



THANE MUNICIPAL CORPORATION **(Solid Waste Management)**

Invitation for Global Expression of Interest (EOI)

For Installation, Operation and Maintenance of

Processing plant of 1,800 TPD

To convert waste generated within municipal limits of

Thane Municipal Corporation

To

Fuel/ Value added products/ Energy on DBFOT basis

Issued by
The Municipal Commissioner
Thane Municipal Corporation



THANE MUNICIPAL CORPORATION (Solid Waste Management)

Disclaimer

The Expression of Interest (EOI) Document for "Installation of Waste to Fuel/ Value added products/ Energy Plant" contains brief information about the scope of work and selection process for appropriate technology service provider. The purpose of the Document is to provide the bidders with information to assist the formulation of their response to this EOI.

While all efforts have been made to ensure the accuracy of information contained in this EOI Document, this Document does not purport to contain all the information required by the bidders. The bidders should conduct their own independent assessment, investigations and analysis and should check the reliability, accuracy and completeness of the information at their end and obtain independent advice from relevant sources as required before submission of their response to EOI. Thane Municipal Corporation or any of its employees or advisors shall incur no liability under any law, statute, rules or regulations as to the accuracy or completeness of the EOI Document.

TMC reserves the right to change any or all conditions/ information set in this EOI Document by way of revision, deletion, updating or annulment through issuance of appropriate addendum as TMC may deem fit without assigning any reason thereof.

TMC reserves the right to accept or reject any or all applications without giving any reasons thereof. TMC will not entertain or be liable for any claim for costs and expenses in relation to the preparation of the bid applications to be submitted in terms of this EOI Document.



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1. Purpose of EOI

1.1. The Thane Municipal Corporation (TMC), intends to Solicit applications to participate for the submission of expression of interest (EOI) to Design, Build, Finance, Operate and Transfer (DBFOT) a 1,800 TPD Waste to Fuel/ Value added products/ Energy Project on public private partnership (PPP) basis with concession period of 25 years at Daighar, Thane. The expression of interest is hereby called from the experienced companies/ organizations, with well-established financial system, sound project management and technical background in designing, construction and operating decentralized/ centralized solid waste processing facility for solid waste of Thane Municipal Corporation.

1.2. Objective of EOI

1.2.1. To identify and evaluate various types of technologies available for waste processing in Thane city

1.2.2. To explore/ firm up bid evaluation criteria for evaluation of final response/ tender

1.2.3. To understand financial implications as well as environmental and societal impacts of possible solutions

1.2.4. To firm up minimum performance guarantee percentage and scope of performance guarantee

1.3. Further, the technology to be used by the interested company should be economically viable, suited to the local conditions, and environmentally compliant as per the Solid Waste Management (SWM) Rules, 2016 and Hon'ble National Green Tribunal (NGT) orders issued from time to time in this regard

1.4. EOI is invited from interested parties to propose any suitable technology/ combination of technologies for processing of MSW in part or entirety, like:

- Bio-methanation producing electricity/gas
- Electricity generating through incineration (SCF/ RDF based)
- Composting
- Plasma Arc Gasification
- Pyrolysis
- Any other viable option/s

1.5. The interested companies can visit the websites <https://thanecity.gov.in/> and <https://mahatenders.gov.in/> to check the requirements of the department before



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submitting the proposal. The proposal must be sent through email (tmcswm333@gmail.com) with subject line "EOI- for Waste to Fuel/ Value added products/ Energy Plant' latest by 11:00 hrs on 04.06.2021. Any proposal sent after 04.06.2021 by 11:00 hrs shall not be accepted.

1.6. The land parcel is approximately 7.78 hectares, situated at Diaghar Thane. The land is earmarked for proposed 1,800 TPD Waste to Fuel/ Value added products/ Energy project, leased out to TMC by Maharashtra State.

