable to be terminated by the IIITD without payment of any compensation, if subsequent to the acceptance of tender the contractor is black-listed by, or enters into partnership or employs any black listed contractor of the IIITD or any other department, or Govt. or its, undertakings.
11. Cost of Bidding
  - 11.1 The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.
12. Clarification of Bidding Documents
  - 12.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing/mail at the Employer's address indicated in the invitation to bid not later than 2 days before the Date of Submission of Tenders.  
Email- [admin-project@iiitd.ac.in](mailto:admin-project@iiitd.ac.in)
13. Currencies of Bid and Payment
  - 13.1 The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments will be invariably made in Indian Currency (Indian Rupees.)
14. PROTECTION OF ENVIRONMENT AND OTHER LAWS:  
The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and other local Acts/ Laws/ rules made there under, regulations, notifications and bye-laws of local authorities or any other law, bye-laws, regulations that may be passed or notification that may be issued in this respect in future by the State/ Local authority.

For and on behalf of the  
Registrar  
Indraprastha Institute of Information Technology,  
New Delhi

**TENDER**

I/We have read and examined and understood the notice inviting tender, schedule, A, B, C, D, E & F, Specifications applicable, drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I / We hereby tender for the execution of the work specified for the IIITD within the time specified in Schedule ' F ', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule - 1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect in accordance with, such conditions so far as applicable.

We agree to keep the tender open for sixty (60) days from the due date of its opening and not to make any modifications in its terms and condition.

A sum of Rs..... Rupees (.....)  
has been deposited in demand draft of a scheduled bank issued by a scheduled bank as earnest money. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said Director, IIITD or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I / we fail to commence work as specified, I / we agree that Director, IIITD or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, up to maximum of the percentage mentioned in Schedule ' F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I / We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I / We shall be debarred for participation in the re-tendering process of the work.

I / We hereby declare that I / we shall treat the tender documents drawings and other records connected with the work as secret / confidential documents and shall no communicate information / derived there from to any person other than a person to whom I / we am / are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated. ....

Witness:

Signatures of Contractor

Address:

Postal Address

Occupation:



**LETTER OF SUBMISSION**

The CE  
Indraprastha Institute of Information Technology, Delhi  
Okhla Phase-III  
(Behind Govind Puri Metro Station)  
New Delhi-110020.

I/We, the undersigned, have read and examined in detail, the specifications and all bidding documents and hereby declare that:

**Price and Validity**

1. All the rates quoted in our proposal are in accordance with the terms and conditions as specified in the bid document. All the prices and other terms and conditions of this proposal are valid for a period of 60 calendar days from the date of opening of bid.
2. We do hereby confirm that our bid prices include all taxes/levies.
3. We hereby declare that if any tax law is altered, we shall pay the same.

**Earnest Money**

We have enclosed EMD in the form of demand draft no....., dated.....favoring IIIT, Delhi payable at New Delhi issued / drawn on .....Bank for Rs. 20,000/- (Rupees Twenty thousand only), as desired.

**Deviations**

We declare that all the works shall be performed strictly in accordance with the technical specifications and other tender conditions with no deviations.

**Qualifying Data**

We confirm that all information/data have been submitted as required in tender document.

We hereby declare that our proposal is made in good faith, without collusion for fraud and the information contained in the proposal is true and correct to the best of our knowledge and belief. I/We agree that in case any information is found to be incorrect the tender is liable to be rejected at any point of tendering process.

Bid submitted by us is properly sealed and prepared so as to prevent any subsequent alteration and replacement.

We understand that you are not bound to accept the lowest or any bid you may receive.

Thanking you,  
Yours faithfully,  
(Signature and seal of Tenderer with name, designation and contact no.)

## SCHEDULES

### SCHEDULE 'A'

Schedule of quantities (Enclosed)

: Enclosed

### SCHEDULE 'B'

Schedule of materials to be issued to the contractor

NIL

### SCHEDULE 'C'

Tools and plants to be hired to the contractor

NIL

### SCHEDULE 'D'

Extra schedule for specific requirements/documents for the work, if any,

NIL

### SCHEDULE 'E'

Schedule of component of Cement, Steel, other materials, Labour etc. for price escalation.

NIL

### CLAUSE 10 CC

Component of Cement - expressed as percent of total value work,

N / A

Component of Steel-expressed as percent of total work.

