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eProcurement System Government of India

Tender Details

Date : 18-Mar-2026 05:09 PM

Print

Basic Details

Organisation Chain	National Council for Cement and Building Materials		
Tender Reference Number	NCB/Project/AFT-07		
Tender ID	2026_NCCBM_902914_1	Withdrawal Allowed	Yes
Tender Type	Open Tender	Form of contract	Works
Tender Category	Services	No. of Covers	1
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No
Payment Mode	Not Applicable	Is Multi Currency Allowed For BOQ	No
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No

Cover Details, No. Of Covers - 1

Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical/Finance	.pdf	Request for EOI as per the pdf attached
		.xls	No Price Bid

Tender Fee Details, [Total Fee in ₹ * - 0.00]

Tender Fee in ₹	0.00		
Fee Payable To	Nil	Fee Payable At	Nil
Tender Fee Exemption Allowed	No		

EMD Fee Details

EMD Amount in ₹	0.00	EMD Exemption Allowed	No
EMD Fee Type	fixed	EMD Percentage	NA
EMD Payable To	Nil	EMD Payable At	Nil

[Click to view modification history](#)

Work /Item(s)

Title	NOTICE FOR EXPRESSION OF INTEREST FOR DETERMINATION OF MOISTURE CONTENT AND BIOGENIC CONTENT OF RDF USING ARTIFICIAL INTELLIGENCE BASED PREDICTION MODELS FOR THE INDIAN CEMENT INDUSTRY				
Work Description	as per pdf attached				
Pre Qualification Details	as per pdf attached				
Independent External Monitor/Remarks	NA				
Show Tender Value in Public Domain	No				
Tender Value in ₹	0.00	Product Category	Miscellaneous Services	Sub category	NA
Contract Type	Tender	Bid Validity(Days)	270	Period Of Work(Days)	60
Location	Ballabgarh, Haryana	Pincode	121004	Pre Bid Meeting Place	NA
Pre Bid Meeting Address	NA	Pre Bid Meeting Date	NA	Bid Opening Place	Ballabgarh, Haryana
Should Allow NDA Tender	No	Allow Preferential Bidder	No		

Critical Dates

Publish Date	18-Mar-2026 06:00 PM	Bid Opening Date	10-Apr-2026 10:00 AM
Document Download / Sale Start Date	18-Mar-2026 06:30 PM	Document Download / Sale End Date	09-Apr-2026 09:00 AM
Clarification Start Date	NA	Clarification End Date	NA
Bid Submission Start Date	18-Mar-2026 06:30 PM	Bid Submission End Date	09-Apr-2026 09:00 AM

Tender Documents

NIT Document	S.No	Document Name	Description	Document Size (in KB)
	1	Tendernotice_1.pdf	Request for EOI as per the pdf attached	922.46

Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	Tender Documents	EOI.pdf	as per pdf attached	905.03

Bid Openers List

S.No	Bid Opener Login Id	Bid Opener Name	Certificate Name
1.	ak.popuri@ncbindia.com	Anil K Popuri	ANIL KUMAR POPURI
2.	munishmoudgal@gmail.com	Munish Moudgal	Munish Moudgal
3.	bhupinder.singh007@gmail.com	Bhupinder Singh	BHUPINDER SINGH
4.	ravindar.deori@gmail.com	Ravindar Singh	Ravindar Singh

GeMARPTS Details

GeMARPTS ID	5AQFAATJVKI8
Description	for EOI
Report Initiated On	17-Mar-2026
Valid Until	16-Apr-2026

Tender Properties

Auto Tendering Process allowed	No	Show Technical bid status	Yes
Show Finance bid status	Yes	Stage to disclose Bid Details in Public Domain	Technical Bid Opening
BoQ Comparative Chart model	NIL	BoQ Comparative chart decimal places	2
BoQ Comparative Chart Rank Type	NIL	Form Based BoQ	No

TIA Undertaking

S.No	Undertaking to Order	Tender complying with Order	Reason for non compliance of Order
1	PPP-MII Order 2017	Agree	yes
2	MSEs Order 2012	Agree	yes

Tender Inviting Authority

Name	Head MMS
Address	National Council for Cement and Building Materials 34, km stone Delhi Mathura Road Ballabgarh-121004,Haryana

Tender Creator Details

Created By	Ravindar Singh
Designation	Assistant
Created Date	18-Mar-2026 10:50 AM

Expression of Interest (EOI)

NOTICE FOR EXPRESSION OF INTEREST FOR DETERMINATION OF MOISTURE CONTENT AND BIOGENIC CONTENT OF RDF USING ARTIFICIAL INTELLIGENCE BASED PREDICTION MODELS FOR THE INDIAN CEMENT INDUSTRY

(Only bidders who participate in the EOI process and are declared eligible will be permitted to submit technical and financial proposals for the RFP, which will be issued subsequently.)

