

SCIENCE CITY
(National Council of Science Museums)
J.B.S. Haldane Avenue, E.M Bypass, Kolkata-700046

E-TENDER DOCUMENT

Tender Number: SCCY-18011/17/PUR/2018 (112)

Name of Work:

Operation and Comprehensive Maintenance of 300 TR HVAC system consisting of 3 Air Cooled Screws Chillers (Make: Climaveneta) of 100 TR each, Chilled Water pumps, AHUs, chilled water piping with all the valves, ducting, electrical panels, VFD panel of secondary chiller pumps and other associated equipment of the central air conditioning plant of Science Exploration Hall, Science City, Kolkata for a period of three years.



Science City

NATIONAL COUNCIL OF SCIENCE MUSEUMS

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INSTRUCTIONS TO THE TENDERERS / BIDDERS FOR E-SUBMISSION OF BIDS ONLINE THROUGH E-PROCUREMENT SITE <https://eprocure.gov.in/eprocure/app>

This tender document has been published on the Central Public Procurement (CPP) Portal (URL: <https://eprocure.gov.in/eprocure/app>). The tenderers/bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates (DSC). The instructions given below are meant to assist the tenderers/bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>

REGISTRATION

- 1) Tenderers/bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Click here to Enroll**” on the CPP Portal. Enrolment is free of Charge.
- 2) As part of the enrolment process, the tenderers/bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Tenderers/bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the tenderers/bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a tenderers/bidders. Please note that the tenderers/bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID & password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate tenderers/bidders to search active tenders by several parameters. These parameters could include organization name, location, date, value, etc. There is also an option of ‘**Advanced Search**’ for tenders, wherein the tenderers/bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the tenderers/bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective “My Tenders” folder. This would enable the CPP Portal to intimate the tenderers/bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Tenderer/bidder should take into account any corrigendum published on the tender document before submitting their bids. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and contents of each of the documents that need to be submitted.
- 2) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally they can be in PDF / XLS / RAR / DWF formats as mentioned. **Bid documents may be scanned with 100 dpi with black and white option.**
- 3) To avoid the time and efforts required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the tenderers/bidders. Tenderers/bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting the bid just by tagging and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Tenderer/bidder should log into the site well in advance for bid submission so that he/she uploads the Bid in time i.e. on or before the bid submission time as per the system. Bidder will be responsible for any delay due to other issues.
- 2) Tenderer/bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Tenderer/bidder has to select the payment option as “offline” to pay the Tender Fee & EMD and enter details of DD/any other accepted instrument.
- 4) Tenderer/bidder should prepare the EMD instrument as per the instructions specified in the tender document. Scanned copy of DD/any other acceptable instrument as mentioned towards EMD should be uploaded while online submission of the tender and the original should be posted/couriered/given in person to the Tender Processing Section latest by the last date and time of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the Scanned copy and the data entered during bid submission time otherwise the Tender will be summarily rejected.
- 5) The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the tenderers/bidders. The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected
- 6) Tenderers/bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format shall be acceptable. The price bid has been given as a standard **Rate Quote Sheet (Item Rate BoQ Template)** (.xls format) with the tender document, which is to be downloaded and to be filled by all the tenderers/bidders. Tenderers/bidders are required to download the **Rate Quote Sheet (Percentage BoQ Template)** file, open it and complete the **colored (unprotected)** cells

with their respective financial quotes and other details (such as name of the Tenderer/bidder). No other cells should be changed. Once the details have been completed, the tenderer/bidder should save it and submit it online, without changing the filename. If the **Rate Quote Sheet (Item Rate BoQ Template)** file is found to be modified by the tenderer/bidder, the bid will be rejected. In e-Tendering, intending tenderer/bidder can quote their rate in figures only. The total amount for the Percentage quote shall be generated automatically. Therefore, the rate quoted by the tenderer/bidder in figures shall be taken as correct. The Comparative Statement shall also be generated automatically by the system. The Comparative Statement and rate quoted by each tenderer/bidder shall be downloaded. **The manual calculation check of tenders/bids and Comparative Statement, shall be final. In case, any discrepancy is noticed, the decision of appropriate SCIENCE CITY authority shall be final and binding.**

- 7) The server time (which is displayed on the tender's/bidder's dashboard) will be considered as the standard time for referring the deadlines for submission of the bids by the tenderers/bidders, opening of bids etc. The tenderers/bidders should follow this time during bid submission. The tenderers/bidders are requested to submit the tenders/bids through online e-tendering system to the **Tender Inviting Authority (TIA)** well before the bid submission end date & time (as per Server System Clock).
- 8) All the documents being submitted by the tenderers/bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- 9) The uploaded tender documents become readable only after the tender opening by the authorized tender/bid openers.
- 10) Upon the successful and timely submission of tenders/bids, the portal will give a successful tender/bid submission message & a tender/bid summary will be displayed with the NIT/tender/bid no. or Name of Work and the date & time of submission of the tender/bid with all other relevant details.
- 11) The tender/bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any tender/bid opening meetings.

ASSISTANCE TO TENDERERS/BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the **Tender Inviting Authority (TIA), Science City, 3, J.B.S Haldane Avenue, Kolkata, West Bengal 700046 Ph. 033-22854343/1572/2607, Fax- 033-2285 9895 Email at: sctycal@cal.vsnl.net.in**
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk Ph. **1800-3070-2232.**

SCIENCE CITY
J. B. S. Haldane Avenue, E.M. Bypass
Kolkata-700 046

E-NOTICE INVITING TENDER
Tender Notice No: SCCY-18011/17/PUR/2018 (112)

Science City, Kolkata, a constituent unit under the National Council of Science Museums, (hereinafter referred to as the Museum/Centre) invites e-Tender in 2 (two) parts – in two covers (**Technical Bid and Financial Bid**) from respective manufacturers as stated in Technical Particulars or from his authorized agents / suppliers for the following works:

Operation and Comprehensive Maintenance of 300 TR HVAC system consisting of 3 Air Cooled Screw Chillers (Make: Climaveneta) of 100 TR each, Chilled Water pumps, AHUs, chilled water piping with all the valves, ducting, electrical panels, VFD panel of secondary chiller pumps and other associated equipment of the central air conditioning plant of Science Exploration Hall, Science City, Kolkata for a period of three years.