N / A

Component of civil (except cement & steel) / Electrical construction Materials-expressed as percent of total value of work.

N / A

Component of labour-expressed as per cent of total value of work.

N / A

Component of P.O.L. - expressed as percent of total value work.

N / A

### SCHEDULE 'F'

Reference to Latest General Conditions of contract.

**Name of work: SITC of HVAC related BMS Controller in new buildings for Phase-II Construction of Indraprastha Institute of Information Technology (IIIT-Delhi) Campus, Okhla Phase-III, New Delhi.**

- i. Estimated cost of work: Rs.10 lacs
- ii. Earnest money: Rs. 20,000/-
- iii. Security Deposit / Retention money shall be Five percent (5%) of the value of executed works and will be deducted from each and every payment made to the contractor against running account bill submitted for the work done at site. 50% of retention money will be released along with the payments of final bill and balance 50% will remain with Employer until the Defects Liability period is successfully over.
- iv. Defect Liability period 12 months from date of completion.
- v. Liquidated damages In case of delay on account of reasons attributable to the Contractor Liquidated Damages shall be levied .The amount of Liquidated Damages payable by the Contractor to the Employer would be 0.25% of the value of order for each calendar day of delay subject to a maximum of 5% of the value of order after which Employer reserves the right to terminate the contract without prejudice to the rights of the Employer.

**General Rules & Direction:**

Officer inviting tender: Registrar (IIITD)

**Definitions**

2(v) Engineer-in-Charge	CE
2(viii) Accepting Authority	Director IIITD
2(x) Percentage on cost of materials and labour to cover all overheads and profits.	15%
2(xi) Standard Schedule of Rates	DSR-2016
2(xii) Department	IIIT-Delhi
9(ii) Standard CPWD contract Form	CPWD form 8 -2010 with up to date correction slips.

**Clause 2**

Authority for fixing compensation under clause 2. Director, IIITD

**Clause 2A**

Whether clause 2A shall applicable No

**Clause 5**

Number of days from the date of issue of letter Acceptance for reckoning date of start	5 days
Time allowed for works	60 Days

**Clause 6, 6A**

Clause applicable - (6 or 6A)	Clause 6A
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**Clause 7**

Gross work to be done together with net payment /adjustment or advance for material collected, if any since the last such payment for being eligible to interim payment.	Rs 5 Lakhs.
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**Clause 10A**

List of testing equipment to be provided by the contractor at site lab.	As required
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**Clause 10 B (ii)**

Whether Clauses 10B (ii) (iv) shall be applicable	Yes
-----do-----10B(iii) -----	No

<b>Clause 10CA Escalation</b>	<b>Not Applicable</b>
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<b>Clause 10CC Escalation</b>	<b>Not Applicable</b>
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**Clause 11**

Specification to be followed for execution of work	CPWD Specifications 2007, Part I & II with Up-to-date correction slips
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**Clause 12**

Deviation limit beyond which clauses 12.2 & 12.3 shall Apply for building work	100%
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**Clause 16**

Competent Authority for deciding reduced rates.	Director, IIITD
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**Clause 17**

Contractor liable for Damages defects during maintenance period	Applicable
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**Clause 18**

List of mandatory machinery, tools & plants to be deployed by the contractor at site

As per the site requirement.

**Clause 36(i)**

Requirement of Technical Representative (s)

As per requirement.

**Clause 25**

Arbitration Clause

As per special conditions

## **SPECIAL CONDITIONS**

1. The rates quoted in the bills of quantities shall unless specified otherwise will be for all heights, depths deemed to be for finished work in-situ/ item by item as provided for, and shall include cost for all necessary material and labours, all necessary tools and plants and machinery, sheds, marking out, clearing site, etc. and for all taxes, GST and any other tax or duty levied by Government, Central or Local, or Local Authority, if any as applicable.
2. The rates shall be firm and not be subject to any variations in exchange rates, in taxes, duties etc. in railway freight and the like including labour conditions, etc. The rates are not subject to escalation.  
It will be the sole responsibility of the contractor to procure all the equipment's/ materials and other materials required for the work.
3. The IIITD further reserves the right to delete or reduce at any time, any section of the bills of quantities without assigning any reasons whatsoever there for and no claim will be entertained in this regard.
4. The Security Deposit will bear no interest what so ever until the date of release.
5. The Contractor is required to comply with all Acts of Government relating to labour, safety, environment and other Rules and Regulations made there under from time to time and to submit at the proper times all particulars and statements required to be furnished to the appropriate Authorities.

