

BRIHANMUMBAI MUNICIPAL CORPORATION

(Water Supply Projects)

ChE/WSP/P/1651 dtd. 17.08.2022

INVITATION FOR BIDS

1. The Municipal Commissioner for and on behalf of BRIHANMUMBAI MUNICIPAL CORPORATION (BMC) invites e-tenders on item rate basis consisting of three packets (Technical i.e. packet A & B and Price Packet C) for providing of consultancy services regarding “Feasibility Study for converting Tertiary Treated water from Waste Water Treatment Plants (Group II - Versova, Dharavi, Ghatkopar, Bhandup) to Direct Potable Water and further Integrating with water supply system of Mumbai City” for the following scope under National Competitive Bidding from reputed consultancy firms who meet the eligibility requirements and possess the technical & financial capabilities mentioned in the bidding documents.

The scope of consultancy work includes following but not limiting to:

A) CONVERSION OF THE TERTIARY TREATED WATER TO DIRECT POTABLE WATER

The scope of the assignment separately for each of the ATTPs is as follows:

- i. Study the availability of tertiary treated water from WWTF in consultation with BMC. Based on the availability of the tertiary treated water, the requirement of Advanced Water Treatment Plant (for converting the tertiary treated water into potable water) will be assessed and development of the same shall be planned accordingly.
- ii. The water quality parameters of potable water being supplied to Mumbai City shall be maintained in consultation with BMC. Variety of treatment processes to be explored to meet specific water quality parameter to be used purely for direct potable purpose.
- iii. Collect all proposed/treated water data after tertiary treatment from the WWTFs proposed and carry out a comparative study of various technologies to convert the same into direct potable water for supply to the city. Also if necessary, test will be carried out on water at outlet of existing STP plant to ascertain sewage quality parameters from NABL accredited laboratory. The variation in raw water quality parameter shall be explored and influence on design aspects shall be submitted.

- iii. The land requirement with minimum footprint area for development of ATTP will be worked out (for various technologies) and also to assess the availability of the land within the existing treatment plant location. In case land is not available or if there are any other local site specific constraints then the same will be addressed and various options such as constructing underground plant or identifying suitable lands will be considered and most suitable, economical and viable option will be recommended.
- iv. Design reports shall be prepared (for various technologies) including hydraulic flow diagram and plant GAD and also preliminary sizing and location / arrangement of the units- linear or racked or any other suitable. (excluding detailed structural design).
- v. Identifying the area where the recycled potable water from proposed ATTP can be supplied in the existing water distribution zones in consultation with HE Department.
- vi. Design of storage tank to collect/store the tertiary treated water from the outlet of WWTF, foot print required for the same and also its location in the proposed Potable Water Plant in the WWTF premises. In case land is not available then various options such as constructing underground plant/tank or identifying suitable lands will be considered and most suitable, economical and viable option will be recommended.
- vii. Design of storage tank of potable water taking into consideration the supply hours of BMC in the area mentioned in (vi) above including area for pumping arrangements before integrating it into water supply system (excluding detailed structural design).The feasibility of storage of the Potable Water Plant in the ATTP premises shall be studied and the layout for the same shall be located near the ATTP. In case land is not available then various options such as constructing underground plant or identifying suitable lands, laying of new pipeline / tunnel upto distant identified locations will be considered and most suitable, economical and viable option will be recommended in consultation with HE.
- viii. Suggest environmentally safe system for disposing of effluent from proposed ATTPs as per prevailing norms.
- ix. The time schedule in the form of macro-level activity linked bar chart (for various technologies) for construction of ATTPs.

- x. Units wise block cost estimates will be prepared (for various technologies) based on the SOR (and market rates for the items which are not in the SOR) including the cost towards requisite O & M for the period of 15 years. This shall also include asset replacement and power consumption during O & M period.
- xi. Suggesting the most suitable techno-commercial option for implementation including financial/economic analysis for the project life cycle.