The Tender Document can be downloaded from the website (<http://eprocure.gov.in/eprocure/app>). This is the only mode of collection of Tender documents. The same website shall be used for disseminating the dates & time related to pre-bid meeting, tender submission, EMD deposit, tender opening, and opening of financial bid of this tender.

1. Broad Scope of Work:

- i) Operation and daily checking of equipment, routine maintenance of the central air-conditioning plant of 300 TR from 9 AM to 7.00 PM every day for 365 days.
- ii) Comprehensive, periodical and break down maintenance of 300 TR HVAC system consisting of 3 Air Cooled Screw Chillers (Make: Climaveneta) of 100 TR each, 3 primary Chilled Water pumps, 3 secondary chilled water pumps, 6 AHUs, chilled water piping with all the valves, ducting, electrical panels, VFD panel of secondary chiller pumps and other associated equipment of the central air conditioning plant including measuring devices of Science Exploration Hall, Science City, Kolkata for a period of three years.
- iii) Agency may have to operate the machine beyond the hours mentioned as above if required.
- iv) While doing the maintenance of the Screw Chillers agency has to purchase the spare parts from the OEM of the equipment.

2. Eligibility Criteria of the Applicant:

- (i) Should have experience in the operation and maintenance of **3 (three)** similar HVAC central air conditioning installations consisting of air-cooled screw chillers in Central Government / Central Autonomous Bodies/ State Government/ Central Public Sector Undertakings / Corporate Houses / reputed private Institutions of requisite magnitude

each costing not less than Rupees 4 lakhs during the last five years (During 05-11-2013 to 04-11-2018). (Combined value of three valid orders should be equal to or more than 4 lakhs)

OR

- (ii) Should have experience in the operation and maintenance of **2 (two)** similar HVAC central air conditioning installations consisting of air-cooled screw chillers in Central Government / Central Autonomous Bodies/ State Government/ Central Public Sector Undertakings / Corporate Houses / reputed private Institutions of requisite magnitude each costing not less than Rupees 5 lakhs during the last five years (During 05-11-2013 to 04-11-2018). (Combined value of two orders should be equal to or more than 5 lakhs)

OR

- (ii) Should have experience in the operation and maintenance of **1 (one)** similar HVAC central air conditioning installations consisting of air-cooled screw chillers in Central Government / Central Autonomous Bodies/ State Government/ Central Public Sector Undertakings / Corporate Houses / reputed private Institutions of requisite magnitude each costing not less than Rupees 8 lakhs during the last five years (During 05-11-2013 to 04-11-2018). (Combined value of three valid orders should be equal to or more than 8 lakhs)

3. Evaluation Criterion

(A) Technical Evaluation:

Selection process of the bidders for opening the financial bids:

1. The documents submitted by Bidders shall be evaluated for their experience in the operation and maintenance of central air conditioning systems having air-cooled or water cooled screw chillers as desired by Science City.
2. The Bidders shall be shortlisted on the basis of details submitted along with the supporting documents in Annexure A, Annexure B (Details of the bidder) and experience criteria.

(B) Financial Evaluation:

1. The bidders must submit rates for PART A, PART B and combined rate shall be considered for financial evaluation.

4. Earnest Money Deposit (EMD):

The tenderer/s shall be required to deposit a sum of **Rs.25,000.00** (Rupees Seven Lakh Fifty thousand only) as Earnest Money Deposit (EMD) along with the Tenders in cover 1 (**fee cover**). The earnest money shall be deposited by Crossed Demand Draft or Banker's Cheque or pay order in favour of "**Science City, Kolkata**" of any Nationalized or Scheduled bank.. EMD of the unsuccessful Tenderer(s) shall be refunded without interest on written request after the date of acceptance of the Final Work Order by the successful tenderer on completion of the tender process or within sixty days from the date of opening of the tenders. EMD of the successful Bidder, who is formally awarded the Work Order, shall be forfeited if the tenderer refuses to implement whole or part of the work after receiving the Work Order.

5. Security Deposit (SD):

The successful bidder shall deposit **10%** of total contract value as **Security Deposit in the form of Demand Draft**. The EMD submitted by the successful bidder may be

converted into initial security deposit after receiving the balance amount or 10% value of the bills raised by the bidder shall be retained as SD. The security deposit so deducted will be retained till 3 months after expiry of Defect Liability Period and all contractual obligations against quality of performance and workmanship of material and work done from the date of completion.

6. Tenure of the Work:

The successful bidder shall be awarded work on year to year basis upon the satisfactory performance of the agency. Initially, the successful bidder shall be awarded the work for 3 months as probation. After satisfactory performance of the agency, the work will be awarded for 9 months. After completion of satisfactory performance for one year, the contract may be renewed for further one year at the same rate and terms & conditions. After completion of satisfactory performance of the agency during second year, the contract may be renewed for further one year at the same rate and terms & conditions.

7. Pre-Bid Meeting:

A Pre-Bid Meeting will be held at Science City, Kolkata on date and time as mentioned against under Important Dates at Clause 8 below, to clarify queries, if any, of the Tenderers before submission of their Tenders. Intending bidders must submit their queries either through email / hard copy (at the address for communication) at least two days before the date of pre-bid meeting. The minutes of the Pre-Bid Meeting will be integral part of this Tender Document and will be communicated as per clause mentioned under “Provision for Amendments in the tender document.