1.7. Key Events and Tentative Dates

Sr. No.	Stage	Date
1	EOI Publishing Date	22.05.2021
2	EOI Bidders' Conference (Queries to be sent before conference to tmcswm333@gmail.com)	27.05.2021 12:00 hrs
3	Post Conference Site Visit (Subjected to COVID Restriction and Guidelines of the State of Maharashtra)	27.05.2021 14:00 hrs
4	Reply to EOI Queries	28.05.2021
5	EOI Submission Date	04.06.2021 11:00 hrs
6	EOI Opening Date	04.06.2021 17:00 hrs
7	Date(s) for presentation by Shortlisted Bidders	09.06.2021

Dr. Vipin Sharma, IAS
The Municipal Commissioner
Thane Municipal Corporation, Thane

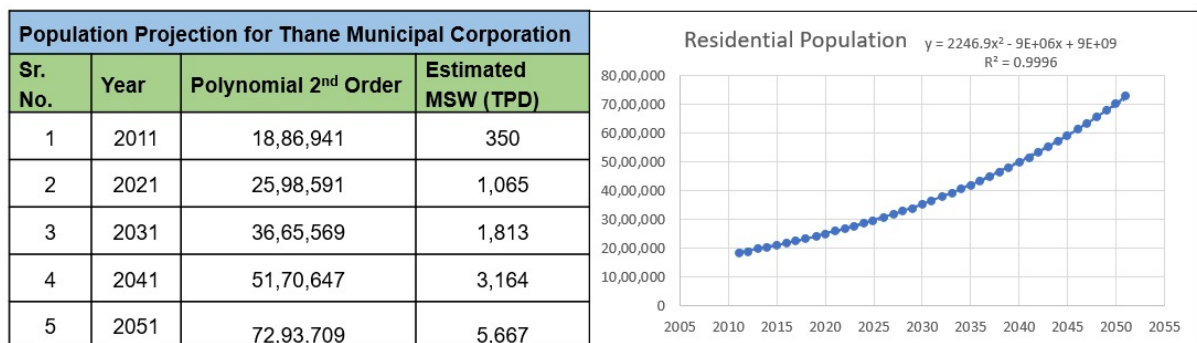


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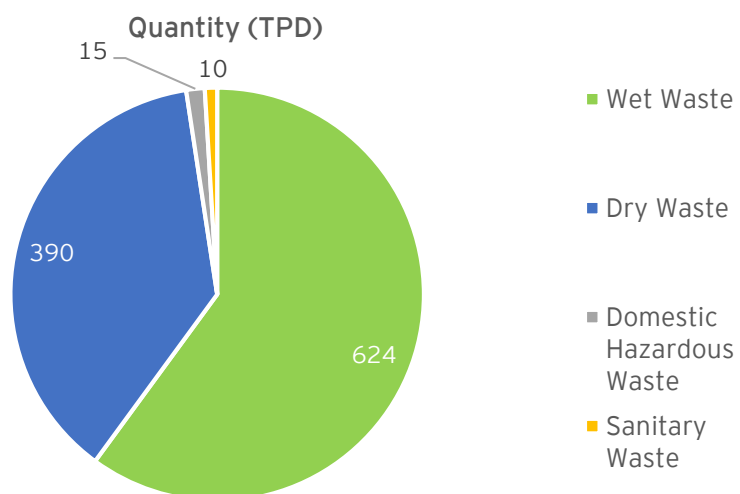
2. Background

2.1. The city of Thane governed by Thane Municipal Corporation (TMC), is a metropolitan city in Maharashtra, India. It is situated in the north-eastern portion of the Salsette Island. The City of Thane is located on the north-western side of the state of Maharashtra, the city is an immediate neighbour of the City of Mumbai and a part of the Mumbai Metropolitan Region. TMC is spread over 128 m^2 . The city has 9 administrative wards and 33 electoral wards. TMC, currently has an estimated population of 25,98,590 with around 5,19,718 number of residential properties.