B) INTEGRATION OF THE POTABLE WATER PRODUCED WITH THE WATER SUPPLY SYSTEM

The scope of the assignment separately for each of the ATTPs is as follows :

- i. Collection of data of existing water supply system, hydraulic study of the water supply system / zoning to identify mains, distributaries, service reservoirs in the system where the produced potable water can be injected / integrated based on the unutilised capacity in the existing system.
 - ii. Study & suggest the changes in supply hours, volume & pressure of the injection / integration of produced potable water, study the hydraulic impact of the integration of the produced potable water at the various locations and accordingly recommend the most feasible / economic solution for integration. Also in case the proposed ATTP is temporarily incapacitated the provisions to be complied to maintain the uninterrupted water supply in the relevant area shall be explored.
 - iii. Recommend online measurement tools for monitoring the supply and pressures of the integrated water.
 - iv. Study of legal and social aspects of usage of recycled water for drinking purpose, suggest public awareness measures such as, recycled water museum etc.(SIA report shall be submitted).
 - v. To ensure failsafe system for converting Waste water into Potable water.
- C.** Carrying out tests on the sewage water to be used as the raw water from the outlets of existing STPs, 40 for each STP.
- D.** Preparation and submission of 7/8 minutes' animated audio video presentation about entire studies done, recommendations, salient features, technical

parameters, benefits etc. complete combined for all proposed WTPs under the assignment.

2. The consultancy firms may obtain further information from the office of the Corporation at:

DEPUTY CHIEF ENGINEER
(WATER SUPPLY PROJECTS) CONSULTANCY CELL,
First Floor, Engineering Hub Building,
Dr. E. Moses Road, Worli Naka,
Worli, Mumbai- 400 018, Maharashtra
Email: dychecc01@gmail.com

3. Consultancy contract period will be 6 months from the date of the commencement of service.
4. The forms of Tender documents are available on the e-Tendering website <https://mahatenders.gov.in>. The aspiring Applicants will have to download Tender form, from the website mentioned above after payment of applicable fees. The bidder has to fill in online format and upload information regarding Tender Online. Also he /she has to download the Tender application form from website, fill it and upload the scanned copy of duly filled form, along with required documents.
5. For registration enrolment for digital signature certificates and user manual, please refer to respective links provided in e-tendering tab. Vendors can get digital signature from any one of the Certifying Authorities (CA) licensed by controller of certifying authorities namely Safecrypt, IDRBT, National Informatics Center, TCS, CUSTOMS, MTNL, GSFC and e-Mudhra CA.
6. For purchasing the Tender documents, the bidders will have to get registered with e-tender portal (<https://mahatenders.gov.in>) for the e-tendering process and obtain login credentials to participate in the online Tender process. The details of the same are available on <https://mahatenders.gov.in>. For registration, enrolment for digital signature certificates and user manual, please refer to respective links provided in e-tendering tab on <https://mahatenders.gov.in>.
7. The Earnest money deposit (E.M.D.) is Rs.3,25,000/- (Three Lakh Twenty Five thousand only).The bidder is required to pay 90 % E.M.D online i.e. Rs. 2,92,500 /- (Rupees Two Lakh Ninety Two thousand and Five Hundred only) through <https://mahatenders.gov.in>. The balance 10 % E.M.D. i.e Rs. 32,500/- (Rupees Thirty Two thousand and Five Hundred only) is required to be paid in the form of Demand Draft (DD) payable to Brihanmumbai Municipal Corporation; the DD shall be submitted in the office of the Deputy Chief Engineer(Water Supply Projects) Consultancy Cell located at the address mentioned in clause (2) above after submission of bids & before the opening of packet A, failing to which

their Packets A & B shall not be opened and the bidder shall be considered non-responsive and his 90 % EMD, if paid, shall also be permanently forfeited. The bidder has to prepare & submit Tender Documents Online on or before last date of submission as mentioned in tender notice.

8. MINIMUM TECHNICAL & FINANCIAL QUALIFICATION CRITERIA:

<u>Technical -</u>	
i	One FS/DPR/Detailed engineering Assignment for (i) Desalination plant/TTP of capacity not less than 150 MLD single plant and (ii) water network study (using water GEM) for not less than 30 sq km area, both in last 7 years.
Or	
ii	Two FS/DPR/Detailed engineering Assignment for (i) Desalination plant/TTP of capacity not less than 100 MLD single plant and (ii)Two water network study (using water GEM) for not less than 15 sq km area, both in last 7 years.
Or	
iii	Three FS/DPR/Detailed engineering Assignment for (i) Desalination plant/TTP of capacity not less than 75 MLD single plant and (ii)Three water network study (using water GEM) for not less than 10 sq km area, both in last 7 years.
<u>Financial -</u>	
iv	Average annual turnover of consultancy firm in the last five (5) financial years shall be minimum 30 crores.