8. Important Dates:

Sl. No.	Description	Date	Time
1.	Date of uploading of “Notice Inviting Tender” (N.I.T) & associated Tender documents (online)	05-11-2018	04.30 PM
2.	Starting of Documents download (online)	06-11-2018	9.00 AM
3.	Date of Pre Bid Meeting at Science City, Kolkata	15-11-2018	11.30 AM
4.	Bid Submission starting (on line)	16-11-2018	10.00 AM
5.	Last date of Documents download and submission of bid (on line)	25-11-2018	6.00 PM
6.	Submission of original demand draft in favour of “SCIENCE CITY, Kolkata”. Submission hard copy of the NIT other than financial bid	24-11-2018	3.00 PM
7.	Date of Technical Bid opening	26-11-2018	11.30 AM
8.	Date of uploading list for Technically qualified Bidders (on line)	To be notified later	
9.	Date of opening of Financial Proposal (online)	To be notified later	
10.	Date of uploading of list of bidders along with the approved rate	To be notified later	

9. The intending tenderers/bidders must read the terms and conditions of NCSM/Science City carefully. They should only submit their bid if they consider themselves eligible and if they are in possession of all the documents required.

10. Information and Instructions for tenderers/bidders posted on website shall form a part of the bid document.
11. The bid document consisting of plans, specifications, schedule of quantities of various types of items to be executed and the set of Terms and Conditions of the contract to be complied with and other necessary documents can be seen and downloaded from <https://eprocure.gov.in/eprocure/app> free of cost.
12. Out of the online bid documents submitted by intending tenderers/bidders, the technical bids of only of those tenderers/bidders shall be opened, who have deposited e-Tender with Earnest Money Deposit as specified duly scanned, uploaded and found in order. And the financial bids of only those tenderers/bidders shall be opened when technical bids are in conformity with the specifications & uploaded necessary documents.
13. Those contractors not registered on the website mentioned above, are required to get themselves registered beforehand.
14. The intending tenderer/bidder must have valid Class II or Class III Certificates with signing key usage (DSC) to submit the bid.
15. The e-Tenders are invited under two envelopes system. The first electronic envelope named as **Technical Bid Envelope (Cover 1)** shall contain the EMD, details of tenderer's/bidder's satisfying the eligibility conditions, NIT, etc. and the second electronic envelope named as **Financial Bid Envelope (Cover 2)** containing Rate Quote Sheet. The bidder shall submit the **TECHNICAL BID ENVELOPE** and **FINANCIAL BID ENVELOPE** simultaneously. The technical bids will be evaluated first and thereafter financial bids of only the eligible tenderers/bidders shall be opened. These envelopes shall contain one set of the following documents:-

a) TECHNICAL BID ENVELOPE (Cover 1) shall contain the documents.

- i) Scanned copy of Demand Draft/Pay order or Banker`s Cheque of any Nationalised/ Scheduled Bank towards Earnest Money Deposit (EMD) in .pdf format in favour of Science City payable at Kolkata..
- ii) Scanned copy of Enlistment Order/Registration certificate with appropriate Authority as applicable in .pdf format.
- iii) Scanned copies of specific WORK COMPLETION CERTIFICATES along with Work Order/Letter of intent issued by Govt. / Semi-Govt. / Autonomous/ PSUs and/or reputed private Institutions of requisite magnitude with appropriate Authority as per the NIT in .pdf format.
- iv) Scanned Copy of PAN card of the agency in .pdf format.
- v) Scanned Copy of GSTIN Certificate of the agency in .pdf format.
- vi) Scanned copy of Income tax returns for last 3 years in .pdf format.
- vii) Scanned copy of Trade license in .pdf format.
- viii) Declaration 1 & 2 and Undertaking as per Annexure – “A”

- ix) 'Details of Bidder participating in tender' in .pdf format as per Annexure – “B”
- x) Detailed Work Plan in pdf
- xi) Tender Document in .pdf format (TENDERXXXXX.pdf file) digitally signed.
- xii) Addenda/corrigenda, if any, issued to the technical bid documents.

b) FINANCIAL BID ENVELOPE (Cover 2) shall contain:

- i) Rate Quote Sheet (Percentage BoQ Template) in .xls format.
- j) Addenda/corrigenda, if any, issued to the price bid documents.

16. E-tenders which do not fulfil any of the above conditions or are incomplete in any respect are liable for summary rejection.
17. The Museum/Centre does not bind itself to accept the lowest e-tender/bid and the right to reject or accept any or all the e-tenders/bids; e-tendered items or schedules received without assigning any reason whatsoever.
18. Canvassing in connection with e-tenders/bids is strictly prohibited and the e-tenders/bids submitted by the tenderers/bidders that resort to canvassing will be liable for rejection on that ground alone.
19. E-tenders incorporating additional conditions are liable to be rejected.
20. The tenderer(s) must declare in writing that neither he nor any of them is in anyway related to any officer in the Science City or National Council of Science Museums, Kolkata, or any of its constituent units as per the format given in **Annexure – “A”**
21. **Quoted price in the bid shall include GST, freight F.O.R. site and transit insurance and related incidentals in respect of this contract and no additional claim beyond what has been quoted in the Financial Bid shall be accepted.**
22. Before submitting the e-tender, the tenderer shall examine all specifications, drawings, condition of the existing plant, conditions of contract and inspect the site. The e-tender must be balanced in respect of individual items so that the rates quoted shall remain in force even if the quantities deviate (increase or decrease) to any extent before or during the execution of the work. The successful tenderer/bidder shall be paid at their net rate quoted.
23. For the purpose of opening of the e-tenders/bids as described in Notice Inviting e-tender it is clarified that only on receiving the EMD, physically in Science City, Kolkata on or before 24-11-2018, the Technical Bid Envelope will be opened. After the authority is satisfied that the documents in the Technical Bid Envelope are in order, the FINANCIAL BID ENVELOPE may be opened, subsequently.
24. **It may be noted that the Technical Bid Envelope which are not found in order as per SCIENCE CITY requirements may be summarily rejected.**