2.2. As per the approved Solid Waste Management - Detailed Project Report of TMC, the population of Thane is expected to increase by 2.8 times by 2051. The Image below highlights the population project of the city of Thane:



2.3. Thane is currently generating 1,039 tons of municipal solid waste on daily basis. Out of this total waste, 624 tons is wet waste while 390 tons is dry waste including inert waste. Around 15 tons per day is the generation of domestic hazardous waste, while 10 tons per day comprises of sanitary waste. Thus, keeping into consideration, the current waste generated and increase in population, the Thane Municipal Corporation foresees Waste to Fuel/ Value added products/ Energy plant to efficiently channel waste management.





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- 2.4. The primary objective of this project is to manage the MSW in an environmentally safe manner and produce energy/fuel/ value added products by using MSW as resource by constructing/ commissioning/ operating an affordable system and sustainable technology that is easy to maintain and in-line with the applicable laws & regulations and Global Standards.
- 2.5. TMC is making great strides in the field of sustainability in line with the SWM Rules, 2016. These strategic plans aim to protect the environment and ensure sustainable development through various projects and initiatives for conservation of natural resources, rationalized consumption and inclusion of alternate and renewable energy resources to TMC's energy mix.
- 2.6. In accordance with the objectives envisaged hereunder, TMC is keen to strengthen the national as well as their own efforts to achieve the targets for minimizing the municipal waste disposed in landfills and for developing alternate energy sources through prompt implementation of projects for the sustainable management of wastes, energy and environment.
- 2.7. Waste Management: TMC's core vision from waste management perspective is "Creating an ever-evolving smart city that provides a sense of comfort and sustainable liveability". This vision is underpinned by the key strategic directive "Ensuring a clean and sustainable environment in Thane".
- 2.8. In consideration of the various TMC waste management plans, policies and projects currently pursued, TMC intends to accomplish the waste processing project. This requires forming a view on the elements which would make offers "economically advantageous" and then weigh these in order of significance. This allows TMC to evaluate and compare bids that may meet various permutations of the award criteria.
- 2.9. TMC is widely acknowledged as a leader in aggressively pursuing to adopt unique designs, features and enhancement in every field. Accordingly, TMC is keen to select innovative and sustainable concepts, designs, development and execution for its waste processing project to make it into a world-class showcase. These sustainable initiatives and innovative concepts are expected to be economically advantageous and sustainable as well.

3. General Conditions

- 3.1. The land parcel of approx. 7.78 Ha is earmarked for proposed 1,800 TPD project. The green belt shall be developed within this land area.
- 3.2. TMC shall provide bidders with flexibility to propose bids for the 1,800 TPD plants to be commissioned in single or maximum up to three phases as to upgrade in line with the increasing quantum of waste. The interested entity may thus propose a single plant of 1,800 TPD, or two plants of 1,200 TPD and 600TPD each, or three plants of 600 each, or as seen appropriate by the applicant. However, the earliest phase of commissioning for single or first phase shall latest be in the year 2025.



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- 3.3. TMC shall commit to provide 1,000 TPD of Waste to be diverted to the processing plant from the day of initiation of the project.
- 3.4. TMC wants the Waste to Fuel/ Value added products/ Energy Project to be constructed in all respects within 24 months from the date of issue of letter of acceptance (LoA) as per the timeline indicated below:
- Mobilization and obtaining Statutory Approvals - 6 months.
 - Design, Construction and Commissioning of Waste to Fuel/ Value added products/ Energy Plant (from the date of Consent to Establish from MPCB) - 18 months including monsoon.
- 3.5. TMC has been allotted the land available at Daighar by State. TMC has earmarked it to be suitable for construction of processing plant. The site comprises of a combination of RCC Wall and Brick Wall.
- 3.6. Sitemap for same is provided on the next page (i.e. Pg. No. 10). A total of approximately 7.78 Ha. land shall be made available to the successful bidder. Interested Entities are encouraged to accommodate processing plant, axillary utilities of processing plant, sanitary landfill, any other utilities and greenbelt/greenspace within this land parcel.
- 3.7. The financial model of the technology(ies) submitted should be such that there is no financial implication on TMC other than providing the requisite quantity of waste at processing facility free of cost. The waste processing project is expected to be at least revenue neutral for TMC, if not revenue positive. However, TMC prefers a revenue positive financial model to off-set the cost of providing the waste at site.
- 3.8. All the expression of interests shall be assessed by a "Technical Evaluation Committee (TEC) for Technology Finalization" comprising of the following members:

S.No.	Position held by Committee Member	Role in Committee
1.	Municipal Commissioner, Thane Municipal Corporation	Chairperson
2.	Additional Municipal Commissioner - 2, TMC	Member
3.	Pollution Control Officer, TMC	Member
4.	Regional Officer Thane, Maharashtra Pollution Control Board	Member
5.	Environment Management Expert from Academia	Member
6.	Deputy Municipal Commissioner, SWM Projects, TMC	Member Secretary

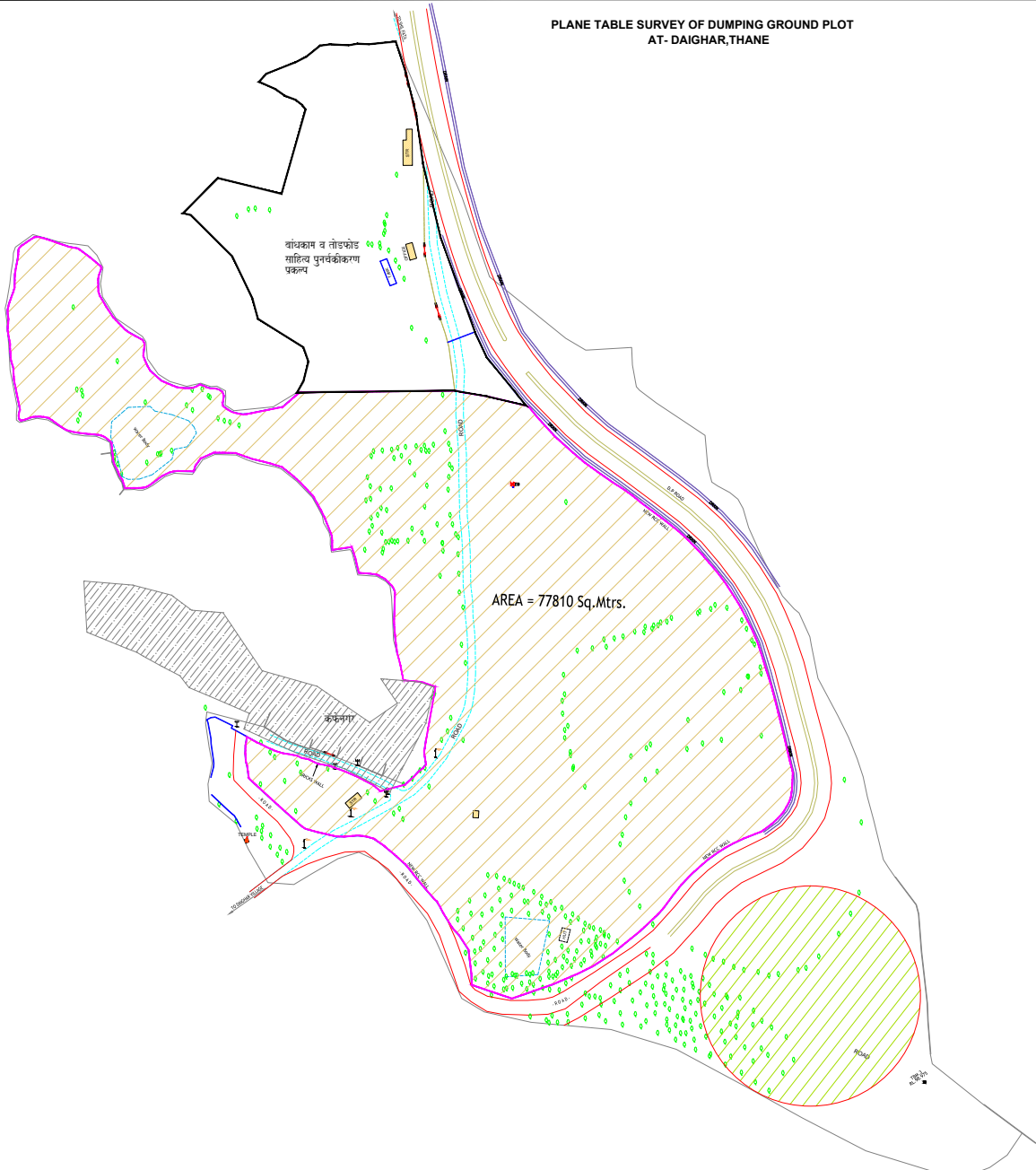


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- 3.9. The Committee shall evaluate all technologies on various aspects ranging from technology(ies) recommended by bidders, financial model proposed, environmental and social sustainability aspects in addition to technical-financial eligibility criteria fulfilment submitted by bidders.
- 3.10. The TEC shall review technologies submitted/presented by each bidder and only after due deliberation finalize the most appropriate technology/combination of technologies for project design. The finalized technology shall make the basis of design of tender document by TMC.



