

E-TENDER DOCUMENT

Work of Daily Operation & Comprehensive Maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata

विज्ञान नगरी

Science City

(राष्ट्रीय विज्ञान संग्रहालय परिषद)

(National Council of Science Museums)

संस्कृति मंत्रालय, भारत सरकार

Ministry of Culture, Government of India

जे.बी.एस. हलडेन एवेन्यु, कोलकाता-700046

J B S Haldane Avenue, Kolkata-700046



E-Tender No. SCCY-15014/30(383)

**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 enrol 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 Enrol”** on the CPP Portal. Enrolment is free of Charge.

As part of the enrolment process, the tenderers/bidders will be required to choose a unique username and assign a password for their accounts.

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.

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.

Only one valid DSC should be registered by 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.

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:-

- (a) 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.
- (b) 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.
- (c) 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:-

- (a) 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 document that need to be submitted.
- (b) 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.**
- (c) 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 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 (here Civil Engineering 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 is acceptable. The price bid has been given as a standard **Offer Sheet** in .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 **Offer Sheet** file, open it and complete the **green coloured (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** 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 is generated automatically. Therefore, the rate quoted by the tenderer/bidder in figures shall be

taken as correct. The Comparative Statement is also 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 authority of museum/centre 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:-

- (a) 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, J.B.S Haldane Avenue, Kolkata-700046

Fax No.033-22859895

Website: www.sciencecitykolkata.org

Email: sctycal@cal.vsnl.net.in / sctyncsm1@gmail.com)

- (b) 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.**

NOTICE INVITING e-TENDER (e-NIT)

No. SCCY-15014/30(383)

Dated: 30.10.2018

Science City, Kolkata is a constituent unit of the National Council of Science Museums, Kolkata* (*hereinafter referred to as 'the Science City').

General terms & Conditions:-

Online e-tenders are hereby invited from reputed and experienced agencies for the work of **“Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata”**, on Annual Contract basis initially for a period of one year with a provision of renewal of the same on year-to-year basis for a maximum period of **3** years subject to satisfactory performance of the Agency.

The tenderer should fulfil the following eligibility criteria:-

- (i) Should be either registered as a Company under Companies Act 1956/2013 or as a Partnership (including Limited Liability Partnership) under Partnership Act, 1932, as the case may be, and should be in existence as such entity for not less than five years as on 29.10.2018. Should be in possession of:
 - (a) Trade Licence
 - (b) PAN Card [in the name of firm/agency or proprietor]:
 - (c) EPF/ PF Registration
 - (d) ESI Registration
 - (e) Professional Tax Registration
 - (f) Registration under the Shops & Establishment Act
 - (g) GST Registration

The Registered Office or one of the Branch Offices of the tenderer should be located in and around Kolkata. The agency or any of its Partners/Directors etc should not have been black listed/ debarred by any of the government agencies or department or should not have been found guilty of commission of acts of moral turpitude or convicted for any economic offence or for violation of any labour laws etc. by any court or any authority appointed to enforce any labour laws or regulations including PF/ESI authorities. Further no past contract of such agency should have been terminated in the past 3 years on account of violation of laws or deficiency of services or breach of contract **(To be submitted as per Annexure-II in bidder's/ tenderer's letterhead)**.

- (ii) Minimum 03 (Three) years experience in executing similar kind of services in Central Government/ Central Autonomous Bodies/ State Govt./ Central Govt./ Public Sector Undertakings/**Corporate sector organizations**. Tenderer shall attach list of such organizations with contract nos. where the Agency is currently providing/ has earlier provided this kind of service and copies of work order/completion certificate shall be submitted in support of their claim **(To be submitted as per Annexure-III in bidder's/tenderer's letterhead)**.
- (iii) The Tenderer should meet **the criteria** as under:
 - a) Currently providing / earlier provided successfully **TWO** contracts for operation of similar service in any Departments/ Autonomous Institutions /Public Sector Undertakings of the Government of India/other State Government or Public Sector Banks or Local Bodies/Municipalities/ Corporate Sector during last three financial years.

And

b) Annual Turnover of the firm/company should be minimum of Rs.15.00 lakhs in last three consecutive financial years.

2. The place of work shall be Science City, J.B.S. Haldane Avenue located at Kolkata-700046.

3. Important Information & Dates:

Estimated cost	₹23,00,000/-
EMD Amount	₹57,500/-
Tenure and validity	Initially 03 months on trial basis, thereafter 09 months subject to satisfactory performance of the Agency. The contract may be renewed on year-to-year basis based on the satisfactory performance for a maximum period of 03 years at the discretion of the Science City, Kolkata.
Bid Document Publishing Date & Time	30.10.2018
Bid Document Download Start Date & Time	30.10.2018
Pre-Bid meeting Date & Time	05.11.2018 (11:30 A.M.)
Bid Document Download End Date & Time	As per system generated.
Bid submission Start Date & Time	06.11.2018 (06:00 P.M.)
Bid submission End Date & Time	03.12.2018 (Up to 03:00 P.M.)
EMD Submission (Physically) End Date & Time in Science City	05.12.2018 (Up to 11:00 A.M.)
Bid Opening (Technical) Date & Time	05.12.2018 (11:30 A.M.)

4. The intending tenderers/bidders must read the terms and conditions of the contract carefully. They should submit their bid only if they consider themselves eligible as per the laid down criteria and if they are in possession of all the documents/registrations required.

5. Information and Instructions for tenderers/bidders posted on website shall form a part of the bid document.

6. The bid document consisting of guidelines for the work of “**Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata**” to be fulfilled and the set of Terms & Conditions of the contract to be complied with and other necessary documents can be seen and downloaded free of cost from <https://eprocure.gov.in/eprocure/app>.

7. Out of the online bid documents submitted by intending tenderers/bidders, the technical bids of only those tenderers/bidders shall be opened, who have deposited Earnest Money Deposit as specified above duly scanned, uploaded and found in order. The financial bids of only those tenderers/bidders shall be opened whose uploaded documents are found to be in order.

8. Those agencies not registered on the website mentioned above, are required to get themselves registered beforehand.

9. The intending tenderer/bidder must have valid Class II or Class III Certificates with signing key usage (DSC) to submit the bid.

