

(INVITATION FOR EXPRESSION OF INTEREST)

**NTPC Limited**

(A Government of India Enterprise)



**INVITATION FOR**

**EXPRESSION OF INTEREST (EOI)**

**For**

**IDENTIFICATION OF VENDORS AND SYSTEM/TECHNOLOGY FOR FIRE  
DETECTION AND PROTECTION SYSTEM OF BIOMASS STORAGE SILOS  
AT THERMAL POWER PLANTS**

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### DETAILED NOTICE INVITING EXPRESSION OF INTEREST (EOI)

EOI No.: NTPC/PE-PU/EOI/01/2022-23

Date: 06-10-2022

**NTPC is Inviting an Expression of Interest for “Identification of vendors and system/technology for Fire detection and Protection system of Biomass storage silos at thermal power plants.**

1. NTPC Limited (A Government of India Enterprise) intends to install fire detection and protection system for biomass storage silos for its upcoming and existing thermal power plants. In this regard, NTPC Limited invites Expression of Interest (EOI) from any Indian/Foreign entity.

***Note: This EOI is to identify prospective entities along with suitable system/technology of fire detection and protection system for biomass storage silos.***

#### **2. DOWNLOAD AND TIMELINES FOR SUBMISSION OF EOI**

- a. Interested APPLICANTS may download the documents of EOI free of cost from [www.ntpctender.com](http://www.ntpctender.com) & <https://eprocurentpc.nic.in>
- b. **Last date for submission of EOI : 30.10.2022**

3. NTPC encourages submission of EOI in soft copy. For consideration of EOI, APPLICANTS are required to e-mail softcopy of EOI, completed in all respect, through e- mail mentioned hereunder. If APPLICANTS also wish to submit hard copy of the EOI, the same can be submitted either in person or by registered/ speed post till the last date of submission of EOI to the following address: -

To: Subhasis Das, AGM (PE C&I), Doondeswar, Sr Manager (PEM-PU/ ET & PR)

Email: [vdoondeshwar@ntpc.co.in](mailto:vdoondeshwar@ntpc.co.in), [subhasisdas@ntpc.co.in](mailto:subhasisdas@ntpc.co.in)

CC to: [akhilagarwal@ntpc.co.in](mailto:akhilagarwal@ntpc.co.in)

Project Engineering (Mechanical),

NTPC Limited, SRHQ, NTPC Bhavan, Kavadiguda, Secunderabad-500080

4. NTPC 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, APPLICANT shall not have any claim arising out of such action. NTPC bears no responsibility or liability of any kind in reference to the EOI.

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# Detailed EOI

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### 1. **INTRODUCTION**

- i. NTPC Limited produces around 300 billion units of electricity annually through its cluster of gas, coal, hydro and RE based power stations of more than 69 GW capacity spanning across the country. Further NTPC plans targets RE capacity of 60 GW by 2032.
- ii. NTPC Ltd., in keeping focus on power generation in environmentally responsible manner, has already initiated biomass co-firing at its thermal power plants. This is also mandated by the policy as issued & later revised by the Ministry of Power (Government of India) in Oct. 2021 for “Biomass Utilization for power generation through co-firing in Coal based Power Plants”. Accordingly, it intends to co-fire biomass at its upcoming and existing thermal power plants.
- iii. The ultimate objective is to reduce carbon emission of coal fired power plant and simultaneously reducing air pollution by discouraging stubble burning by way of co-firing with coal.

### 2. **INTENT OF THE EXPRESSION OF INTEREST (EOI)**

- i. NTPC’s conventional coal-based fleet is required to mandatory co-fire biomass towards environment protection as also towards compliance of MoP policy guidelines in this regard.
- ii. The above is to be achieved by way of blending of biomass pellets (torrefied only) along with coal.
- iii. The purpose of this EOI is to identify prospective potential entities along with suitable system/technology of fire detection and protection system of biomass storage silos.

### 3. **CRITERIA FOR PARTICIPATION:**

- i. The Applicant of the EOI should be any entity capable of having experience in engineering/design/supply/manufacturing/consultancy of fire detection and protection system related works.

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### 4. The Applicants should note that:

- a. For expression of interest, Application Form and Annexures given shall be duly filled and sent to NTPC by the APPLICANT in soft copy.
- b. Applicants should go through EOI document thoroughly before filling and submitting the application form and annexures.
- c. Applicants shall mention the name and contact details of two persons, with complete address, phone number and email id.
- d. NTPC Ltd. may, at its sole discretion, ask for additional information/ documents and/ or seek clarifications from the Applicant(s) after the Deadline for submission of response, inter alia, for the purpose of removal of inconsistencies or infirmities in their responses.
- e. This EOI is non-committal.