PLANE TABLE SURVEY OF DUMPING GROUND PLOT
AT- DAIGHAR, THANE



NOTE : 1. THIS SURVEY CONDUCTED AS PAR SITE BOUNDARIES SHOWN BY THE OWNER
2. All Dimensions are in meters.
3. All levels are in meters.
4. Contour Levels at 10 x 10 m Grid line
5. Contour line 0.5 & 1.0 m Reference to TBM.

LEGEND

EX- PLOT BOUNDARY	LAMP POLE	↑
CONCRETE WALL	ELECTRIC POLE	↑
STRUCTURE	ELECTRIC BOX	⊠
GATE	HIGH TENSION LINE	—●—●—
TANK	WIRE FENCE	—●—●—
CHAMBER	TEMPLE	⊠
BONDWELL	NEW RCC WALL	—●—●—
RIVER	BRICKS WALL	—●—●—
FOOTPATH BLOCK		
FLOWER BED		

TITLE:-	PLANE TABLE & CONTOUR SURVEY OF DUMPING GROUND PLOT AT- DAIGHAR, THANE
CLIENT	THANE MUNICIPAL CORPORATION THANE
CONSULTANT:-	
CONTRACTOR :-	Thane Clean Environment Pvt Ltd Pune
Name Of Surveyor-	SARYADHI LANDMARK SURVEYING & ENGINEERING PVT. LTD. saryadhi@gmail.com
Date :-	20.06.2019
DRAWING NO.	TS/2019/DRG445
Rev	0.00