### **6. Delay and extension of time**

If in the opinion of the Architect/PMC/Owner the Work is delayed:

- a. By force majeure, or
- b. By reason of any exceptionally inclement weather, or
- c. By reason of proceedings taken or threatened by or dispute with adjoining or neighboring owners or public authorities arising otherwise than through the Contractor's own default, or
- d. By the works or delays of other Contractor or tradesmen engaged or nominated by the Owner or the Architect/PMC and not referred to in the Schedule of Quantities and/or Specification, or
- e. By reason of Architect's/PMC/Owner Instructions to delay work, or
- f. By reason of civil commotion, local combination of workmen or strike or lock-out affecting any of the building traders, or

In consequence of the Contractor not having received in due time necessary Instructions from the Architect/PMC/Owner for which he shall have specifically applied in writing,

Then the Architect/PMC/Owner shall make a fair and reasonable extension of time for completion of the Contract Work; in case of such strike or lock-out the Contractor shall, as soon as may be, give written notice thereof to the Architect/PMC/Owner, but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required to the satisfaction of the Architect to proceed with the work.

7. Failure by Contractor to comply with Architect's Instructions

If the Contractor after receipt of written notice from the Architect requiring compliance fails within five days to comply with such further drawings and/or Architect's Instructions the Owner with the consent of the Architect may employ and pay other persons to execute any such work whatsoever that may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor.

**8. Arbitration**

Any dispute in respect of which:

- a. the decision, if any, of the engineer has not become final and binding pursuant to the first sub-clause above,
- b. amicable settlement has not been reached within the period stated in the second sub-clause above, shall be finally settled, unless otherwise specified in the contract, by arbitration to be held in New Delhi in English, under the provisions of the Arbitration and Conciliation Act 1996, including any statutory reenactment(s) / amendment(s) thereof and Rules made thereunder, by the arbitrator. The Director of the Institute shall appoint one person as the sole arbitrator. Either party shall be limited in the proceeding before such arbitrator to evidence or arguments put before the engineer for the purposes of obtaining the said decision pursuant to the first sub-clause herein. No such decision shall disqualify the engineer from being called as a witness and giving evidence before the arbitrator on any matter whatsoever relevant to the dispute. Arbitration proceedings shall not be commenced prior to the completion of the works, unless any major pre-requisite criticality is discerned by the arbitrator, and the obligations of IIT-Delhi, the engineer and the contractor shall not be altered by reason of the arbitration. The works shall not be stopped on account of the said process of arbitration and the contractor shall not be relieved of his responsibilities for the completion of the work under any circumstances whatsoever.

**9. Contractor to provide everything necessary**

The Contractor shall provide everything necessary for the proper execution of the Work according to the intent and meaning of the Drawings, Schedule of Quantities and Specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from, and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Schedule of Quantities and Specification he shall immediately and in writing refer the same to the Architect who shall decide which is to be followed.

**10. Materials and Workmanship to conform to Descriptions**

All materials and workmanship shall so far as procurable be of the respective kinds described in the Schedule of Quantities and/or Specification and in accordance with the Architect's Instructions, and the Contractor shall upon the request of the Architect furnish him with all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials which the Architect may require.

**11. Assignment and Sub-letting**

The whole of the works included in the Contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or underlet the Contract or any part share thereof or interest therein without the written consent of the Architect, and no undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the Work during its progress.

**12. Removal of improper work**

The Architect shall, during the progress of the Work, have the power to order the removal, from the Site or works within such reasonable time or times as may be specified in the order, of any materials which in the opinion of the Architect are not in accordance with the Specification or the Instructions of the Architect, the substitution of proper materials, and the removal and proper re-execution of any works executed with materials or workmanship not in accordance with the Drawings, Specifications or Instructions and the Contractor shall forthwith carry out such order at his own cost. In case of default on the part of the Contractor to carry out such order, the Owner shall have the power to employ and pay other persons to carry out the same, and all expenses consumed thereon or incidental thereto as certified by the Architect shall be borne by the Contractor, or may be deducted by the Owner from any moneys due or that may become due to the Contractor.