25. Earnest Money is liable to be forfeited if the successful e-tenderer/bidder selected for the work fails to sign the formal agreement within 15 days from the date of issue of Letter of Intent to them by the Museum/Centre.
 26. The selected tenderer will be issued a Letter of Intent by the Museum/Centre for the job for one year only and depending on the performance of the agency the order may may be renewed further on year to year basis. Agency has to submit the work plan before starting the job. **The date of commencement of work shall be the date of issue of Letter of Intent.**
 27. The validity period of the e-tender shall be at least (120 days) from the date of opening of e-tenders. This period may be extended with mutual consent if the decision regarding issue of Letter of Intent is delayed for any reason.
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ANNEXURE – “A”

(Format for Declarations & Undertaking to be typed on bidder agency’s letterhead and to be submitted in Cover –I (TECHNICAL ENVELOPE) of the e-tender document)

DECLARATION -1

This is to certify that neither I/we/any of us is in anyway related to any employee in the National Council of Science Museums, Kolkata, or any of its constituent units.

Date: (Signature of the tenderer)

With company seal/rubber stamp

Place:

DECLARATION -2

I/We hereby declare that I/we have not quoted any extra condition along with the Part-II (FINANCIAL ENVELOPE) of the e-tender.

Date: (Signature of the tenderer)

With company seal/rubber stamp

Place:

UNDERTAKING

This is to certify that I/we have carefully gone through the drawings/specifications, etc. given in the e-tender document & have clearly understood the site working conditions, time schedule given and have accordingly quoted my balanced rates after going through all details.

I/we hereby give an undertaking that I/we shall carryout the work strictly as per the given specifications, and shall adhere to the General conditions, Special conditions and scope of work.

I/We also undertake that the physical EMD instrument shall be deposited by me/us with the office of Science City inviting the e-tender before the bid opening date otherwise the Science City inviting the e-tender may reject the bid and also take action to withdraw my/our enlistment or debar me/us from further tendering in NCSM or its constituent units.

Date: (Signature of the tenderer)

Place: with company seal/rubber stamp

SCIENCE CITY
(National Council of Science Museums)
J B S Haldane Avenue, Kolkata 700046

General Terms and Conditions
Tender No: SCCY-18011/17/PUR/2018 (112)

Name of the work: Operation and Comprehensive Maintenance of 300 TR HVAC system consisting of 3 Air Cooled Screws Chillers (Make: Climaveneta) of 100 TR each, Chilled Water pumps, AHUs, chilled water piping with all the valves, ducting, electrical panels, VFD panel of secondary chiller pumps and other associated equipment of the central air conditioning plant of Science Exploration Hall, Science City, Kolkata for a period of three years.

1. The term "Museum/Centre" wherever mentioned in the NIT shall mean the authorities of Science City, Kolkata. The term "Agency" wherever mentioned in this NIT shall mean the agency selected for award of the contract.
2. The Museum/Centre does not bind itself to accept the lowest tender and reserves the right to reject or partially accept any or all the tenders received, without assigning any reason.
3. Tenders which do not fulfill all or any of these conditions or are incomplete in any respect, are liable to summary rejection without assigning any reason.
4. Tenders incorporating additional conditions are liable to be rejected.
5. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the parties who resort to canvassing will be liable to rejection on this ground alone.
6. Before quoting the service charges the Agency must assess the quantum of work involved after going through the specifications of work and physical inspection of the AC plant and its allied machinery in the premises.
7. **A detailed work plan showing how the agency proposes to render services for daily operation of the plant and preventive maintenance must be appended as annexure to Part-I of the tender. The agency must get the plan approved by the authorities of Science City, Kolkata before commencement of the work. The offered rate for rendering service through this contract should be realistic with respect to the quantum of work and manpower deployment as may be required from time to time to meet the requirements. If the Part-I of the tender does not contain the detailed work plan as stated, the Part-II of the tender shall not be opened and the tender shall be treated as incomplete and shall be rejected.**
8. While submitting the tender, the Agency must note that there will be no revision of the tendered rate on any ground whatsoever during the entire tenure of the contract. Therefore, they should include all eventual increases in statutory liabilities while quoting their offers.

Credentials:

9. The Agency should declare in writing that none of their partners is any way related to any officer of National Council of Science Museums, including the units under its control.
10. The Agency must have a local office with a regular telephone both in the office as well as in the residence(s) of Partners/Directors/Proprietors.
11. The Agency shall furnish Income tax clearance certificate / PAN No. along with their quotation
12. All credentials of the Agency including financial standing, registration with Govt. having support or connection with Govt. Depts./Organizations, Semi-Govt., Non-Govt., autonomous body, public body, local Govt., Civil body and public institutions/organizations / any corporate offices / reputed private organisations etc. together with records of past performance with such institutions, departments, organizations etc., are to be produced for verification whenever demanded by the Museum/Centre.

