

***NTPC GE Power Services Pvt. Ltd. (NGSL)***

(A Joint Venture between NTPC Ltd. & GE Power Systems GmbH, Germany.)

EXPRESSION OF INTEREST (EOI) FOR IDENTIFYING WASTE TO  
ENERGY (WtE) OEM TECHNOLOGY PROVIDER AS JV PARTNER  
FOR BIDDING & EXECUTION OF WtE PLANTS

**DOCUMENT NO.: NGSL-RFQ-101-A**

**SECION – I**  
**INVITATION FOR EXPRESSION OF INTEREST**

**EOI No.: NGSL-RFQ-101-A**

**Date: 21/08/2018**

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ENERGY (WtE) OEM TECHNOLOGY PROVIDER AS JV PARTNER FOR BIDDING &  
EXECUTION OF WtE PLANTS**

EOI shall be received up to 23:59 hrs (IST) on 07.09.2018 in soft copy to e-mail mentioned below. No manual or hard copy submission shall be accepted.

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## **1.0 INTRODUCTION**

NTPC GE POWER SERVICES PVT. LTD. (NGSL) is 50-50% Joint Venture company between NTPC Ltd. and GE Power Systems GmbH, Germany (A GE group company). NGSL plans to bid and execute projects for WtE Plants and for this, NGSL invites EoI from Companies in India or outside India for identifying WtE OEM (Original Equipment Manufacturer) Technology provider as JV partner for bidding and executing of WtE Plants.

## **2.0 BACKGROUND**

One of the components of Swachh Bharat Mission (SBM) undertaken by the Ministry of Urban Development (MoUD) is scientific management of Municipal Solid Waste (MSW) generated in the country. Under this SBM scheme, it is proposed that 200 WtE plants be set up all over India. Further, Ministry of Power, Government of India made amendments in the Electricity Act of 2003, for ensuring that power produced from WtE is mandatorily procured by power DISCOMS. This step will go a long way in promoting WtE plants in the country and for making India clean. Swachh Bharat Mission is likely to get a big boost with procurement of 100 % power produced from WtE plants.

## **3.0 INTENT OF THE EXPRESSION OF INTEREST (EOI)**

Through this EOI, NGSL intends to identify prospective WtE OEM technology provider as JV Partner which can partner with NGSL for bidding and execution of WtE projects. NGSL is looking for Grate firing as a suitable technology for scientific disposal of MSW to energy considering Indian kind of unsegregated MSW. The technology should be commercially proven meeting all the necessary environmental norms as per Indian Solid Waste Management Rule (SWM) 2016 and amendment 2018.

## **4.0 ELIGIBILITY**

- I. WtE OEM companies of repute who have carried out Waste to Energy project of at least 300 TPD (Tons per Day) in capacity of Municipal Solid Waste (in a single unit / line) and the company should have proven experience in Design, Engineering, Erection and Commissioning of such facility in India or abroad and the project is in successful commercial operation for at least two years at the time of submission of EOI.
  
- II. The average annual turnover of the Company in the preceding three (3)

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financial years, should not be less than Rs. 1400 million (Indian Rupees One Thousand four hundred million only) or in equivalent foreign currency.

- III. The Net Worth of the Company as on the last day of the preceding financial year (2017-18) should not be less than 100 % (hundred percent) of its paid-up share capital.

Participants to this EOI are required to submit documentary evidence in support of fulfillment of above technical & financial requirements of eligibility.

NGSL reserves the right to reject or accept any or all applications, cancel/withdraw the EOI process without assigning any reason whatsoever and in such case no applicant / intending applicant shall have any claim arising out of such action.

**SECTION - II**

**INSTRUCTIONS TO APPLICANTS**

## **A. Scope of Work**

Design, Engineering, Manufacturing, Supply, Packing and Forwarding, Transportation, Unloading, Storage, Installation and Commissioning of components of Waste to Energy plant in Full EPC basis across India. Bidder shall provide comprehensive operation & maintenance of the plant for a period of five years from the date of successful completion of trial run.