### **ADDITIONAL CONDITIONS**

1. General conditions of contract for Central PWD Works 7/8 (Tender of Form) shall be part of the agreement.
2. The work shall be carried out strictly as per CPWD specifications 2007, Part I & II with up to date correction slips. Wherever no specification is available in the above said document, drawings and specifications supplied with bill of quantities shall be applicable
3. The Contractor shall have to clear the site for the work of all overlying rubbish /garbage/dumped refuse material prior to commencement of the work in case required at no extra cost. The contractor shall take approval from the Engineer /Officer in Charge in writing for collection and stacking of materials.
4. The contractor must follow CPWD Safety Code as provided in general conditions of contract for CPWD Works.
5. Any damage done by the contractor or his workmen to any existing work during the course of execution of the work shall be made good by him at his own cost.
6. Contractor shall clear the site thoroughly of all rubbish etc. left out of his materials immediately on completion of the work and properly keep the site clean around the building to the satisfaction of the Engineer- in-Charge.
7. The preference of the codes will be IS codes.
8. The rates are inclusive of all staging, material and labour as required for the works. The items in the bill of quantities include all the materials, labour, and installation, complete as a finish items unless otherwise stated.
9. Unless specifically mentioned otherwise, quoted Rates shall be deemed to include work to be carried out at all curvatures, heights, depths, inclinations and locations, and in wet/foul locations, as and when they are encountered. The rates quoted for the various works as specified in the Priced Schedule of Quantities are work in all types of soils/rock and prevailing Site conditions including earth work, excavation, shoring, execution of various other items of work, i.e., laying of pipes, joining, concreting, masonry, plastering, etc. in and under water and dewatering as required. Nothing extra is payable on this account.
10. All security precautions shall be taken during dismantling work. The site shall be fenced /barricaded with suitable material during construction period. No payment shall be made for fencing/barricading work. Fencing/barricading shall be done immediately after possession of site and shall be removed after completion of construction period
11. No space on site/otherwise for labour huts shall be provided by IIITD, cost of same shall be borne by contractor.

12. The general condition of contract for Central P.W.D. Works has reference of various laws /acts /rules. The settlement of any disputes and arbitration, only Indian arbitration and conciliation act 1996 shall be applicable.
13. In case any specific brand of material has been specified either the same brand or of approved make of same specifications shall be used. The contractor shall take approval in advance for all such materials.
14. Costs for all materials and labour for the preparation of samples, market research, etc. shall be borne by the Contractor within his quoted Rates and nothing extra shall be payable for this. The works shall not be proceeded with without approval of the sample. In case sample is rejected and works cannot be proceeded with the IIITD shall be at liberty to terminate the contract and the Contractor shall have no claim for the works under such circumstances whatsoever.
15. The contractor should take utmost care to avoid any damage to the existing flooring, electrical works/cables, telephone cables, false ceiling, sprinkler system, fire alarm etc. in place. In case of any damage, it would be the responsibility of the contractor to restore the same immediately.

## **TECHNICAL SPECIFICATIONS:**

### **GENERAL**

The electrical Installation work shall be carried out in accordance with Indian Standard Code of Practice for Electrical Wiring Installation IS: 732-1989 and IS: 2274-1963. It shall also be in conformity with the current Indian Electricity rules and regulations and requirements of the Local Electricity Supply Authority and Fire Insurance regulations, so far as these become applicable to the installation. Electrical work in general shall be carried out as per following CPWD Specifications with up to date amendment.

- Specifications for Electrical Works Part-I (Internal) by CPWD - 2013
- Specifications for Electrical Works Part-II (External) by CPWD - 1994 or latest revision.

Wherever these specifications calls for a higher standard of material and or workmanship than those required by any of the above mentions regulations and specification then the specification here under shall take precedence over the said regulations and standards.