Responsibilities of the Agency:

13. The Agency shall ensure that all wages and allied benefits conforming to statutory norms are complied with as applicable for operation and service contracts. The Agency shall remain liable to the authorities concerned for compliance of the respective existing rules and regulations of the Govt. for this purpose and shall remain liable for any contravention thereof.
14. A **security deposit** of not less than one tenth of the annual tender value payable in the form of a demand draft drawn in favor of 'Science City, Kolkata' is to be deposited by the Agency to cover risk or any loss to the Museum/Centre for negligence, failure, inefficiency, fraud or theft, pilferage etc., on the part of the services in the event of any such occurrence and/or breach of contract in any way or form etc, during the contractual period. In the event of any such occurrence and/or breach of contract, the amount of compensation, as assessed by the Museum/Centre shall be recovered either from the bill for monthly service charges due to the Agency or from their security deposit.
15. During the period of this contract, the Agency shall provide proper and adequate service and perform their duties diligently, honestly and to the entire satisfaction of the Museum/Centre. The Agency shall constantly keep in touch with the Museum/Centre for effective performance of the contract and abide by all instructions and directives issued by the Museum/Centre in this regard.
16. The Agency shall ensure compliance of all Acts, Rules and Statutory Orders in force with regard to deployment of their staff in the premises of the Museum/Centre for the purpose of this contract and shall keep the Museum/Centre indemnified against any liabilities arising out of non-compliance of any of the Acts, Rules or orders on their part.
17. The Agency must issue proper identity cards to the service providers deployed at any time for the purpose of the contract in order to facilitate verification of their identity by the Museum/Centre.
18. The Agency shall be liable to comply with the direction of the Museum/Centre, to remove a staff member employed by the agency within 24 hours of receipt of such direction, and shall make alternative arrangements immediately to ensure proper and adequate services.

19. All employees of the Agency deployed for rendering these services in the Museum/Centre, must remain in proper uniforms. The Agency shall supply at their cost uniforms, raincoats, woolen clothing, torches with batteries and other stationery items required for carrying out the work.
20. **Inspection of chillers should be carried out through OEM once in a quarter in the presence of representative of Science City. The service report of HVAC system should be accompanied with the performance / condition / health report issued by OEM for chillers.**
21. **Watch & Ward**
Watch and Ward of their material, machineries and system etc. till end of the contract shall be the sole responsibility of the contractor and pilferage etc. shall be entirely to his account.
22. **Damage Caused To Installation** In case of any damage caused to the installation due to negligence, carelessness or inefficiency of staff of the firm the contractor shall be responsible to make good the loss. Decision of the GUV-SAIL shall be final & binding on the contractor.
23. **Payment:**
The payment will be made on Quarterly basis by A/c. payee cheque / NEFT transfer within 30 days from the date of submission of the proper and pre-receipt bill, duly certified by the authorized representative of Science City for the operation work and routine maintenance of the plant. Payment for comprehensive overhauling work as a part of preventive maintenance shall be paid by four running bills (once in a quarter) upon the production of service report certified by the authorized representative of Science City.
24. **Penalty:**
Agency should provide the services as per contract. In case of the Agency's failure to provide requisite services on particular day/days and for breakdown maintenance / preventive maintenance, proportionate deduction shall be made from the bill. Similarly, proportionate deductions shall be made if the agency does not carry out the overhauling work satisfactorily.
25. **Tenure and Validity**
In the beginning the contract would be for a trial period of three months on probation, and it shall be extended for a further period of nine months, if the services are found to be satisfactory during the trial period. The contract may be renewed at the discretion of Science City for a further period of two years depending on the performance of the agency on year to year basis.
26. The contract can be terminated by the Museum/Centre at any time without notice in the event of gross security risk or gross damage to Museum/Centre's property due to Agency's failure or persistent failure of the Agency in providing satisfactory service to the Museum/Centre and the decision of the Museum/Centre in this regard shall be final and binding on the Agency.
27. For reasons other than mentioned in the clause above, the contract can be terminated by either party by providing clear three months notice in writing.

28. **Arbitration:**

In case of any dispute arising out of this contract between the Museum/Centre and the Agency, the matter shall be referred to the sole arbitration of a person to be appointed by the Director General of NCSM on receipt of an official request with details of the dispute, from either the Museum/Centre or the Agency. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to the contract. The submission shall be deemed to be submission to arbitration under the Arbitration and Reconciliation Act, 1996 or any statutory modifications or reenactment thereof and of the rules made thereunder for the time being in force.

29. Tender should be submitted in two parts Technical Bid and Financial Bid as per Clause.No 15 of E-Notice Inviting Tender.
30. Tenders submitted in any other form other than above are liable for rejection.

Special Conditions and Scope of Work

Name of the work: Operation and Comprehensive Maintenance of 300 TR HVAC system consisting of 3 Air Cooled Screws Chillers (Make: Climaveneta) of 100 TR each, Chilled Water pumps, AHUs, chilled water piping with all the valves, ducting, electrical panels, VFD panel of secondary chiller pumps and other associated equipment of the central air conditioning plant of Science Exploration Hall, Science City, Kolkata for a period of three years.

1. Service shall be rendered by the agency through highly skilled, technically qualified and experienced persons.
2. The agency should consider for employing a trained technician beyond the office hours in case of a maintenance work taken up by Science City in the facilities of SEH.
3. The agency shall be solely responsible for smooth operation and routine maintenance of the A C Plant on all days and checking the various readings of the machinery installed in the plants to maintain required temperature and humidity strictly as per the instructions of Engineer-in-Charge.
4. The agency should assess the volume of work and submit a detailed work plan as a part of the (Technical Bid) PART-1 of the tender document.
5. The personnel deployed by the agency for rendering services should be present during the entire operation hours of A C Plant. If necessary they may have to stay during overnight on any particular day.
6. Necessary Vacuum pump/Jet pumps/hammer drills/De scaling pump etc. are to be kept at site to meet all eventualities.
7. All tools and tackles required to attend the maintenance work should be arranged by the agency and have to be kept at site.
8. The agency has to maintain a log book giving all the details about suction pressure, discharge pressure, chiller pump's discharge pressure, temperature, relative humidity, power consumed by chillers, AHU etc. in the SEH or any other details as required by the authorities of Science City.
9. Agency should keep spare parts for regular maintenance.
10. Agency must submit a service report on monthly basis and get it signed by authorized person of Science City.