10. The e-Tenders are invited under two envelopes system. The first electronic envelope will be named as **Technical Bid Envelope** and will contain documents of tenderer's/bidder's satisfying the eligibility conditions, scanned copies of EMD and NIT, and the second electronic envelope will be named as **Financial Bid Envelope** containing Rate Quote Sheet with detailed break up of rate and the bidder shall submit **TECHNICAL BID ENVELOPE** and **FINANCIAL BID ENVELOPE** simultaneously. The technical bids will be evaluated first and there after 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 shall contain the following 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**.
(Physical Demand Draft at Sl. (i) to be submitted to Science City and hard copy of complete Notice Inviting E-Tender endorsing signature and rubber seal of the agency on all the pages on or before the date of Bid opening or as stipulated.
- ii) Scanned copy of Enlistment Order/Registration certificate with appropriate Authority/necessary license as required under the contract labour (Regulation & abolition) Act 1970 or any other Act as applicable in pdf format.
- iii) Scanned copies for the proof of eligibility as per **Clause No.1 (i)** and specific WORK EXPERIENCE CERTIFICATES/ CONTRACT EXECUTION CERTIFICATE along with **Work Order/Letter of Intent** issued by Govt./ Semi-Govt./ Autonomous/ PSUs and/ or Reputed Institution/ Corporate Sector with appropriate Authority as per **Annexure – III** the NIT in PDF format.
- iv) Scanned copy of undertaking (**as per Annexure-II**) duly signed with agency seal in PDF format which also includes the undertaking that "The physical EMD shall be deposited by us with the office of Science City payable at Kolkata calling the bid before the bid opening otherwise the tender/bid shall be rejected.
- v) Scanned copy of details of the bidder/agency duly filled in as per **Annexure-IV** of the E-NIT.
- vi) Scanned copy of Declaration & Undertaking as per **Annexure-I**

b) FINANCIAL BID ENVELOPE shall contain: Rate Quote Sheet in .XLS format.

11. E-tenders which do not fulfil any of the above conditions or are incomplete in any respect are liable for **summary rejection**.
12. The Science City does not bind itself to accept the lowest e-tender/bid and has the right to reject or accept any or all the e-tenders/bids received without assigning any reason whatsoever.
13. 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.
14. E-tenders incorporating **additional conditions** are liable to be **rejected**.
15. The tenderer(s) **must declare** in writing that neither he nor any of their Directors/Partners are in any way related to any officer in the National Council of Science Museums, Kolkata, or any of its constituent units as per the format given in **Annexure-I**.
16. Apart from GST as specified above any other tax in respect of this contract shall be paid as per the applicable rates that may be prescribed by the Government of India from time to time.

17. Before submitting the e-tender, the tenderer shall assess the quantum of the **SCOPE OF WORK** before quoting their rate in the BOQ sheet and the Agency must assess the quantum of work involved after going through the specifications of work given in the “Scope of Work” as **Annexure-A, Annexure-B and Annexure-C** and physical inspection of the installations and work sites of the premises.
18. For the purpose of opening of the e-tenders/bids, as described in Clause 10 of the Notice Inviting e-tender, it is clarified that only on receiving the **EMD, physically in the Science City, Kolkata together with duly signed and stamped copy of the e-tender document** before the bid opening date, the **Technical Bid Envelope** will be opened. After the authority of Science City is satisfied that the documents in the Technical Bid Envelope are in order, the **FINANCIAL BID ENVELOPE** shall be opened subsequently by the duly constituted committee of the Science City.
19. It may be noted that the Technical Bid Envelope which are not found in order as per the requirement of Science City, Kolkata, shall be summarily rejected.
20. Earnest Money is liable to be forfeited if the successful e-tenderer/bidder selected for the work of “**Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata**” fails to take up the work and sign the formal agreement within **07** days from the date of issue of Letter of Intent to them by the Science City.
21. The successful tenderer will be awarded the work of “**Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up and major maintenance of all service pumps, motors and accessories at Science City, Kolkata**” and given stipulated time which shall be counted from the date of issue of the LOI. During this intervening period, the successful tenderer shall mobilise their men, material and resources for commencing the required services.
22. The validity period of the e-tender shall be **03 (THREE)** months from the date of opening of e-tenders. This period may be extended suitably if the decision regarding issue of Letter of Intent is delayed for any reason.
23. The bidder has to visit the site as stipulated in the “**SCOPE OF WORK**” before putting their rate in tender. **Necessary overhauling of the plants/equipment/pump/motors etc. to be assessed by the bidder before submission of tender and the expenditure has to be included in their rates for complete overhauling. The successful bidder has to commence the work first by overhauling the entire system and without interrupting the day-to-day services of the subject work. In this regard, the contractor has to provide necessary support for continue running the plants/motors /pumps etc. AT THEIR OWN COST**
24. The successful bidder has to submit supporting documents with respect to payment to the engaged personnel.
25. The successful bidder has to maintain the attendance register for their employees/Log book for each plant and other registers as instructed by the Engineer-in-Charge.
26. Payment shall be deducted due to unsatisfactory performance as stated below:
 - (1) Payment shall be deducted for Unsatisfactory purified water discharged from the following, **with respect of specified quality of treated water in the tender documents** and / or as per discretion of the Science City authority :
 - (a) From model ECO CHILL RO 20-4020: @ ₹1000/- per day per water purifier.
 - (b) 250 LPH skid mounted water treatment plant: @ ₹2000/- per day per water treatment plant.

- (c) 1.50 cubic metre/hour capacity R.O. Plant: @ ₹5000/- per day
- (d) D.M. water treatment plant/water/water softening plant: @ ₹2000/- per day per plant.
- (e) Water softening mini-plant on the roof of Director's office: @ ₹ 100/- per day.

(2) Unsatisfactory discharge of water:-

(a) For model ECO CHILL RO 20-40-20:

- Discharge \Rightarrow $\geq 15 < 19$ L/hr. @ ₹200 per day per water purifier
- \Rightarrow $\geq 10 < 15$ L/hr. @ ₹200 per day per water purifier
- \Rightarrow < 10 L/hr. @ ₹500 per day per water purifier

(b) 250 LPH Skid Mounted water treatment plant.

- Discharge \Rightarrow $\geq 200 < 220$ L/hr. @ ₹200/- per day per plant
- \Rightarrow $\geq 150 < 200$ L/hr. @ ₹300/- per day per plant
- \Rightarrow $\geq 100 < 150$ L/hr. @ ₹400/- per day per plant
- \Rightarrow $\geq 50 < 100$ L/hr. @ ₹500/- per day per plant
- \Rightarrow $\geq 0 < 50$ L/hr. @ ₹2000/- per day per plant

(c) 1.50 Cubic metre/hour capacity R.O. Plant:

- Discharge \Rightarrow $\geq 1100 < 1200$ LPH @ ₹500/- per day
- \Rightarrow $\geq 1000 < 1100$ LPH @ ₹700/- per day
- \Rightarrow $\geq 500 < 1000$ LPH @ ₹1000/- per day
- \Rightarrow $\geq 0 < 500$ LPH @ ₹5000/- per day

APPENDIX TO NIT

1. SUMMARY OF CONDITIONS OF CONTRACT

Tenure of the Contract : Initially for a period of **one** year which includes trial period of **3** months. The contract may be **renewed** on year-to-year basis for a maximum period of **03** years including trial period at the discretion of the authorities of Science City.