### **SCOPE OF WORK**

IIIT Delhi aims to connect the thermostats for their FCU and CSU control online over the existing enterprise WiFi network. To this effect, we are looking for a solution with the following features:

1. Controller Hardware :
  1. Replaces the existing un-connected thermostats with WiFi connected thermostats
  2. May connect to the existing temperature sensor or come in with their own temperature sensor
  3. Hardware should support:
    1. On/Off Fan control for both CSUs and FCUs
    2. On/Off Valve control for FCUs
    3. Analog valve control (0-10 V) for CSUs
    4. Potential free contact for over-ride
  4. Device Firmware should support the following configurations (over internet):
    1. Support for 3 modes of operations - Cool/Hot/Ventillate
    2. Different mode of operation - on/off or analog for valve control
    3. Different setting for over-ride - For FCUs over-ride should decide when the operation should happen and for CSUs over-ride should decide extension of operations
  5. Ability to connect over WEP/WPA/WPA2 WiFi network
  6. Ability to connect securely (using http/mqtt) to the server
  7. Local operation (including the time schedules and set temperature based operations) even when the devices are not connected to internet
  8. Over the air update of firmware (from internet) running on the devices
2. Server side (hosted on cloud) should support:
  1. Configurations of set temperature and schedules for an individual or group of devices

2. Real time visibility of temperature, mode of operation, over-ride status for an individual or group of devices
  3. Immediate control for a device (on/ off)
  4. Unlimited number of users - as requested by IIIT Delhi
  5. Integration with existing energy management system being used at IIIT Delhi (IIIT Delhi will facilitate exposure of APIs from existing system or if the vendor provides their APIs then IIIT Delhi will work with existing supplier to integrate these APIs into existing system)
3. AMC for three years for item (1) and item(2) will be start after completion of Defect Liability period of 12 months.
  4. A sample unit needs to be provided for approval and satisfactorily commissioned before mass replication of the units.

### **SPECIFICATIONS:**

#### **1. GENERAL:**

- 1.1. Without forgoing the requirements of the conditions of Tender and the Conditions of Contract the works in general shall conform to the "Specifications 2007" published by CPWD, New Delhi and the "Specifications for works" stated in this tender. In case items not covered by the general specifications referred above, reference shall be made to the appropriate I.S. Codes. If there is any difference in the particular specifications of individual item of work and the description of item as given in the Schedule of quantity, the latter shall prevail. In case of any work for which there is no specification in I.S. specifications in the specifications forming part of tender documents or in case there is any variation, such work shall be carried out in all respects in accordance with the instructions to be issued by the Engineer-in-charge. The term Officer in Charge appearing in the specifications shall mean supervisor and be in Charge of the work or his authorized representative as the context may demand. All corrections to "Specifications 2007" or latest revisions of I.S. Code/ Specification shall be deemed to apply to this contract.
  - 1.1.1. Materials bearing ISI certification mark certification shall be given highest preference for use in the works. Where the Contractor is required to do, perform, execute (etc.) any work or service or the like, it shall be deemed to be at his own cost. Absence of terms providing, Supplying, installing, fixing, etc. shall not even remotely entitle the Contractor to any additional payment there for
  - 1.1.2. The rates accepted in the Schedule of Quantities apply to all floors, heights, depths, leads, lifts, spans, sizes, shapes, locations, etc. unless a distinction has been included in the very Schedule.
  - 1.1.3. Screws, bolts, nuts, washers, hold fasts, lugs, anchors, clamps, plugs, suspenders, brackets, straps and fasteners of the like are deemed to be included in the rates of various items unless the Schedule of Quantities expressed a different intention.

- 1.1.7. Resetting any displacements, making good holes/chases and such other incidental jobs are included in rates of respective items for which these are required.

**2. DRAWINGS, SPECIFICATIONS, INTERPRETATIONS ETC.:**

In general, drawings shall indicate the dimensions, positions and type of construction, the specifications shall stipulate the qualities and the methods and performance criteria, and the schedule of quantities shall indicate the provisional quantities and the rates for each item of work. However, the above documents being complementary, what is called for by any one shall be as binding as if called for by all. In case of contradictory requirements between specifications and schedule of quantities, the requirements given in the schedule of quantities shall prevail.

Special conditions being mainly an amplification of General Conditions, they shall be read in conjunction with each other.

Work indicated on the drawings and not mentioned in the schedule of quantities or specifications or vice versa, shall be deemed as though fully set forth in each. Work not specifically detailed, called for, marked or specified, shall be the same as similar parts that are detailed, marked or specified.