11. Agency should make arrangements for regular cleaning to keep neat environment in plant room, condenser pump room, cooling tower area and AHU rooms.
12. Agency must provide proper aprons and safety equipment to the technicians employed to provide the services.
13. Agency should provide and maintain a First aid kit with necessary medicines in the plant room and service area.
14. Agency is responsible for the fire dampers, smoke dampers and actuators of smoke dampers attached to the HVAC System. Agency should work in tandem with the agency maintaining fire detection & prevention System of Science City. Must check the functioning of equipment once in a week.
15. All the maintenance works shall be carried out in accordance with the manufacturer's specifications and instructions of the In Charge Officer of Science City.
16. **Comprehensive maintenance cost as quoted by the agency is for repairing / replacement of spares of all the equipment, like chillers, compressor, microprocessor panel, chiller pumps, condenser coils, condenser fans, heat exchangers, all type of valves, motorised valves, motors, actuators, AHUs, FCUs, ducts, dampers, diffusers, AHU filters ,gauges, main electrical panel, electrical panels in AHU room, VFD panel of secondary pumps chill all the spares related to all the equipment including electrical panels. Agency has to arrange for repairing and replacement of the spares.**

In case of complete replacement of any of the major equipment like compressor, condenser coil, motors, pumps, actuators, balancing valves, pre filers in the AHU coil, MCCB, MCBs etc., shall pay the agency as per market rates or Science City shall directly procure the said equipment and agency has to make arrangements for fixing and installing them.

If damage occurs on any equipment due to negligence or faulty operation on the part of the operator, agency has to make it good or completely replace the equipment at their own cost.

Complete replacement of Compressor Oil and Refrigerant is not included in the scope of agency. (Topping up of oil and refrigerant as and when required is in the scope of agency).

Any repairing of civil structure related to AC Plant shall be under the scope of Science City.

17. **Inspection of chillers should be carried out through OEM once in a quarter in the presence of representative of Science City. The service report of HVAC system should be accompanied with the performance / condition / health report issued by OEM for chillers.**
18. If agency is not able to repair to the satisfaction of the Science City within the set time limit, Science City may make arrangements for repairing it through a third party and deduct the amount incurred by it.

SECTION – A (Daily operation and routine maintenance)

1. Daily operation including routine maintenance of AC Plant in Science Exploration Hall (SEH) during 365 days of the year including Sundays, holidays from 9AM to 7 PM (rate may be quoted per month).

The agency has to maintain the following performance parameters during the operation of plant in the air conditioned space

- a) Suction and discharge pressures should be maintained at desired levels of the installed machines.
- b) Inside temperature of the halls should be between 22⁰ C to 24⁰ C.
- c) Relative humidity should be between 40% to 60 %.
- d) Checking and operating RO water plant.
- e) Checking and inspecting the pumps, AHUs, FCUs, chilled water pipes, makeup water tank, all types of valves for any leaks.
- f) Checking and inspecting all the equipment associated with HVAC system fire dampers, smoke exhaust activators, fresh air fans, FCUs etc. and informing to Science City officials and Maintenance team of the agency for taking the corrective action.
- g) Recording various parameters as required and as desired by Science City in a logbook.
- h) Measuring the temperature in various rooms of the hall 4 times a day and recording in the log book. Adjusting the temperature for better comfort.
- i) Maintaining a clean environment in the plant area, panel area and AHU rooms.
- j) Checking and maintaining water in the makeup water tank.
- k) Keeping all equipment externally cleaned.
- l) Checking compressor oil level wherever applicable.
- m) Checking all the rotating machines for smoothness of drive, vibration and noise level.
- n) Checking and adjusting belt tension of all V belt drives, if required.
- o) List of the equipment is provided in the Section C

SECTION B : Scope of Work for Comprehensive Annual Maintenance Contract

Monthly/ Quarterly Maintenance / Preventive Maintenance

Chillers / Condensers / Heat Exchanger

- Checking and rectification, if required for abnormal noise and vibration.
- Checking for leakage of oil and refrigerant.
- Topping up system with refrigerant and oil if required.
- Checking the operation of oil separator, Oil Heater, Motor Protector, flow switch, slide valve mechanism, overload etc.
- Safety controls such as pressure cut outs will be tested for proper functioning and in case of any mal-functioning they will be either repaired or replaced accordingly
- Checking condition of oil filter.
- Checking of Microprocessor control panel.
- Cooling coil will be inspected and cleaned, if necessary
- Checking healthy operation of safety devices.
- Checking tightness of all electrical terminations, re-crimping of lugs.
- Meggering, checking of earthing of the motors, electrical panels.
- The PCBs of the IDU & ODU will be checked for its proper functioning and if any defect found, the same will be rectified / replaced.
- Develop action plan for rectifying, abnormalities if any observed in the performance of the unit.
- Checking the quality of water flowing in the pipes and replacing the water.
- **Cleaning the condenser coils once in a month with water jet or with any non corrosive cleaning agent.**
- To attend break down calls as and when required, investigate, locate defects, repair / replace the defective parts, and verify defects and re-commission the chiller.
- **Inspection of chillers should be carried out through OEM once in a quarter in the presence of representative of Science City. The service report of HVAC system should be accompanied with the performance / condition / health report issued by OEM for chillers.**

Chiller Pumps (Primary and Secondary)

- Checking for leakage and repair / replacement / adjustment of pump seals, glands, valve glands, gaskets.
- Checking and rectification if there is any abnormal sound, heating or vibration.
- Replacement of all bearings if required.
- Inspection of motor terminal connections and Insulation test of motor, if required.
- Rewinding of Motor if required.
- Repair and maintenance of VFD panel of Secondary Chiller pumps

Air-Handling Units / Fan Coil Units

- Checking, inspection and rectification of AHU / FCU starter, fuses and electrical components.
- Replacement of belts, bearings
- Cleaning of filters once in a month
- Cleaning of AHU / FCU cooling coil above ceiling, if required.
- Rewinding of AHU / FCU Motor.