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4. Scope of Work

- 4.1. Design, Build, Finance, Operate and Transfer (DBFOT) a Waste to Fuel/Value added products/ Energy Project on PPP basis with concession period of 25 years to utilize the Municipal Solid Waste of Thane Municipal Corporation and hand over a reclaimed clean site after 25 years of Operation & Maintenance.
- 4.2. The Waste to Fuel/ Value added products/ Energy Project shall comply EIA notification 2006 and SWM Rules 2016, amendments, as well as Hon'ble NGT Orders in this regard, if any.
- 4.3. Proven technology shall be designed and developed to meet the above requirements including obtaining all necessary permits and statutory clearance.
- 4.4. The Waste to Fuel/Value added products/ Energy project shall be compatible for using RDF extracted and segregated from legacy waste.
- 4.5. The land for the project will be made available to PPP concessionaire on the basis of 'Non-transferable License to Use' to develop 1,800 TPD Waste to Fuel/Value added products/ Energy Project.
- 4.6. TMC will provide water source tap point, approach road and boundary wall to clearly identify the project site.
- 4.7. The Developer/Concessionaire shall develop a sanitary landfill within the project site (refer map) to dispose ash/inert/sanitary disposal within the plant premises at Daighar, Thane.
- 4.8. Greenbelt/Greenspaces to be developed on 1/3rd of the project area by the bidder (refer map for green space area demarcation).
- 4.9. Environmental Clearance (EC), Airport Authority of India (AAI) clearance, Consent to Establish (CTE), Consent to Operate (CTO) or any other applicable statutory clearances shall be obtained by developer. All compliance management would be in the scope of developer. These clearances must be taken for the project site at Daighar including sanitary landfill to be developed at site.
- 4.10. The proposed project would be based on '**Open Technology**', i.e. bidder may recommend any proven technology or combination of technologies requiring minimum footprint area, minimum implementation period, minimum processing time and generating minimum process residues so as to minimize burden on sanitary landfill and achieving goal of zero waste to landfill.
- 4.11. Depending on the technology, successful bidder shall be required to enter into Power Purchase Agreement (PPA) with Power Distribution company, which shall completely be in the scope of the successful bidder. TMC shall not be a party in this arrangement.



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- 4.12. All the expenses related to installation and supply of power during construction shall be in the scope of successful bidder
- 4.13. Bidder shall undertake development of Project including site grading, internal roads, utilities, necessary pipeline works, green-belt landscape, etc., including necessary designs, engineering, obtaining all necessary permits and statutory clearances, construction and maintenance of the above components.
- 4.14. The proposed Waste to Fuel/Value added products/ Energy Project shall complement the existing MSW Management System of TMC. The concessionaire shall work in coordination with other contractors and operators of TMC and all the works under this Scope of Work shall be undertaken accordingly.
- 4.15. At the time of tender submission bidder should justify the claim of optimum energy production/ fuel production/ manufacture of value-added products, or a combination of these by proposed methodology by bidder.

5. Obligations

5.1. Thane Municipal Corporation to:

- Provide Municipal Solid waste to the processing plant site free of cost.
- Provide required Land for setting up of the project within Daighar, Thane site.

5.2. Successful Bidder to:

- Receive and utilize the Municipal Solid waste at the Processing plant
- Operate and maintain the Waste to Fuel/Value added products/ Energy Plant
- Supply power/fuel to State power/fuel distribution company by separate infrastructure
- Enter into formal Power Purchase Agreement (PPA) and other products, as required, with other potential users
- Make power evacuation arrangement for generated power
- Take all necessary permits, clearances and licenses necessary for setting up and operating the plant
- Share complete information with TMC regarding all processed/ unprocessed by-product of process.

While it is sole responsibility of the selected agency to dispose/ sell all the by-products of its process, the agency will do so meeting all environmental and other statutory laws, rules and regulations. The selected agency is liable to furnish the



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information of all the by-products & the detail of buyer to TMC and take prior approval for processing and sale of by-products.

- The selected agency is to sign a lease agreement with TMC for the land which will be used for installation of the processing plant.

6. Eligibility Criteria

6.1. Technical eligibility criteria

6.1.1. All reputed National / International companies / agencies / firms / individuals and service providers as sole entity or in Joint Venture with Investors / developers can apply. Creation of SPV is a mandatory requirement to execute the project. Interested agency should have the experience in Installation, Operation & Maintenance of Waste to Fuel/Value added products/ Energy Plant at anywhere in India or abroad. Documentary evidence from concerned authority to be submitted along with other EOI documents.

In the event a Company/ Organization on its own does not meet the Eligibility Criteria as given above, it can associate with the Organization(s) who meet the above Qualification Criteria, form a Joint Venture (JV) and submit response. The JV shall have maximum three partners. The JV shall nominate a Lead Member who shall maintain a highest shareholding for the entire Contract Period. The other JV Members shall maintain a shareholding of at least 26% for the entire Contract Period. The JV shall clearly indicate the Roles & Responsibilities of each of the Members and the JV shall be jointly and severally responsible for the execution of the proposed Waste to Fuel/ Value added products/ Energy Project.