**Special Note**

**Though every care is taken while preparing this document to cover all necessary matters, specifications, general conditions, special conditions, provisions for smooth and complete execution of work, however in case of any omission in the tender/ contract document, latest correction slips of general conditions of contract for CPWD Works 2014 will be the reference document but not in supersession to specific conditions (general and special) given hereinbefore.**

**AGREEMENT**

AN AGREEMENT is made this -----  
BETWEEN the Indraprastha Institute of Information Technology. A State  
University established by Govt.

Of NCT of Delhi ,and with its registered office at IIITD Campus , Okhla Phase III ,  
New Delhi 110020, which expression shall include its successor, unless  
repugnant to or Excluded by the contract here of and assignees of and  
represented by its Registrar, IIITD the first party (hereinafter called the Authority)  
and by its sole proprietor/partners/Director.of M/s -----  
and having registered office at ----- (which expression shall be  
including his / its successor's heirs, executors, representative and or assignees  
of the second party (hereinafter called the contractor).

WHEREAS the Authority has, under tender Notification No. -----  
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WHEREAS the contractor has submitted tender for carrying out the work as  
above as per the tender document page ---- to ----- and has represented that in  
conformity with his / its obligation contained in the tender as modified by the  
correction slips and corrigendum contained he / it shall carryout the same truly,  
faithfully and honestly.

THE SAME has been accepted by both the parties on the terms and conditions,  
corrections, corrigendum contained in the tender as modified as well as the letter  
of acceptance Issued party No.1 annexed here to as.

The same shall be binding on both the parties.

IN WITNESS WHEREOF, the parties have signed the deed of agreement on the  
date, month and year referred to above.

Date: -----  
At New Delhi.

Signed by

Party No.1

Party No.2

WITNESS

----- Party No.1  
----- Party No.2

**SCHEDULE OF QUANTITIES**

S. No	Description	Unit	Qty.	Rate	Amount
1	<p>Manufacturing Supply Installation Testing and commissioning of Controller Hardware to connect the thermostats for their FCU and CSU control online over the existing enterprise WiFi network. This is to provide a solution with the following features</p> <ol style="list-style-type: none"> <li>1. Replaces the existing un-connected thermostats with WiFi connected thermostats</li> <li>2. May connect to the existing temperature sensor or come in with their own temperature sensor</li> <li>3. Hardware should support:                             <ol style="list-style-type: none"> <li>1. On/Off Fan control for both CSUs and FCUs</li> <li>2. On/Off Valve control for FCUs</li> <li>3. Analog valve control (0-10 V) for CSUs</li> <li>4. Potential free contact for over-ride</li> </ol> </li> <li>4. Device Firmware should support the following configurations (over internet):                             <ol style="list-style-type: none"> <li>1. Support for 3 modes of operations - Cool/Hot/Ventillate</li> <li>2. Different mode of operation - on/off or analog for valve control</li> <li>3. Different setting for over-ride - For FCUs over-ride should decide when the operation should happen and for CSUs over-ride should decide extension of operations</li> </ol> </li> <li>5. Ability to connect over WEP/WPA/WPA2 WiFi network</li> <li>6. Ability to connect securely (using http/mqtt) to the server</li> <li>7. Local operation (including the time schedules and set temperature based operations) even when the devices are not connected to internet</li> <li>8. Over the air update of firmware (from internet) running on the devices</li> </ol>	Nos	200		
2	<p>Server side (hosted on IIITD server or on cloud) should support (non-exclusive perpetual licence):</p> <ol style="list-style-type: none"> <li>1. Configurations of set temperature and schedules for an individual or group of devices</li> <li>2. Real time visibility of temperature, mode of operation, over-ride status for an individual or group of devices</li> <li>3. Immediate control for a device (on/ off)</li> <li>4. Unlimited number of users - as requested by IIIT Delhi</li> <li>5. Integration with existing energy management system being used at IIIT Delhi (IIIT Delhi will facilitate exposure of APIs from existing system or if the vendor provides their APIs then IIIT Delhi will work with existing supplier to integrate these APIs into existing system)</li> </ol>	Job	1		
3	<p>AMC for three years for item (1) and item(2) will be start after completion of Defect Liability period of 12 months.</p>				
	Ist Year	Job			
	IInd Year	Job			
	IIIrd Year	Job			
	<b>Total Amount (Inclusive All Taxes )</b>				