Chilled water pipes, all types of valves

- Checking for any leakage of water and rectifying by welding if required. Agency has to arrange for a welder.

Once in a year

Overhauling of entire plant once in a year preferably during winter as per the guidelines of OEM / officials of Science City.

SECTION – C Equipment Details

S. NO	DESCRIPTION OF Equipment	Quantity
1	<p>Air Cooled Packaged Screw Chiller Units Make : Climaveneta`</p> <p>Manufacturer- Climaveneta Model No.-FOCS/B1942 Capacity:- 100 TR (each</p> <p>Description: Common base frame/cabinet for compressor, condenser & chiller unit fabricated of MS angle, channels, sheets etc.</p> <p>Controls: Electronic expansion valve, solenoid valve in the refrigerant circuit, operating thermostat / temperature sensors and anti freeze thermostat/sensors in the chilled water circuit.</p> <p>Microprocessor based control panel of the Chiller unit with safety against high & low refrigerant pressure, low oil pressure, freezing of chilled water, overload, winding heating by means of high & low pressure transmitter, oil pressure transmitter, temperature sensors, O/L relays, thermistor relays, capacity control circuit etc.</p>	3 Nos
1.a	<p>Screw Compressors: Each unit have two compressors (Make: Bitzer) Type: Rotary Twin-Screw type, semi-hermetic, directly driven, Refrigerant: R-134a Accessories:- Suction and discharge valves, discharge check valve, Oil Separator, safety valves, safety controls like HP, LP cutout switches, Low oil level cutout, pressure gauges, high winding temperature cutout through PTC sensors, Motor overload cutout, liquid Injection system, integrated pressure relief valve, oil service valve, Step less Automatic capacity control arrangement with automatic unloaded starting device, Anti Recycle device, Heater.</p>	3 Nos
1.b	<p>Air cooled Condenser: Type: Air Cooled type, R-134a duty, matching with the above compressor and having adequate surface area to provide sub-cooling by 4⁰C.</p> <p>The condenser coils are made of seamless internally grooved copper tubes with slit aluminum fins with protective coating, arranged in staggered rows.</p> <p>Accessories: Directly driven 6 Nos. of Axial flow fans with adequately sized 2.1 KW drive motors (squirrel cage induction type) Relief valve with hot gas connection, charging connection with valve, wire guard at the air intake and exhaust, liquid trap,</p>	3 Sets
1.c	<p>Chiller:(Heat exchanger)</p> <p>Make : Climaveneta Type: Horizontal shell and tube, direct expansion type, R-134a duty water chiller made of MS shell and internally finned seamless copper tubes having adequate surface area to provide super heating by 3⁰C at least. Accessories: Liquid and water connection provided with thermo-wells, water flow</p>	3 nos

	<p>switches, Operating and anti-freeze thermostats/temperature sensors, pressure gauge connection, 39 mm thick Nitrile rubber / XLPE insulation or equivalent finished with 30 gauge aluminium sheet cladding with removable type insulated flange cover, water side drain & vent with valve.</p> <p>Controls: Electronic expansion valve, solenoid valve in the refrigerant circuit, operating and anti freeze thermostat/temperature sensors cum transmitters.</p>	
2.a	<p>Primary Chilled Pump (CHP-1, CHP-2 and CHP-3): 2W+1S</p> <p>Quantity: 3 Nos. make KBL, model No.-80/26 Capacity: 120 Cum/Hr, 20 M Head (each). Make:</p> <p>Single stage, back pull out / horizontal split casing centrifugal pump, directly coupled with electric motor and mounted on common base frame and is complete with drive motor, pressure gauges at suction & discharge, butterfly type isolating valve at suction and globe valve at discharge, strainer with by-pass connection with butterfly type isolating valves, check valve, flexible coupling with guard, and local stop push buttons.</p>	3 nos
2.b	<p>Primary Chilled Pump Motor: 2W+1S</p> <p>ABB make 11 KW Squirrel cage induction motor suitable for AC 415± 10%, 3-phase, 50 Hz± 5% power supply.</p>	3 nos
2.c	<p>Secondary Chilled water Pump 2W+1S (CHP-4, CHP-5 and CHP-6):</p> <p>Quantity : 3 Nos. make KBL, model No.-80/32 Capacity: 120 M³/Hr, 35 M Head (each).</p> <p>Single stage, back pull out / horizontal split casing centrifugal pump, directly coupled with electric motor and mounted on common base frame and is complete with drive motor, pressure gauges at suction & discharge, butterfly type isolating valve at suction and globe valve at discharge, strainer with by-pass connection with butterfly type isolating valves, check valve, flexible coupling with guard, and local stop push buttons.</p>	3 nos
2.d	<p>Secondary Chilled water Pump motor 2W+1S</p> <p>ABB make 18.5 KW Squirrel cage Induction type VFD motor suitable for A.C. 415+/-10% 3 phase power supply suitable for variable frequency.</p>	
3	<p>VFD PANEL for Secondary Pumps</p>	
	<p>Expansion Tank</p> <p>Quantity : 01 Specification : Chilled water expansion tank of size 1m x 1m x 1m with chilled water connection, float valve, isolating valve. Etc.</p>	
4	<p>Chilled water piping:</p> <p>Quantity Lot Specification : Chilled water piping of MS ERW steel connecting chillers, Chilled water pump, AHUS and Expansion tank, complete with valve ,bends, strainers, fittings, instruments, flow measuring device, thermal insulation etc.</p>	1 lot
5	<p>Air Handling Units</p> <p>Two for each floor Capacity: a) 25000 Cu.M/hr. St.Pr. – 65mm wg 4 row copper coil - 4 Nos.</p>	6 Nos