**NGSL shall be selecting the prospective partner to ensure competitiveness with optimal division/ scope of work between NGSL & Technology provider.**

The Typical scope for a WtE Plant includes the following:

- I. Design, engineering, manufacturing, supply, packing and forwarding, transportation, unloading, storage, installation, testing and commissioning of equipments, Demonstrating the guaranteed performance parameters and compliance to all prevailing norms for emission for Waste to Energy plant shall be based on single point responsibility, completely covering the following activities and services in respect of all the equipment & works.
- II. Acoustic enclosure for entire plant / machinery along with appropriate architecture to ensure pleasing appearance on par with international standards to promote people acceptance level towards WtE plant.
- III. Design and construction of foundation for equipment & chimney.
- IV. Site leveling, clearing of vegetation, if any.
- V. Arrangement for construction power, startup power, water etc., required for construction of entire plant.
- VI. Providing engineering drawings, equipment sizing and performance data, instruction manuals, as built drawings and other information.
- VII. Construction of Main Control room(s) with switchgear room, Operator cabin (if any) store room for spares, equipments, chemicals etc., with all electrical fitting and furniture, fencing of plant boundary, security cabin etc.
- VIII. Construction of switchyard(s) with associated electrical works required for interfacing with grid (i.e. transformer, breakers, isolators panels, protection system, earth ing and metering) and evacuation of power through underground trench or cable trestle / over ground.
- IX. Construction of internal roads, pathways, fencing and drainage system.
- X. Construction of water treatment / leachate treatment system / zero liquid discharge (ZLD).
- XI. Supply of all hardware & software electronic systems to upload emission parameter to website for remote monitoring and display at plant gate.
- XII. Operation & maintenance of WtE Plant along with electrical equipments, consumables and spare parts for a period of five years from the date of successful completion of trial run including disposal of ash and rejects (if any) to nearby landfill, identified for this purpose.
- XIII. Supply, erection and commissioning of fire-fighting systems, CCTV cameras and its network inside the plant, wherever required for its safe and reliable operation.
- XIV. All necessary control and instrumentation system, human machine interface (HMI),

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control logics, protection and interlocks ensuring safe and reliable operation of waste to energy project.

- XV. Detailed design of all the equipment and equipment system(s) including all control and instrumentation, electrical, civil, structure steel works included in bidder's scope.
- XVI. Compliance with statutory requirements and obtaining clearances from statutory authorities, wherever required. (This includes IBR approvals and registration of plant, explosive authority's approval, Consent to Establish, Consent to Operate, approval from electrical inspector, factory inspector, approval for excise and custom duty waiver etc. if any)
- XVII. Complete manufacturing including shop testing/type testing where applicable;
- XVIII. Packing and transportation from the manufacturer's works to the site including customs clearance & port clearance, port charges, if any.
- XIX. Receipt, unloading, storage, preservation, handling and conservation of equipment at the site.
- XX. Fabrication, pre-assembly if any, erection of equipments, site & shop testing, completion of facilities, commissioning and successful operation of complete system and individual equipments.
- XXI. Performance and guarantee tests after successful completion of initial operation.
- XXII. Spares: Supply of mandatory spares, start-up and commissioning spares, recommended spares and other spares as required for complete system erection, testing, commissioning, start-up, initial operation etc. at site.
- XXIII. Operation & Maintenance of plant including supply of manpower, machineries, T&P, consumables, spares etc. for initial period of five year as described above; in case of lube oil or any other specific consumables, top up requirement for 2 years shall be supplied.
- XXIV. Reconciliation with customs authorities, in case of foreign Bidders.
- XXV. Complete as built documentation and O&M manual.
- XXVI. Satisfactory conclusion of the contract.  
The technology provider/ JV Partner shall be responsible for providing all material, equipment and service, which are required to fulfill the intent of ensuring operability, maintainability, reliability and complete safety of the complete work, irrespective of whether it has been specifically listed herein or not.



**B. Schedules:**

- a. **Schedule-1:** Company/Agency profile and Organization Structure.
- b. **Schedule-2:** Turnover and Profit/Loss of the agency in preceding three financial years and net worth of the Company/Agency.
- c. **Schedule -3:** Past experience with regard to
  - i. Relevant experience in similar type of project
  - ii. Total numbers of such type of projects-International and in India
  - iii. Client Certificates/Other certificates.
- d. **Schedule-4:** Scope covered in previous Waste to Energy projects and other technical details.
- e. **Schedule-5:** Time schedule for setting up of Waste to Energy Plant.

SCHEDULES ARE TO BE FILLED UP AND SUBMITTED IN MS WORD FORMAT.