### 5. Enquiries and clarifications

Any clarifications on the EOI may be sought to the following via email:

To: Subhasis Das, AGM (PE C&I), Doondeswar, Sr Manager (PEM-PU/ ET & PR)  
Email: vdoondeshwar@ntpc.co.in, subhasisdas@ntpc.co.in  
CC to: akhilagarwal@ntpc.co.in

### 6. Corrigendum

At any time before the last date of submission of EOIs, NTPC may, for any reason, whether at its own initiative or in response to a clarification requested by an Applicant, modify the EOI document. The amendment will be posted on the website and will be binding on the Applicants and the Applicant will give due consideration to the same, while they submit their EOIs, and would invariably enclose documents/ information, as required, on account of the amendment, as a part of the EOI. NTPC may, at its discretion, extend the deadline for the submission of EOIs.

### 7. Preparation of the response to Eoi

The application of EOI consists of the following:

- (a) Filled up all annexures.

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### **8. Submission of the response to Eoi**

All the pages of the response should be duly signed by the authorized signatory.

The responses to the EOI should be submitted within the Deadline at the address provided in this EOI to the following emails:

To: vdoondeshwar@ntpc.co.in, subhasisdas@ntpc.co.in  
CC to: akhilagarwal@ntpc.co.in

### **9. Opening of responses to the Eoi**

The responses to the EOI shall be opened as per the time schedule 15:00 HRS at date as mentioned in the document and will be communicated to the Applicants via e- mail. In the event of any of above dates falling on a day which is not a working day or which is a public holiday, the responses shall be opened on the next working day at the same venue and time.

### **10. Costs and expenses towards response to EOI**

The Applicants shall bear all the costs associated with the preparation of the response and participation in discussions and finalization & execution of the documents related with this EOI, regardless of the conduct or outcome of this short-listing/ selection process.

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**Annexure-1**

**FORMAT FOR COVERING LETTER CUM UNDERTAKING**

(The covering letter should be on the Letter Head of the Applicant)

Date : \_\_\_\_\_

Place : \_\_\_\_\_

To,  
.....

**Sub.: (INVITATION FOR EXPRESSION OF INTEREST)**

**Ref.: EoI No. \_\_\_\_\_, dated \_\_\_\_\_(the “EoI”)**

Dear Sir,

We, the undersigned ..... [insert name of the “Applicant”] having read, examined and understood in detail the **(INVITATION FOR EXPRESSION OF INTEREST)**. We confirm that neither we nor any of our Parent Company/ Affiliate/ Ultimate Parent Company has submitted response other than this response directly or indirectly in response to the aforesaid EOI.

1. We give our unconditional acceptance to the EOI, issued by NTPC, as amended. In token of our acceptance to the EOI, the same have been signed & stamped by us and enclosed to the response.
2. We have submitted our response strictly as per provisions and formats of the EOI, without any deviations, conditions and without mentioning any assumptions or notes.
3. We hereby unconditionally and irrevocably agree and accept that the decision made by NTPC in respect of any matter regarding or arising out of the EOI shall be binding on us. We hereby expressly waive any and all claims in respect of EOI process. We confirm that there are no litigations or disputes against us, which materially affect our ability to participate or function under the obligations with regard to EOI.

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4. Details of the contact person are furnished as below:  
Name:  
Designation:  
Address:  
Contact numbers:  
email id:
5. We are enclosing herewith the entire response containing duly signed formats in electronic format sent via email to: vdoondeshwar@ntpc.co.in, subhasidas@ntpc.co.in as per the EOI for consideration.
6. It is confirmed that our response is consistent with all the requirements of submission as stated in the EOI and subsequent communications from NTPC, if any.
7. The information submitted in our response is complete, strictly as per the requirements stipulated in the EOI and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response.

We remain,

Yours sincerely

(Name, Designation and Signature of Authorized Person in whose name Power of Attorney is issued)



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Annexure-2

INFORMATION TO BE SUBMITTED BY APPLICANT

(Note: Documents in support of meeting the respective requirement shall be submitted by the Applicant.)