Estimated cost ₹23,00,000/-

Earnest Money to be deposited with the e-tender : ₹57,500/-

2. SECURITY DEPOSIT / RETENTION MONEY : Minimum $\frac{1}{10}$ of the Annual Contract Value of the E-tender to be deducted in every monthly bill.

3. Refund of EMD of successful bidder and Security Deposit : Will be refunded after satisfactory completion of the work for a period of one (01) year.

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

Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata

TENDER No. SCCY-15014/30(383)

01. Bidders shall have **at least five years of working experience on operation of similar services.**
02. The Bidders shall not be a close relative of any employee of the Council (close relative means - Father, Mother, Brother, Sister, Son, Daughter and Spouse) nor any such close relatives are associated with the Bidders as Proprietor/Partner/Share Holder/Director and like of the Bidders and furnish a Declaration to this effect in writing.
03. Successful Bidders shall be required to enter into an Agreement with the Centre, governing the terms & conditions of the license on non-judicial stamp paper as per the proforma enclosed.
04. Before submitting the Bid, the Bidder must assess the mandatory commitment, quantum and nature of services involved in providing the services of **Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata**, after physical inspection of the premises.
05. Before quoting their rate, the Agency must assess the quantum of work involved after going through the specifications of work given in the **Annexure-A, Annexure-B and Annexure-C** and physical inspection of the installations and work sites of the premises. Overhauling of the plants/pumps/motors has to be done at their own cost.
06. **The successful bidder must submit a detailed plan showing the number of persons to be deployed and how they propose to provide services and overhauling all the plants , pumps with motors etc under this contract.**
07. While submitting their rates, 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.
08. One consolidated charges should be quoted for the entire contract on monthly basis and as a token of acceptance of all the terms & conditions mentioned in the NIT, the Agency shall submit this tender after signing all the pages and quoting the rates in the format given at the end of this tender paper.

Credentials:

09. The Agency shall declare in writing that none of their partners/employees in 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 & Mobile telephone both in the office as well as in the residence(s) of Partners/Directors/Proprietors. The site supervisors must have mobile telephones at their disposal for the benefit of the service.

11. The Agency shall declare in writing that they are not incorporating any additional conditions and shall strictly abide by the existing deployment to render regular service under their contract.
12. The agency shall furnish I.T. PAN & latest IT clearance certificate/return along with their tender.
13. All credentials of the Agency including financial standing, registration with respect to EPF, ESIC, GST etc. issued by statutory authorities, registrations with Government having support or connection with Govt. Depts./ Organizations, Semi-Govt., Non-Govt., Autonomous body, Public body, Local Govt, Civil body and public institutions/organizations/ Corporate sector organizations etc. together with records of past performance with such institutions, departments, organizations etc., are to be produced for verification whenever demanded by the Centre. Agencies not having either adequate credential or the experience to take up contracts of such magnitude, need not submit tender.

Responsibilities of the Agency:

14. The Agency shall ensure that all wages and allied benefits like P.F., Bonus, ESIC etc. as prescribed by the Government from time to time, are paid to their staff deployed for the purpose of this contract. The Agency shall remain liable to the authorities concerned for compliance of the respective existing rules and regulations of the Government for this purpose including Workman Compensation Act and shall remain liable for any contravention thereof. The agency shall have to abide by the minimum wage legislations and must pay minimum wage as per law to their staff deployed at any time by them for the purpose of the contract.
15. **A security deposit of @ 10% shall be deducted from the gross value of every monthly bill of the Agency (excepting the EMD).**
16. 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 Centre. The Agency shall constantly keep in touch with the Centre for effective performance of the contract and abide by all instructions and directives issued by the Centre in this regard. The Agency shall give or provide all necessary supporting documents during the execution of the operation and maintenance work for proper fulfilling of their obligations under the contract.
17. 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 Centre for the purpose of this contract and shall keep the Centre indemnified against any liabilities arising out of non-compliance of any of the Acts, Rules or Orders on their part. The agency shall obtain necessary license etc. as required under the contract labour (Regulation & Abolition) Act, 1970 or any other Act as may be applicable.
18. **The Agency must issue proper identity cards to their employees deployed at any time for the purpose of this contract in order to facilitate verification of their identity by the Centre.**
19. The Agency shall be liable to comply with the directions of the Centre to remove within 24 hours of receipt of such direction; any member of their staff deployed for the purpose of this contract and shall make immediate necessary alternative arrangements to ensure proper and adequate services.
20. All employees of the Agency deployed for rendering these services in the Centre, must remain in proper uniforms. The agency shall supply, at their cost, uniforms, umbrella, gumboot, insulated glove, raincoats, woolen clothing, torches with batteries and other stationery items required for carrying out the work.
21. The area and scope of work will be as per the requirements of the Centre from time to time. Any extra work arising out of special programmes or exigencies and beyond the scope of this agreement shall be negotiated separately.

22. The Centre shall pay to the Agency nothing more than the amount as may be due under the contract terms.
23. The service personnel must have mobile telephones so that he could be contacted in case of emergency.
24. All service personnel must have separate individual tools and tackles to carry out respective jobs at the site.
25. The Agency on completion of the specified term of contract or on termination of the contract shall peacefully vacate the premises of Centre and remove all their persons from the campus within 48 hours.

Payment:

26. In case of the Agency's failure to provide requisite services on particular day/days, proportionate deduction shall be made from the bill. **Monthly payment shall not be released unless specifications of the water quality & water yield of the plants are complied with the standard specifications as mentioned in tender documents and a test report, of the treated/ purified water, to this extent is not submitted with the bill.**
27. Income Tax/Labour Welfare Cess/ GST or any other statutory taxes will be deducted at the prescribed rate from the monthly bill of the agency and the same would be deposited with the concerned authorities by the Centre.

Tenure and Validity:

28. **Initially the contract would be for a period of one year which includes trial period of 3 months. The contract may be renewed at the discretion of the Science City on year-to-year basis for a maximum period of 03 years, if the services and performance of the Agency are found to be satisfactory.**
29. The contract can be terminated by the Centre at any time without notice in the event of gross security risk or gross damage to Science City's property due to Agency's failure or persistent failure of the Agency in providing satisfactory service to the Centre and the decision of the Centre in this regard shall be final and binding on the Agency.
30. For reasons other than those mentioned in the clause above, the contract can be terminated by either party by providing clear three months notice in writing.

Arbitrations:

36. In case of any dispute arising out of this contract between the Centre and the Agency, the matter shall be referred to the sole arbitration of a person to be appointed by the Director General of National Council of Science Museums on receipt of an official request with details of the dispute, from either the 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 Conciliation Act, 1996 or any statutory modifications or reenactment thereof and of the rules made thereunder for the time being in force.