- The Applicant should upload the documents in readable form, He should take trial of uploads by taking printout. The unreadable documents will be treated as null & void. The remaining documents will be evaluated. The decision of opening Authority regarding this will be binding to all applicants.
- Wholly owned Indian subsidiaries of foreign Consultancy firms will be allowed to claim the technical and financial credentials of only their parent firm, subject to the submission of the requisite documentary evidence alongwith Parent Company Undertaking with the bid in Packet 'B'. In absence of above documents and undertaking experience of Parent company shall not be considered for deciding technical capacity / qualification.

9. The Municipal Commissioner reserves the right to reject all or any of the e- tender(s) without assigning any reasons at any stage. Those bids without the below said payments will be summarily rejected.
10. The BMC reserves the right to cancel the e-tenders before submission/opening of e-tenders, postpone the e-tenders submission/opening dates and to accept/reject any or all e-tenders without assigning any reason thereof.
11. This tender document is not transferable.
12. Packet A, B & C shall be opened on dates as mentioned in the time schedule. All the responsive and eligible bidders can be present, if they so wish, at the time of opening of bids, in the office of Chief Engineer (WSP). The Packet C of the bidder shall be opened if bids submission in Packet A & B satisfies/includes all the stipulated requirements and same are found acceptable to the Authority.
13. Tenderers are requested to submit and upload the tenders in time on or before the stipulated day so as to avoid rush at the closing hours. BMC will not be responsible for poor connectivity of network / internet services / connectivity of servers / snag in system /breakdown of network / or any other interruptions. If any online information uploaded but not received by Bid creator (BMC) within stipulated time limit, BMC will not be held responsible at any cost and such bids cannot be validated. Any online intimation / information asked to be submitted by Bidders /Contractors or sent to bidders/ Contractors, if not receiving or bounced back at the receiving end due to any problem in the server or connectivity, BMC will not be held responsible.
14. The sale of E-tenders shall commence on 10.10.2022, 11 A.M. and shall close on 10.11.2022, 3.00 P.M. E-tenders shall be uploaded up to 4.00 P.M. on 10.11.2022 and Packet 'A' & 'B' of bids will be opened on the next working day i.e. on 11.11.2022 at 12.30 PM.

The Packet 'A' & 'B' shall contain all duly certified credential documents, filled up forms & schedules, undertakings and other information etc. required as stipulated in the tender as per e-tendering process and "Item data" shall contain duly filled 'Bill of Quantities' online.

15. Only the technical packets 'A' & 'B' will be opened on BMC's above mentioned portal in the office of The Deputy Chief Engineer (Water Supply Projects), Consultancy Cell located at the address mentioned at Clause No. 2 above on 11.11.2022 day at 12.30 PM in the presence of bidder's authorised representatives who choose to attend. The price packet will be opened after technical evaluation, on a date which will be intimated to the technically responsive bidders. In the event of specified date of opening of bids being declared as holiday for the BMC, bids shall be opened on the next working day. Bidders should note that timing of downloading/submission/opening of tender shall be considered as per BMC web time only.

16. In order to obtain first-hand information /opinion on the assignment, the bidders are advised to visit the individual sites of the existing STPs mentioned in enclosed Annexure-I, before submitting their proposal. Required assistance may be obtained from the “office of the Deputy Chief Engineer (Water Supply Projects) Consultancy Cell located at the address mentioned in clause (2) above with prior appointment in writing except Saturday, Sunday & Public Holidays.
17. Pre-bid meeting will be held in the Office of Deputy Municipal Commissioner (Special Engineering)'s conference room, 3rd floor, Annex Building, Municipal Head Office, Mahapalika Marg, Fort, Mumbai – 400 001, INDIA on 17.10.2022 at 2.30 PM.
18. Bids shall remain valid for a period of 180 days after the date of technical bid opening mentioned at Sr. No. 14 above.
19. Payment under this consultancy contract will be in Indian Rupees only.

Sd/-

**Chief Engineer
(Water Supply Projects)**