	<p>b) 30000 Cu.M/hr. St.Pr. – 70mm wg 4 row copper coil - 1No.</p> <p>c) 30000 Cu.M/hr. St.Pr. – 70mm wg 4 row copper coil - 1Nos.</p> <p>Specification :- Double Skinned, vertical / Horizontal type air handling units of sectionalized construction each each complete with Kruger make fan, ABB make 415V/3ph/50 Hz motor, copper coil (12.7mm & 0.4 mm thick), Aluminum fins (thick - 0.12mm) and Airtech filter . Motorized 2- way control valve at chilled water outlet for chilled water flow control with the sense of modulating thermostat placed in the RA path.</p> <p>Voltas Make Model Nos. of AHU (1, 2, 3, 4) are V-250-H, AHU (5) is V- 300-H and AHU (6) is V-300-V. Type – Chilled water type cooling coil, Centrifugal blower, ABB makes Induction Motor).</p>	
6	<p>Duct Work: Made of GI sheets of various thickness with volume control dampers and diffusers</p>	Lot
7	<p>Fan coil units : Hi wall type Fan coil units each complete with Pre- filter, cooling coil, thermally insulated Drain pan with connection , supply air fan with Two speed drive motor, Motorized 2 way Control valve with temperature sensor, powder coated GI casing with swiveling type SA grills and hinged type decorative RA grills.</p>	4
8	<p>Fresh Air Fan filter Units Each wall mounted centrifugal fan, 3 phase squirrel cage induction motor, inlet louver, dry panel HDPE filter</p>	6 nos
9	<p>Smoke Exhaust Fans: Each unit contain Axial flow smoke Exhaust fan with 3 phase squirrel case induction motor, motorized isolating damper at fan inlet, back draft damper at fan outlet.</p>	3 nos
10	<p>Electrical Panels: Main Electrical Panel, Annunciation Panel, VFD panel for Secondary Pumps, 6 Electrical Panels in the AHU rooms, all Push button panels, Fire annunciation panels, fire detection panel</p>	

ANNEXURE- “B”

(To be submitted on the Letter Head of the Tenderer)

DETAILS OF BIDDER PARTICIPATING IN THE TENDER

Sl. No.	Description	To be filled by bidder
1.	Name of the Agency	
2.	Year of Establishment	
3.	Registered office with full address	
4.	Full Postal Address of communication	
5.	Telephone Number(s) of office	
6.	Contact person Name with Mobile No.	
7.	Fax number	
8.	E-Mail ID	
9.	Website if any	
10.	Nature of Entity - Limited Company, Partnership etc. (attach copy of partnership Deed/ Certification of incorporation as applicable)	
11.	Whether the agency is direct OEM of chiller / authorized dealer / having tie with OEM to operate and maintain chillers on behalf of OEM. Please specify and attach a scanned copy of authorization of OEM.	
12.	Name of Director / Proprietor / Partners with address and telephone nos.	
13.	Technical Staff employed (Attach a separate sheet of the employees with qualifications)	
14.	Annual turnover for last three financial years	
15.	PAN of Bidder	
16.	GSTIN of Bidder	

17.	Bank Solvency certificate (Attach a letter from the banker)	
18.	Whether any Civil Suit / Litigation arisen in the contracts executed during the last 5 years / being executed. If yes, please furnish the name of the contract, employer, nature of work, contract value, work order and date & details of litigation briefly	

19. Details of the Operation of the HVACplant and AMC services provided. In the last 5 years

Sl. No.	Client with address	Type of chiller	Tonnage	Period of contract	Type of contract	Value of the contract	Testimonials submitted (Work order & Completion Certificate)
					AMC / Operation		

I/We hereby solemnly declare that I/we have downloaded all the documents from CPP e-Procurement Portal of NIC and all the uploaded information / statements are true to the best of my/ our knowledge. I/we also declare that my/our firm is not involved in any Litigation or Arbitration with National Council of Science Museums during the last 05 (five) years. I/We further declare that the decision of National Council of Science Museums in this regard shall be final and binding on me/us.

Place:

Date

(Signature with date & seal)

[Validate](#)[Print](#)[Help](#)**Item Rate BoQ**

Science City, National council of Science Museums, JBS Haldane Avenue

Operation and Comprehensive Maintenance of 300 TR HVAC System (Both high side and low side) in Science Exploration Hall

SCCY-18011/17/PUR/2018 (112)

Name of the Bidder/ Bidding Firm / Company :							
PRICE SCHEDULE (This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)							
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	GST in %	TOTAL AMOUNT in Rs. P	TOTAL AMOUNT In Words
1	Operation charges						
1.01	Annual Operation charges for the operation of 300 TR HVAC system consisting of 3 Air Cooled Screws Chillers (Make: Climaveneta) of 100 TR each, and associated low side equipment as per NIT from 9 AM to 7 PM	1.000	One year		18.00	0.00	INR Zero Only
2	Comprehensive maintenance charges						
2.01	Annual Comprehensive Maintenance of 300 TR HVAC system consisting of 3 Air Cooled Screw Chillers (Make: Climaveneta) of 100 TR each, Chilled Water pumps, AHUs, chilled water piping with all the valves, ducting, electrical panels, VFD panel of secondary chiller pumps and other associated equipment of the central air conditioning plant of Science Exploration Hall, Science City, Kolkata	1.000	One year		18.00	0.00	INR Zero Only
Total in Figures						0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only					