SCIENCE CITY
(National Council of Science Museums)
Ministry of Culture, Government of India
J B S Haldane Avenue, Kolkata-700046

Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata

TENDER NO. SCCY-15014/30(383)

PROFORMA FOR AGREEMENT

This Articles of Agreement made at Kolkata this day of between Science City, J.B.S. Haldane Avenue, Kolkata-700046, a constituent unit of National Council of Science Museums (NCSM), a registered Society under the Societies' Registration Act of West Bengal, 1961, having its registered office at Sector-V, Block-GN, Bidhan Nagar, Kolkata-700091 (hereinafter, referred to as the "LICENSOR" which expression unless repugnant to the context shall mean and include its successors, executors, administrators and assigns) **ON THE ONE PART.**

And

..... (name and address of the agency) hereinafter referred to as "LICENSEE", which expression shall, unless it be repugnant to the context, shall mean and include heirs, executors, administrators and assigns) **ON THE OTHER PART.**

NOW IT IS HEREBY AGREED AND DECLARED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1. The tenure of the contract will be initially for a period of 3 months from the date of commencement of service on trial basis, which shall be extended upto one year based on the satisfactory performance of the agency during the trial period, and the contract will be renewed on year-to-year basis on satisfactory performance, and service of the licensee and that to at the discretion of the licensor. Such renewals shall be for a maximum period of two additional years beyond the initial one year of contract.
2. The Agency shall ensure that all wages and allied benefits like P.F., Bonus, ESIC etc. as prescribed by the Government from time to time, are paid to their staff deployed for the purpose of this contract. The Agency shall remain liable to the authorities concerned for compliance of the respective existing rules and regulations of the Government for this purpose including Workman Compensation Act and shall remain liable for any contravention thereof. The agency shall have to abide by the minimum wage legislations and must pay minimum wage as per law to their staff deployed at any time by them for the purpose of the contract.
3. During the period of this contract, the Agency shall provide proper and adequate service, & COMPREHENSIVE MAINTENANCE OF ALL THE R.O. PLANTS/D.M.PLANTS/WATER SOFTENING PLANTS/PUMPS & MOTORS ETC. and perform their duties diligently, honestly and to the entire satisfaction of the Centre. The Agency shall constantly keep in touch with the Centre for effective performance of the contract and abide by all instructions and directives issued by the Centre in this regard. The Agency shall give or provide all necessary supporting documents during the execution of the operation and maintenance work for proper fulfilling of their obligations under the contract.
4. 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 Centre for the purpose of this contract and shall keep the Centre indemnified against any liabilities arising out of non-compliance of any of the Acts, Rules or Orders on their part. The agency shall obtain

necessary license etc. as required under the contract labour (Regulation & Abolition) Act, 1970 or any other Act as may be applicable.

5. The Agency must issue proper identity cards to their employees deployed at any time for the purpose of this contract in order to facilitate verification of their identity by the Centre.
6. The Agency shall be liable to comply with the directions of the Centre to remove within 24 hours of receipt of such direction; any member of their staff deployed for the purpose of this contract and shall make immediate necessary alternative arrangements to ensure proper and adequate services.
7. All employees of the Agency deployed for rendering these services in the Centre, must remain in proper uniforms. The agency shall supply at their cost uniforms, umbrella, gumboot, insulated glove, raincoats, woollen clothing, torches with batteries and other stationery items required for carrying out the work.
8. The area and scope of work will be as per the requirements of the Centre from time to time. Any extra work arising out of special programmes or exigencies and beyond the scope of this agreement shall be negotiated separately.
9. The Centre shall pay to the Agency nothing more than the amount as may be due under the contract terms.
10. The service personnel must have mobile telephones so that he could be contacted in case of emergency.
11. All service personnel must have separate individual tools and tackles to carry out respective job at the site.
12. The Agency on completion of the specified term of contract or on termination of the contract shall peacefully vacate the premises of Centre and remove all their persons from the campus within 48 hours.
- 13. 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. In this case, the S.D. / EMD shall be forfeited.**
14. All disputes shall be settled through mutual negotiations between Licensor and Licensee. Only those unresolved disputes which could not be mutually settled shall be referred to the sole arbitration of a person to be appointed by the Director General, of National Council of Science Museums on receipt of an official request with details of the dispute, from either the Licensor or the Licensee. The award of 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 Conciliation Act, 1996 or any statutory modification or re-enactment thereof and of the rules made there under for the time being in force and with legal jurisdiction at Kolkata.

Signed by for and on behalf of the Science City:-

In presence of 1) _____

2) _____

Signed by for and on behalf of the said by M/s.....

In presence of 1) _____

2) _____

SCOPE OF THE WORK

I. Daily operation and comprehensive maintenance of the DM plant & water softening plant.

Details of Plants installed:

A. D.M. Water Treatment Plant:

- a. Oxidation chamber with MnO₂ and hard coke.
- b. Pressure-cum-iron remover filters with zeofil and graded gravels.
- c. Activated carbon filter with activated carbon, sand and graded gravels.
- d. Cation exchanger with 520 lts., strong acid cation resins in hydrogen form.
- e. Anion exchanger with 1000 lts., strong base anion resin.

B. Water Softening Plant:

- a. Dual media filter with zeofil and graded gravels.
- b. Water softener with 2500 lts. strong acid cation resin in sodium form and 2000 lts. HDPE tank for brine.

C. Water Softening Mini Plant on the roof of Director's Office

1. The plants should be operated for 12 hours a day on all days including Sundays and holidays. On certain days, it may be required to be operated for more hours and up to 24 hours a day for which no additional payments shall be made.
2. The rate should include all necessary consumables/ non- consumables, tools, tackles etc. required for executing the job.
3. Daily operation and comprehensive maintenance includes cost of all materials and labour charges for necessary repairing/replacement of all valves, pipe lines, structures, pumps, motors, compressors, rotometers, all chemicals required for regular regeneration of the plants etc. Chemicals supplied should be of standards specified by BSI.
4. Daily operation and comprehensive maintenance includes supply of all chemicals for time to time regeneration of water for the plants and labour charges thereof and measuring of quantity & quality of water at the discharge points.
5. Comprehensive maintenance includes half yearly maintenance with all materials and labour charges such as dismantling of top portion of the exchangers, valves, checking of internal resin/media, checking of activated carbon, checking of zeofils & graded gravels, servicing of plants and painting with two coats over one coats of zinc chromate primer or softener and D M Plant including pipe lines etc.
- 6. The rate should include all charges including all the consumable & non-consumable materials and labour charges for purchasing & refilling of all chemicals, salt, resin, media etc. as and when required or as per direction of E-I-Charge.**
7. The lump sum composite monthly service charge should include testing as per schedule specified below:
 - i) Weekly once at sites: the agency should keep necessary testing equipment at site. All the tests should be done in presence of the authorized representatives of Science City only. A record of the tests so done should be maintained in a log book by the agency engaged duly countersigned by the representatives of the agency and Science City, Kolkata.