6.1.2. Participating firms/parent companies should not have been blacklisted or debarred from participating in tenders by any Central/ State Govt. agencies or autonomous bodies or Universities/Institutions (An undertaking on the agency's letterhead to this affect should be furnished) in last five years.

6.1.3. In case of non-Indian entities, should not have been named in any sanction from any nation, nor should have been held guilty under various anti-corruption/ anti-malpractice laws worldwide. An undertaking to the effect must be furnished.

6.1.4. Eligible bidder should have designed, financed, engineered, erected and commissioned Waste to Fuel/Value added products/ Energy Plant employing suitable technology meeting Statutory Requirements and Emission Standards prevailing at the Plant Location in last 10 years and those Plants are in operation services of Waste to Fuel/Value added products/ Energy Plants for last two continuous years as on the date of submission of Response, meeting any one of the following requirements:

- One Plant with treatment capacity of 960 TPD or above;



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OR

- Two Plants each with treatment capacity of 600 TPD or above;

OR

- Three Plants each with treatment capacity of 480 TPD or above;

OR

- Multiple Plants with total treatment capacity of 1,440 TPD or above.

6.2. Financial eligibility criteria

6.2.1. Average Annual Turnover of the Eligible bidders in the preceding three (3) financial years shall not be less than INR 150 Crores or equivalent.

6.2.2. Net Worth of the Eligible bidder during the preceding financial year shall be INR 100 Crores or equivalent.

7. Response Criteria for Interested Entities

7.1. Interested entities need to submit response/ application to EoI in an envelope clearly marked "Global Expression of Interest (EoI) for setting up 1,800 TPD Waste to Fuel/Value added products/ Energy Plant" not later than 04.05.2021, 11:00 hrs IST only by email. Responses shall be sent to tmcswm333@gmail.com.

7.2. The response shall include details of entity and supporting documents to technical qualification criteria in the format as in Annexure-1 and Annexure-2, respectively. The financial credentials supporting financial qualification criteria shall be provided as per the format given in Annexure-3. The brief write-up on proposed technology brief (basic design details) shall be provided as per the format given in Annexure-4.

7.3. Financial and Technical qualification criteria shall be submitted through email in separate zipped folders. If the size of the file exceeds beyond the permissible size, the same shall be shared through an online drive link. Entities shall ensure that TMC has easy access to the online drive and shall not have to request permissions to access the drive link.

7.4. Interested Parties may obtain further information/suggestion/opinion by emailing to tmcswm333@gmail.com latest by 04.05.2021 , 11:00 hrs IST.

7.5. TMC reserves the right to cancel this process of Global EoI at any stage without assigning any reason. The EoI is not part of bidding process/ notice inviting tender.

Dr. Vipin Sharma, IAS
The Municipal Commissioner
Thane Municipal Corporation, Thane



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8. Annexures

8.1. Annexure 1: Details of the Entity

Please provide details of the entity which is submitting an EoI for the project as follows:

Name of Entity	Legal status (Public/ Private Limited/ Proprietorship etc)	Country of Incorporation	Date of Establishment (MM-YY)	Principal place of business	Presence in India (Y/N)	Contact details of Designated Representative					
						Name	Designation	Address	Phone No.	Fax	Email
1	2	3	4	5	6	7	8	9	10	11	12

Signature and Stamp of the Applicant



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8.2. Annexure 2: Details of Technical Qualification Criteria

Please provide details of projects that qualify technical criteria in the below format (mention projects in descending order of Capacity (TPD) of project):