ALL CREDENTIALS/ SUPPORTING DOCUMENTS RELEVANT TO THE SCHEDULES ARE TO BE SUBMITTED PREFERABLY IN SINGLE PDF FILE.

**(All the documents are to be submitted on Company's Letter Head)**

**Schedule – 1**

**(Company Profile and Organization Structure)**

**(To be submitted on *Company's Letter Head*)**

**Name of the**

**Company:**

**Registered**

**Address:**

**Contact Person & Designation:**

**Postal address for**

**communication: Telephone**

**No.:**

**Fax No.:**

**E-mail address:**

## Schedule – 2

(To be submitted on *Company's Letter Head*)

### (TURNOVER OF THE COMPANY IN THE LAST THREE FINANCIAL YEARS AND NETWORTH OF THE COMPANY)

A) We confirm that annual turnover of M/s..... [Applicant] for the preceding three financial years is indicated below:-

Sl. No.	Financial Year	Turnover amount (In Bidder's Currency)	Turnover amount (In Million Rs.)
1.	2015-2016		
2.	2016-2017		
3.	2017-2018		

B) We confirm that Profit/Loss of M/s..... [Applicant] for the preceding three financial years is indicated below:-

Sl. No.	Financial Year	Profit/Loss (In Bidder's Currency)	Profit/Loss (In Million Rs.)
1.	2015-2016		
2.	2016-2017		
3.	2017-2018		

**We have enclosed Balance Sheets and Profit & Loss account duly certified by Chartered Accountant**

C) We hereby confirm that net worth of M/s ----- (Applicant) as on the last day of the preceding financial year 2017-18 is given below:-

<b>Sl. No.</b>	<b>Description</b>	<b>As on last day of the preceding financial year</b>
1.	Paid-up Share Capital	
2.	Net worth	
3.	% age of Net worth to paid-up Share Capital	

### Schedule – 3

(To be submitted on *Company's Letter Head*)

#### I. Relevant experience in Waste to Energy project

Sl. No	Name of the project	Capacity [TPD]	Location	Date of award of project	Completion year of the project	Scope of the project	Attach Client certificates
						As per following scope description sheet	
						--do--	
						--do--	

#### II. Scope description sheet

Name of the project [ Atleast two different project at two different location]					
S.No.	Scope	Whether Yes/ No		Attach documents in support of the claim	
		Grate system	Flue gas Treatment system		
1	Design				
2	Engineering				
3	Manufacturing / Got Manufactured				
4	Supply				
5	Erection / supervised erection				

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6	Commissioning / supervised commissioning		
7	Performance guarantee test		
8	Waste Calorific value	Kcal / kg	
9	Energy Capacity	Electric Power Generation [MW] Thermal Energy capacity [MW] Total capacity [MW]	
10	Operation of plant	Yes / No (With Years of experience)	
11	Maintenance of plant	Yes / No (With Years of experience)	
12	Net efficiency of the plant	%	
13	Auxiliary Power consumption	In kW and in %	
14	Consumables	Water - Ton/Day Lime - Ton/Day Activated carbon - Ton/Day Urea / Ammonia – Ton/Day Other consumables if any	
15	Total area of the plant	Square meters.	
14	Grate cooling type	Air cooled / water cooled	
15	Type of Grate	Reciprocating / Counter reciprocating / rotary / any other type	
16	Contact detail of customer	Name, address, contact email, contact phone number, website address.	

**III. Client certificates or any other certificates**

All relevant certificates or documents shall be submitted in pdf. file format.



## Schedule - 5

### Time schedule for Setting up of Waste to Energy Plant

S. No.	Activities/Milestone * (This is general milestone as per NTPC GE POWER SERVICES PVT. LTD. understanding which can be modified as per applicability)	Period in months from Letter of Award (LOA)	
		Start	Finish
1.	Site mobilization and preparatory works		
2.	Soil Investigation		
3.	Site Leveling		
4.	Detailed Engineering & Approval		
5.	Foundation and Civil works		
6.	Delivery of main equipment (Grate, Reactor, Bag filter, Pressure Parts etc.,)		
7.	Installation of main equipment		
8.	Other Misc. Civil works		
9.	Commissioning (cold & hot)		
10.	Trial Run		
11.	Completion of facilities		
12.	Any other activity		