- ii) The monthly bills of operation should enclose with it, the preceding month's test reports of D M Plant and Water softening plant. Water samples to be collected and submitted to reputed and licensed laboratory in presence of representatives of Science City, Kolkata. Monthly payment shall not be released unless specifications of the water yield of the plants are complied with the standard specifications as mentioned below:
- iii) Quarterly once from National Test House (NTH)/Laboratories approved by Science City: The test report should be submitted within 20th of next month which precedes the quarter. Water samples to be collected and submitted to NTH in presence of representatives of Science City, Kolkata.
8. All emergency calls should be attended to immediately.
9. All repairing works should be done without hampering the daily schedule of Science City, Kolkata. If required, such repairing works may be done beyond working hours of Science City, Kolkata, with prior written permission.

Standard specifications of the water yield to be followed:

Sl. No.	Particulars	D.M. Water	Soft Water
1	PH	6.5 to 7.5	6.5 to 7.5
2	Total dissolved solid	<500 mg/ltr.	<1000 mg/ltr.
3	Alkalinity as CaCO ₃	<200 mg/ltr.	<200 mg/ltr.
4	Conductivity at 25°C	<120 Mhos/cm	<1000 Mhos/cm
5	Total hardness as CaCO ₃	<300 mg/ltr.	<100 mg/ltr.
6	Chloride as Cl	<250 mg/ltr.	<250 mg/ltr.
7	Sulphate as SO ₄	<200 mg/ltr.	<200 mg/ltr.

II. Reverse Osmosis Technology based Drinking Water Plants of different capacities at different locations.

Details of Plants installed:

A. TWO NOS. of Reverse Osmosis Technology based water purifier-cum-storage cooler with the following features and specification of ION Exchange make and model ECO CHILL RO 20-40-20:

- a. Water storage capacity: 40 litres
- b. Water cooling capacity/Hr.: 20 Litres/hour.
- c. Body material : Full stainless steel
- d. Compressor: Emerson/Tecumseh/LG
- e. Refrigeration: R-134A (Non CFC)
- f. Purification procedure: Reverse Osmosis Purification
- g. Purification capacity: 20 litres/hour
- h. Rejection of TDS: upto 90%
- i. Water recovery: 55%-65%
- j. Auto Flush: Power Flushing of Filter Element
- k. Taste Enhancer Cartridge: PH Correction Cartridge
- l. Auto Sanitizer Cooler & RO: Electronic System sanitizer to sanitize water storage tank 24X7 to prevent germ built up.
- m. Dynamic Monitor & Control: LCD display to indicate temperature, TDS, Cartridge life, Pump status, no water, flushing etc.

All consumables like all types of membranes, pump, sediment filter, taste enhancer cartridges, water saving cartridges, combo filters, control module, solenoid valves any other components that are part of the system are to be replaced at the agency's cost, if required, for smooth functioning of the system. Refrigeration compartment is not covered under this.

B. FIVE NOS. of Existing 250 LPH Skid mounted Water Treatment Plants, situated at different locations with the following features and technical specifications

- a) **Raw water feed pump with motor: Quantity: 1 No.**
(Type: Horizontal centrifugal, Capacity: 1.0 Cum/hr., Power: 0.37KW, 230V, 50 Hz, Make: KBL (Kirloskar))
- b) **Micron Filter** Quantity: 1 No.
(Normal Rating - 5 microns, Size: 4" dia, 20" Ht, Make: Gopani, Capacity: 1.3 Cum/hr.)
- c) **Iron Removal Filter (IRF) -Quantity: 1 No.**
(Capacity: 1.0 Cum/hr., Size: 250 mm dia, 1350 mm height, Min & Max operating pressure:- 1.5Kg/sqcm to 3.5 Kg/sqcm, Type of valve: Single-multiport manually operated, Media: MnO₂+ Supported Sand, Make of Pressure vessel: Pentair)
- d) **Activated Carbon Filter (ACF) -Quantity: 1 No.**
(Capacity: 1 Cum/hr., Size: 300 mm dia, 1200 mm height, Min & Max operating pressure - 1.5Kg/sqcm to 3.5 Kg/sqcm, Media: Activated Carbon+ supported bed, Type of valve: Single-multiport manually operated, Make of Pressure vessel: Pentair)
- e) **Anti Scalant Dosing System Dosing Pump**
(Type of Pump: Electro-magnetic diaphragm, Capacity: 0-1.5 LPH, Operating Pressure: 2.5 Kg/sq.cm., Tank Capacity: 50 litres, Make of Pump: E-Dose_)
- f) **High Pressure Pump: Quantity: 1 No.**
(Type: Multi Stage Centrifugal, Capacity: 1.0 Cum/hr., Maximum Pressure: 5 Kg/sqcm., Power: 1.5 KW, 415V, 3 HP 50 Hz, Suction/Delivery: 25 MM NB, Make: Willo/Gunfosk/ENP)
- g) **RO Module: Quantity of Pressure vessels: 2 Nos.**
(Type of Membrane: TFC Spirral Wound, Size of Membrane: 4040 Qty. of Membranes: 2 Nos. Make of Membrane: Hydranautics, Size of Pressure Vessels: 40-250-1, Make of Pressure Vessel: Pentair)
- h) **UV System: UV Lamp wattage, 16W Make: Sukrit**
 - i) Controls & Instrumentation

High Pressure Switch: 1 No.
Low Pressure Switch: 1 No.
Rota Meters: 2 Nos.
Float operated Switches for tan level: 2 Nos.
Electrical Control Panel: 1 No. (Make: Aster)
Micro Controller for Operation: 1 No.
Pressure Gauges: 0-7 Kg/sqcm, 1 No.
Pressure Gauges: 0-21 Kg/sqcm, 2 Nos.

The treated water to be lifted to Overhead water storage tanks at different heights & different locations by operating lifting pumps in order to deliver the treated water either to the end users through water coolers or direct tap. All the Over Head Storage Tanks to be **checked & the lids locked daily** and cleaning & disinfecting the tanks at least **once in every month** or as per requirement. All the storage tanks of each water coolers to be kept cleaned & disinfected throughout the year. Cooling system of water coolers are not covered under this.

C. ONE NO. of Existing 1.50 cubic meter/hour capacity Reverse Osmosis Plant to process the available Boring water into drinking water having conductivity upto 100 TDS with PH 6.5 to 8.5. This treated water will be used for drinking purpose for the staff members and visitors coming to Science City. The treated water should strictly be in compliance with the IS: 10500. Tolerance/Relaxation beyond the specified limit will not be entertained under any circumstances. Operation of the plant during this comprehensive AMC period shall be for 365 days.

- a) The drinking water facility with pre-treatment unit and Reverse Osmosis system along with related accessories and water distribution system has the capacity of 1.50 cubic metre/hour. The source of raw water shall be from the existing raw water storage tank. The agency shall pump the raw water from the raw water storage tank and pass it through pre-treatment unit, which includes Iron removal filter, activated carbon filter etc, and through Reverse Osmosis system, store the treated water in PVC storage tank for further distribution at different consumption points.
- b) The treated water is to be further stored in the existing over head PVC water storage tanks, of different capacity and situated at different places/levels within the campus of Science City.
- c) The treated water is connected, through CPVC piping, to water coolers as end points. The tanks of water coolers are also to be kept clean & disinfected.