Name of Entity/ Client	Description of Project	Project Model (PPP, DBO, DBFO T, etc)	Date of completion)	Capacity (TPD) and (MW)	Capex (INR Crore or US\$ Million)	Contact details of Designated Representative					
						Processing Capacity (TPD)	Disposal (TPD)	Technologies Used	Currently Operational (T/N)	Does the scope include O&M (Y/N)	O&M Experience (Y/N)
1	2	3	4	5	6	7	8	9	10	11	12

Note:

1. Use separate row for each individual project
2. Name of client shall include:
 - a. Name of legal entity for which work was executed on the project.
 - b. Contact details (including Name, Designation, address, phone, fax, email of the key client personnel who oversaw the project)
3. Description of project shall include:
 - a. Name of legal entities which were involved in execution of the project, nature of waste characteristics, environmental standards.
4. Technologies used (Column 9) - e.g. Incineration, Bio-methanation, RDF, Pyrolysis, composting etc. A brief write-up on technologies used for processing & disposal shall be enclosed separately for each project.
5. The private entity may at their discretion provide any supporting documents which enhances the clarity of the scope of work for each of the projects (including performance certificate) listed above.

Signature and Stamp of the Applicant



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8.3. Annexure 3: Details of Financial Qualification Criteria

Please provide financial details of entity for the last 3 years that qualify financial criteria in the below format (reverse chronological order i.e. latest financial year in first row):

Financial Year Period (MM-YYYY to MM-YYYY)	Turnover (INR Crore or US\$ Million)	EBITDA (INR Crore or US\$ Million)	PBT (INR Crore or US\$ Million)	Net Worth (INR Crore or US\$ Million)
1	2	3	4	5
2020-21				
2019-20				
2018-19				

Note:

1. Use separate row for each financial year
2. EBITDA is Earning Before Interest Taxes Depreciation and Amortization
3. PBT is Profit Before Tax
4. Net Worth is defined as:
 - a. Net Worth = (Equity Share Capital plus & Reserves) minus (Revaluation Reserves & Intangible Asset &
5. Miscellaneous Expenditure to the extent not written off and carry forward losses)
6. Enclose audited financial statements and annual report for last 3 financial years

Signature and Stamp of the Applicant



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8.4. Annexure 4: Proposed Waste Processing & Disposal Technologies and Project Details

Please provide the following details to help us understand your project and technology management plan.

1. Technologies proposed for Waste Processing and Disposal
 - a. Suitability of the waste treatment technologies for processing mixed MSW generally encountered in India. Inert disposal technology
 - b. Land requirements for the project
 - c. Strategy for waste management
 - d. Details of equipment manufacturing/ sourcing
2. O&M plan for the project
 - a. Workforce shifting for the project including details of workforce requirement (skilled and unskilled)
 - b. Plan for sourcing such workforce locally for the project
3. Assessment of the key risks perceived by the entity on the project
 - a. Possible risk mitigation mechanism
 - b. Expectations/requirements of the private entity from TMC

The entities may at their discretion provide any supporting documents which enhances the clarity of the project and technology management strategy.



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8.5. Annexure 5: Estimated project cost

Interested entities are requested to kindly provide a year wise estimate for capital and operational expenditure:

Sr. No.	Year	Capital Expenditure	Operational Expenditure
1	2022		
2	2023		
3	2024		
4	2025		
5	2026		
6	2027		
7	2028		
8	2029		
9	2030		
10	2031		
11	2032		
12	2033		
13	2034		
14	2035		
15	2036		
16	2037		
17	2038		
18	2039		
19	2040		
20	2041		
21	2042		
22	2043		
23	2044		
24	2045		
25	2046		

Note:

1. All costs mentioned shall be considered only for budgetary approval by TMC and not be taken into consideration in case same firm bids in formal tender.
2. The cost is to be mentioned in INR (Rupees) only.
3. Cost shall include annual price escalation scenarios, intermittent capital expenditure through the project period, depreciative interest rate, etc. or any other factor shall be mentioned and taken into consideration.

Signature and Stamp of the Applicant