1. Name of the Entity:
2. Legal status of the Entity:
3. Brief description of the Entity including details of its business groups/subsidiaries/ affiliates:
4. Existing commercial/ demonstration facilities (if any)– Locations, Capacity
5. Date of Incorporation (if any):
6. Date of Commencement of Business (if any):
7. Full address including Telephone nos. / Fax nos.:
  - a. Registered Office:
  - b. Head Office:
  - c. Address for communication:
  - d. Contact Details:
  - e. Office Address in India, if any:
8. Existing Manufacturing facilities – locations, capacity, Complete address
9. Documents to be enclosed:

**Technical Credentials** – Relevant Product/System catalogues, Experience /Reference List (if any), Copies of Customer Certificates, Engineering strengths, collaborations/tie-ups with manufacturer (if applicable), quality accreditations, logistics infrastructure etc.

**Financial Credentials** – Copies of Audited Financial statements (Annual Reports) for last 3 years (if any).

10. Any other documents considered relevant.

(Sign & Entity Seal)  
Authorized signatory

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### Annexure-3

#### INFORMATION TO BE SUBMITTED BY APPLICANT

##### Essential Information

1	Fire detection system/technology/equipment its type/details/design/specification	
2	Fire protection system/technology/equipment its type/details/design/specification	
3	Applicable mandatory standards and codes (India/International) for fire detection system along with detailed description	
4	Applicable mandatory standards and codes (India/International) for fire protection system along with detailed description	
5	Cost of the fire detection and protection system (item wise break may be provided as much as possible) i) Cost of detection system ii) Cost of protection system	
6	Manufacturing capabilities/facilities (Enclose the complete details of Plant & Machine along with their annual production capacity)	
7	Equipment Rating	
	i) Details of all ratings for which applicant is interested in setting up manufacturing facilities/already have manufacturing facilities to be furnished ii) Rating upto which the equipment being manufactured iii) Reason for not going for higher rating manufacturing	
8	Design capabilities	
9	Engineering capabilities	
10	i) If equipment is being/will be manufactured under technology transfer, if yes, Details of technology provider ii) If technology transfer is not applicable, what are the sources of technology acquisition	
11	Local content	
12	Lead time for manufacturing facilities set-up	
13	i) Past experience/references where this equipment is supplied ii) Performance feedback	
14	Quality checks adopted	
15	Type testing facilities available or not	
16	Performance testing facilities available or not	
17	Spare support (Please fill period till it will be provided)	

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18	If applicant is already NTPC approved vendor	
19	If applicant is approved by EPC/SG/STG/BoP vendors (Please mention name)	
20	Enclose the details of Domestic supply orders executed	
21	Enclose the details of Export Supply Orders, if any,	
22	Details of National/International certification/accreditation, if any.	
23	Any other relevant information	

(ANY OTHER INFORMATION)

If Applicant desires to share any other additional Information relevant to the work / assignment like brochure, future plan or any suggestion, it may be given in this Annexure.

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### Annexure-A

#### **Dimensions of Biomass Silos**

Tentative Diameter of Silo Shell (meters) – 9.5 to 10 Approx.

Tentative Height of Silo (meters) – 16 to 17 Approx.

#### **Characteristic of Biomass (Torrefied Rice Straw)**

Analysis was carried out using the powdered torrefied rice straw samples and the results of various testing for the specific sample is tabulated below:

a. Proximate Analysis (wt %, Air Dried Basis )

M	Ash	VM	FC
6.68	21.66	47.68	23.98

b. Ultimate Analysis (wt %, Air Dried Basis)

C	H	N	S	O
46.65	3.93	1.13	0.14	19.81

c. Ash Fusion Temperature under reducing conditions: °C

IDT	ST	HT	FT
1134	1357	1374	1422

d. Ash Elemental Analysis (Elements expressed as Oxides in %w/w)

Na <sub>2</sub> O	MgO	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	SO <sub>3</sub>	K <sub>2</sub> O	CaO	TiO <sub>2</sub>	MnO	Fe <sub>2</sub> O <sub>3</sub>
2.423	7.783	4.623	67.48	1.9	1.9	6.15	4.21	0.39	0.03	2.83

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Annexure-B

**Technical details for Biomass (Torrefied Biomass pellet)**

<b>S.N.</b>	<b>Technical Data</b>	<b>Unit</b>	<b>Specifications for Torrefied Pellet</b>
1.	Diameter	mm	In case of cylindrical shape: Diameter: Not more than 35 mm Length: Random For other shapes: No dimension should exceed 35 mm.
2.	Fines % (<3 mm) (ARB*)	Wt%	fines ≤ 5%
3.	Gross Calorific Value (GCV/ARB*)	Kcal/Kg	Around 3400 Kcal/Kg
4.	Moisture (ARB*)	Wt%	≤ 15% (not more than 15%)

\*ARB – As Received Basis