D. Equipment to be daily operated and maintained comprehensively by the Agency as per details provided below:

Technical data of Equipment:

- a) **Raw water pump with motor -Quantity: 2 Nos.**
Horse Power: 3 Hp, Capacity (Minimum): 3M³/hr at 30 Mtrs WC, Type: Centrifugal pump, Material of construction: SS304, Make: Kirloskar
- b) **Oxidation Chamber/Iron Removal Plant: Quantity: 1 No.**
Capacity (Minimum): 3M³/hr, Design Pressure: 3 Kg/cm², Test Pressure: 4.5 Kg/cm²
- c) **Multigrade Media Filter: Quantity: 1 No.**
Normal Flow: 3M³/hr, MOC: MSRL, Design Pressure: 3 Kg/cm²
- d) **Activated Carbon Filter: Quantity: 1 No.**
Normal Flow: 3M³/hr, Design Pressure: 3 Kg/cm²
- e) **Micron Filter:**
Filter rating: microns
Body: Poly propylene
- f) **Dosing System for NaOCl: Quantity: 1 No.**
Type of Pump: Electronic Diaphragm (1W+1S), MOC of the Tank: LDPE (100 L)
Accessories: Level gauge with level switch, suction filter fitted on pmp Suction Assembly, One dosing Valve, etc. complete.
- g) **Dosing System for Sodium bi Sulphite: Quantity: 1 No.**
Type of Pump: Electronic Diaphragm (1W+1S), MOC of the Tank: LDPE (100 L), Accessories: Level gauge with level switch, suction filter fitted on pump Suction Assembly, One dosing Valve, etc. complete.

- h) **Dosing System for Acid dosing: Quantity: 2 Nos. (1W+1S)**
Type of Pump: Electronic Diaphragm MOC of the Tank: LDPE (100 L) Accessories: Level gauge with level switch, suction filter fitted on pump Suction Assembly, One dosing Valve, etc. complete.
- i) **Anti Scaling dosing: Quantity: 2 Nos. (1W+1S)**
Type of Pump: Electronic Diaphragm (1W+1S), MOC of the Tank: LDPE (100 L), Accessories: Level gauge with level switch, suction filter fitted on pump Suction Assembly, One dosing Valve, etc. complete.
- j) **High Pressure pump for RO feed: (Gunforce/Willo) Quantity: 2 Nos. (1W+1S)**
Type: Horizontal Reciprocating, Make: SS304
- k) **RO Skid with auto flashing device and RO Cleaning System: Quantity: 6 Nos.**
Membrane: Hydronautics, Type of membranes: CPA-2-4040, Make of membranes: Hydronautics, Feed shut off valve, ball valves, pressure switch, PLC, MCB, etc. should be of renowned make.
- l) **Final Treated Water Storage Tanks at UG level: Quantity: 2 Nos.**
MOC: PVC, Capacity: 2m³ & 1m³ with interconnected. Provided with CO₂ breather.
- m) **Final Treated Water Storage Tanks at Dynamotion hall roof level/SEH, roof of Lift m/c room/Roof of Gate Complex etc. Quantity: 10 Nos and may be increased, if required.MOC: PVC, Capacity: 500 litre to 1000 litre capacity, lids with locking arrangement**
- o) **Control Panel:**
Digital Conductivity meter completely wired inside with over load protection for high pressure pump motor, indication lamps for power on, low inlet pressure and pump trip, etc. complete with pressure diagram.
- p) **Storage tanks for Gate Complex: Quantity: 2 Nos., MOC: PVC, Capacity: 1m³**
- q) **Transfer Pumps: Quantity: 2 Nos.**
Horsepower: 5 Hp, Capacity (Minimum): 4M³/hr at 30 Mtrs WC, Type: Centrifugal Pump, Material of Construction: SS304, Make: Kirloskar

E. Distribution System:

UPVC pipe of 40 mm dia for overhead storage tanks.

The treated water to be lifted to Over head water storage tanks at different height & different locations by operating lifting pumps in order to deliver the treated water either to the end users through water coolers or direct tap. All the Over Head Storage Tanks to be checked & the lids locked daily and periodically cleaning the tanks. All the storage tanks of each water coolers to be kept cleaned & disinfected. Equipment to be daily operated and maintained comprehensively by the Agency as per details provided below:

The operator shall ensure that all the overhead storage tanks for RO treated drinking water remain full throughout the day to ensure availability of drinking water for the visitors during the entire duration when the Science Centre component of Science City remains open for visitors.

III. DAILY operation, routine check-up and comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata.**A. Lifting and distribution of water:**

- i) Lifting of water alternatively from various Tube wells located in the premises of Science City and filling the underground reservoir at any point of time as required.
- ii) Operation & day-to-day routine checkup of 2.Nos. centrifugal pumps and Motors located at service area and supply of water to the Convention Centre Complex as required and also distribution of water to Gate Complex and entire garden for eight hours a day or as directed by Engineer in-charge from the underground reservoir located at service area.
- iii) Operation & day-to-day routine checkup of 2.Nos. of Centrifugal pumps and motors located at service area and supply of water to Space Odyssey, Dynamotion, food plaza and ad-joining areas as directed by Engineer in-charge from the underground reservoir located at service area.

B Operation & day to day routine checkup of 2.Nos. of centrifugal pumps and motors for supply of Air Conditioning make up water to AC plant of Convention Centre Complex and AC plant of Space Odyssey as required and directed by Engineer-in-Charge.

C Operation of 5 nos. Centrifugal pumps & motors located in sewage treatment plant for all day or whenever required at any point of time.

D Operation & day-to-day routine check up and dewatering of the following fountains including filling of water as required and directed by the Engineer-in-Charge.

- i) 3 fountains on the Northern side of the Gate Complex and 1 fountain on the Southern side of the Gate Complex., 1 musical fountain.
- ii) Main fountain pump at C.C. Complex.

E Operation & day-to-day routine checkup of the various pumps & motors in Dynamotion building.

- i) 3 nos. Centrifugal pumps & motors for lifting of water to PVC overhead tanks on two different levels.
- ii) 2 nos. Centrifugal pumps & motors for supplying purified water to Aquariums from D.M. Plant.

F Operation & maintenance of 3 nos. portable centrifugal/submersible pump as and where required for dewatering storm/ sewage water.

G Operation & routine checkup of all service pumps installed for Science Exploration Hall & Earth exploration Hall.

LIST OF PUMPS & MOTORS UNDER THE COMPREHENSIVE MAINTENANCE AND OPERATION:

Sl. No.	Location of Pump with motor	No. of Pumps with motor	Capacity of Motor	Remarks
1.	PMC-4	2	2 HP	Kirlosker make (Monoblock)
		2	5 HP	For Main Auditorium, make up water
		2	5 HP	For Dynamotion
2.	Near Earth Exploration Hall	1	10 HP	Submersible

3.	Generator Room	3	5 HP	(Monoblock)
		1	2 HP	(Monoblock)
		1	3 HP	(Monoblock)
4.	Fountain	1	10 HP	Submersible for Convention Centre
		2	5 HP	Monoblock for Science Centre
		1	2 HP	Submersible for Science Centre
5.	Canteen	1	10 HP	Submersible. Near Canteen.
6.	Dynamotion In UGR for S.E.H.	1	10 HP	Submersible
		2	7.5 HP	(Monoblock)
		1	3 HP	(Monoblock)
		2	10 HP	Submersible
7.	Trolley Pump	2	5 HP	Centrifugal
		1	3 HP	Centrifugal
	# At different places	3	Different capacities	For lifting R.O. water adjacent to S.E.H.& other areas (Monoblock)

SCOPE OF WORK

1. Supply of water to Convention Centre Complex including the temporary kitchen/cooking space of the empanelled caterers (during event) near exhibition ground and it should be in accordance with programme schedule of the Convention Centre including operation of various valves and accessories as required.
2. Supply of water to the Gate Complex, Space Odyssey, Dynamotion building, Maritime Centre, Earth Exploration Hall and Science Exploration Hall should be available from 9 a.m. to 9 p.m.
3. Water supply to the food plaza, staff canteen, lal bari and other areas is as per the requirement.
4. Water should be supplied to the entire garden for four hours in the morning and four hours in the afternoon, or as and when required as per situation.
5. All the fountains are to be operated as per the direction of Engineer-in-Charge.
6. All the pumps and motors are to be checked up everyday like oiling, greasing, changing of gland packing, changing of gaskets, changing of coupling etc. including required materials are in the scope of the agency including the following materials, all complete at the own cost of the agency:
 - i) Suction strainer for six inch dia pump sets, neckring, counter thrust bearing, pump coupling, pump shaft, shaft sealing bush, impeller, key for impeller, stage casing, stage casing bush, suction case, suction case bush, guide vane, stud and nuts, NRV body, thrust bearing, bearing bush, motor coupling, nut/circlip for rotor.
 - ii) Rewinding for submersible pumps, lifting of submersible pumps and motor sets and accessories from tube well and reinstallation after repair.
 - iii) Overhauling and painting of the submersible pump and motor sets.
 - iv) Overhauling and painting of the centrifugal/monoblock pump and motor sets, rewinding, MS base for pump and motor, CI welding, ball bearing sets, bearing cover, bearing cover nut (S.S), guide vane, impeller, runner, stage casing bush,

shaft sleeve bush, coupling bush, suction strainer, adjusting cap, brass washer, gland packing, gasket, stud and nut(S.S), CI coupling set, star coupling (rubber), round coupling (rubber), U coupling (rubber), lock nut (S.S), gland bolt (S.S), S. S. spring for check valve etc.

v) Replacement of motor spare parts: Rotor shaft (S.S), thrust bearing, sealing rug, oil seal bush, rotor bush, upper flange, lower flange, machining of rotor shaft, M.S. washer, nylon washer, stud, side cover, pressure gauge, key, fan, fan cover, connector, connector box, long stuck, nuts and bolts (S.S), capacitor, kit sets.

vi) Other than the above materials if any materials required for comprehensive maintenance of all the pumps and motors are to be supplied, fitted and fixed for smoothly functioning the motors by the agency at their own cost.

vii) If the agency feels that any pumps and motors are not repairable the same is to be get checked by the authorized dealer of the manufacturers and get a certificate in this regard from the dealer or service centre. Then the same may be replaced by the Science City authority at their own cost.

7. All the nozzle of the fountains are to be cleared with acid, removing of chockage on periodic basis or as and when required.
8. All the services are to be maintained efficiently and such services may be required for a very long span of time at odd hours of any day.
9. All the pumps and motors to be checked daily and kept operational. Repairing of pumps and motors are to be done on urgent basis.
10. **Adequate provisions are to be made for operating the sewage treatment plants' pumps at any point of time in a day including odd hours during any season and particularly in rainy/monsoon season to avoid any kind of flooding of lower ground floor of Main Auditorium.**
11. **The agency shall be solely responsible for any failure of pumping out monsoon water through sewage treatment plant's pumps. No excuse whatsoever shall be accepted.**
12. Major breakdown should be immediately brought to the notice of Engineer-in-Charge and necessary action must be taken parallel by the agency.
13. The agency engaged shall keep all necessary tools/tackles, spares etc. at Science City that will be required to carry out the work.
14. Agency shall be responsible for repairing of pumps related to all exhibits, water softening plants, AC plants, RO plants as directed by the Engineer-in-Charge.
15. Any plumbing works while running, installation, removing of service pumps, shifting of service pumps etc. are in the scope of the agency. The agency must engage skilled plumber for this purpose.
16. It will be responsibility of the agency to regulate supply of water to different storage tanks, over head tanks etc. and shall ensure that there is no over flow and wastage of water from any of the over head and or underground tanks. If found overflow, necessary deduction to be made in the bill of the agency as decided by the Engineer-in-Charge of Science City.
17. The rates are included all arrangements that are necessary to lift submersible pumps from tubewell (such as scaffolding etc.) and to reassemble to same in position after repairing. The agency shall have to provide tools and tackles etc. for the services.
18. The agency shall also carry out all subsidiary works connected with the awarded work even though such works may not be described in the scope of work.
19. The agency shall have to maintain different log books and history books for pumps and motors.

Annexure – I

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

DECLARATION -1

This is to certify that neither we/any of us/ are/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 agency seal/rubber stamp)

Place:

DECLARATION -2

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

Date: (Signature of the tenderer
with agency seal/rubber stamp)

Place:

UNDERTAKING

This is to certify that we have carefully gone through the terms and conditions given in the e-tender document & have clearly understood the terms & conditions of the tender and have accordingly quoted our Annual License after going through all the details of E-NIT.

We hereby give an undertaking that we shall undertake the visitors' service by way of "Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up and major maintenance of all service pumps, motors and accessories at Science City, Kolkata".

We also undertake that the physical **EMD** instrument shall be deposited by us with the office of **Science City, Kolkata** before the bid opening date. Otherwise the **Science City** shall reject the bid and debar us from further tendering in NCSM or its constituent units.

Date: **(Signature of the tenderer
with agency seal/rubber stamp)**

Place:

UNDERTAKING

Certified that the Agency or any of its partners/Director have not been blacklisted/ debarred by any of the Govt. agencies or department or have not been found guilty of commission of acts of moral turpitude or convicted for any economic offence or violation of any labour laws etc. by any Court or any PF/ESI authorities.

It is further certified that the Agency has not been terminated by any of the Govt. department/autonomous institutions/public sector undertaking of the Govt. of India/other State Govt. or Public sector Bank or local bodies/Municipalities/Corporate Sector during past three years on violation of loss or deficiency of service or breach of contract.

Date:

**(Signature of the tenderer
with Agency seal /rubber stamp)**

Place:

Certified that the Agency has undertaken the similar services at the following Govt. department/autonomous institutions/public sector undertaking of the Govt. of India/other State Govt. or Public sector Bank or local bodies/Municipalities/Corporate Sector during last five years:

Sl. No.	Name of the Office	Details of Service	Duration of contract	Contract Value
a)				
b)				
c)				
d)				
e)				

Date:

Place:

(Signature of the tenderer)
with agency seal / rubber stamp

SCIENCE CITY

Ministry of Culture, Government of India
(National Council of Science Museums)
J B S Haldane Avenue, Kolkata 700046

Daily operation and comprehensive maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata.

TENDER No. SCCY-15014/30(383)

DETAILS OF INFORMATION OF THE AGENCY/ BIDDER

(All information should be given in the following format with complete details)

1.	Name of the Agency	:	
2.	Permanent Postal Address (Full)	:	
3.	Telephone/Fax/E-mail Office Residence Mobile Fax E-mail Website	:	
4.	State whether Proprietorship/ Partnership /Company	:	
5.	Name and Address of Owner(s)/ Partner(s)/Director(s)	:	
6.	State whether Registered under various Statutory Acts <i>(If yes, furnish all the registration numbers and also enclose photocopies of valid registered certificates)</i>	:	
	a) Shops & Establishment Act No	:	
	b) GST Registration No.	:	
	c) Provident Fund Registration No.	:	
	d) Service Tax Registration No.	:	
	d) Trade License No. with validity	:	
	e) Permanent Account No.(PAN)	:	

8.	No. of Employees in the Office	:				
9.	No. of Employees employed at various facilities	:				
10.	a) Details of turnover in last three years (enclose copies of Balance-Sheets for last 3 years)	:	2014-15 2015-16 2016-17			
	b) Bank Solvency Certificate [enclose copy of Certificate]	:				
10.	Enclose copies of Income-Tax Returns filed for the last 3 years	:	2014-15 2015-16 2016-17			
11.	Furnish details of experience in providing similar services during <u>last five years</u> including the existing Contracts. Use separate sheet for the information (<i>Also enclose photocopies of Work Orders and experience certificates etc.</i>):					
Sl. No.	Name & Address of the Organization where service is provided	Duration of the Contract		No. of Employees employed	No. of persons/visitors to whom service is provided (per month)	Any other information
		From	To			
a)						
b)						
c)						
d)						
e)						
12.	Indicate if any Court Case/Arbitration pending against the Agency. If so, details thereof may please be mentioned					

Certified that the information furnished above are true to the best of my/our knowledge. It is hereby declared that I/we will abide by the decision of Science City, Kolkata for evaluation of technical bids of e-Tender.

Date :
Place:

**SIGNATURE OF THE AGENCY
WITH SEAL**

N.B.: Copies of all credentials (mentioned above in DETAILS OF INFORMATION OF THE AGENCY/ BIDDER) must be uploaded in "Cover-I" (Technical Bid), failing which the Bid is liable to be rejected.

SPECIAL TERMS & CONDITIONS AND MAKE OF MATERIALS

Work of Daily Operation & Comprehensive Maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata

- 1. All the RO Plants/DM Plants/Water Softening Plants/Pumps & Motors are to be overhauled within 30 days from the date of Letter of Intent, without disturbing daily requirement of treated water, at the own cost of the successful bidder.**
2. Monthly testing reports of treated water of each plant to be submitted along with the monthly bill. This report (monthly) should be obtained from the reputed and licensed laboratory as approved Laboratory.
3. Quarterly testing reports of treated water of each plant should be obtained from National Test House (NTH)/Laboratories approved by Science City.
- 4. All the bidders are requested to visit all the plants, as per tender documents, before quoting their rates. They should be aware about the present quality of raw water at Science City, Kolkata before quoting their rate.**
5. **Payment :** a) Payment against monthly bill along with test reports of purified water against each plant.
b) **Monthly bill shall be prepared by the successful bidder in consultation with the Science City authority regarding deduction (for unsatisfactory service &/ or unsatisfactory comprehensive maintenance, if any) to be made in the bill as per terms & conditions.**

Approved make of materials to be used:-

1. **RESIN for Softener (Cation) :-** INDION-225 Na of ION EXCHANGE INDIA LTD.
2. **RESIN for DM Plant (Anion):-** INDION – NIP of ION EXCHANGE INDIA LTD.
3. **RESIN for DM Plant (Cation):-** INDION-225H of ION EXCHANGE INDIA LTD.
4. **Caustic Soda for DM Plant:-** As per approved quality
5. **Hydrochloric Acid for DM Plant(Commercial grade):-** As per approved quality
6. **Sodium Chloride for softener:-** As per approve quality
7. **Membrane for RO Plants (4040 membrane):-** Hydranautics/ Hydramem/ DOW/ GE.
8. **Anti-scalant for RO Plants:-** INDION 8III of ION EXCHANGE INDIA LTD.
9. **Micron Filter:-** Gopani/ ION EXCHANGE INDIA LTD.
10. **Pressure Vessel:-** Hydranautics /ION EXCHANGE INDIA LTD. / Pent Air /approved quality.
11. **Spare parts of Pumps & Motors:-** Approved quality of materials

N.B. The successful bidder is requested to get prior approval, of the materials to be used, from the Science City authority and the materials must be shown to the Science City authority before using it.

FINANCIAL BID ENVELOPE

Rate Quote Sheet (BOQ) Format

Item Rate BoQ

Tender Inviting Authority: DIRECTOR , SCIENCE CITY , KOLKATA

Name of Work: Work of Daily Operation & Comprehensive Maintenance of the DM plant & water softening plant, Reverse Osmosis Technology based Drinking Water Plants of different capacities and Daily operation, routine check-up & comprehensive maintenance of all service pumps, motors and accessories at Science City, Kolkata

Contract No: SCCY-15014/30(383)

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 #	TAXES	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC AMOUNT (excluding GST)	GST @18%	TOTAL AMOUNT WITH GST @18%	TOTAL AMOUNT in Words
1	2	4	5	7	14	8	10
1	Gross Financial implication for due performance of the services and other statutory payments, Administrative Expenditure and profit of the agency and GST as applicable (at present @ 18%) and charges towards use of machinery equipment and supply of consumable materials for comprehensive maintenance and performance of the contract as per the specifications, Terms and conditions, and Special Terms & Conditions stipulated in the E-tender, inclusive of all taxes & Duties.	1.000	JOB		18.00%	0.00	INR Zero Only
Total in Figures						0.00	INR Zero Only