EOI Reference No.: NCB/Project/AFT-07



National Council for Cement and Building Materials

*(Under the Administrative Control of DPIIT,
Ministry of Commerce and Industry, Govt. of India)
34 Km Stone, Delhi-Mathura Road (NH2)
Ballabgarh-121 004, Haryana, India*

Disclaimer

The information contained in this Expression of Interest (EOI) is provided to the Bidder(s) on the terms and conditions set out in this EOI document. The EOI document contains statements derived from information that is believed to be true and reliable at the date obtained, but does not purport to provide all of the information that may be necessary or desirable to enable an intending contracting party to determine whether or not to enter into a contract or arrangement with NCB in relation to the provision of services.

The EOI document is not a recommendation, offer, or invitation to enter into a contract, agreement or any other arrangement, in respect of the services. The provision of the services is subject to observance of the selection process and appropriate documentation being agreed between the NCB and any successful Bidder as identified by the NCB, after completion of the selection process as detailed in this document. No contractual obligation whatsoever shall arise from the EOI process unless and until a formal contract is signed by NCB with the Bidder. The purpose of this EOI is to provide the Bidder(s) with information to assist in the formulation of their proposals. This EOI does not claim to contain all the information each Bidder may require. Each Bidder should conduct their own investigations and analysis and should check the accuracy, reliability, and completeness of the information in this EOI and, where necessary, obtain independent advice. NCB makes no representation or warranty and shall incur no liability under any law, statute, rules, or regulations as to the accuracy, reliability, or completeness of this EOI. NCB may in its absolute discretion, but without being under any obligation to do so, update, amend, or supplement the information in this EOI.

Table of Contents

S. No.	Particular	Page No
1	Introduction	4
2	Definitions	4
3	Objectives of the EOI	5
4	Invitation of EOI	5
5	Eligibility Criteria	6
6	Project background & Scope of Work	6
7	Deliverables	7
8	General Terms and Conditions	8
9	Technical Offer	9
10	Contact Information	9
11	Dispute Resolution & Jurisdiction	10
12	Submission of Bids	10
13	Annexure A: Bidder's Profile	11
14	Annexure B: Undertaking by bidder	12
15	Annexure C: Eligibility Criteria	13
16	Annexure D: Project Requirements (Bill of Materials)	15
17	Annexure E: Presentation by Bidder	16

1. Introduction

National Council for Cement and Building Materials (NCB) is a premier body under the administrative control of the DPIIT, Ministry of Commerce and Industry, Govt. of India, for technology development, transfer, continuing education and industrial services for cement and construction industries. Geographically, NCB has its corporate center and main laboratories located at Ballabgarh (Near New Delhi); another well-established regional center at Hyderabad (Telangana) and centers at Ahmedabad (Gujarat) & Bhubaneshwar (Odisha).

NCB's area of work span over the entire spectrum of cement manufacturing and usage - starting with geological exploration of raw materials through the processes, the machinery, the manufacturing aspects, energy and environmental considerations to the final utilization of materials in actual construction, condition monitoring & rehabilitation of buildings and structures.

NCB serves as the nodal agency for providing the necessary support to Government for formulation of its policy and planning activities related to growth and development of cement industry. It is devoted to protect the interests of consumers of cement and concrete in the country. NCB's stakeholders are Government, Industry and Society, who perceive NCB's role as discharging national responsibility, providing adequate technology support and improving the quality of life respectively.

Centre for mining, environment, plant engineering and operation (CME) under NCB is exploring the application of artificial intelligence for cement industry application. In this regard, NCB invites the Expression of Interest (EOI) from Start-ups/ Companies/ Firms for development and validation of an artificial intelligence based prediction models to determine moisture content and biogenic content of refuse derived fuel (RDF) for the Indian cement industry

2. Definitions

- 2.1. 'NCB' means National Council for Cement and Building Materials.
- 2.2. 'EOI' means this Expression of interest prepared by NCB requesting bidders for providing scope of work, technical details i.e. Bill of Material etc. to develop, build, execute PROJECT ENTITLED "DETERMINATION OF MOISTURE CONTENT AND BIOGENIC CONTENT OF RDF USING ARTIFICIAL INTELLIGENCE BASED PREDICTION MODELS FOR THE INDIAN CEMENT INDUSTRY".
- 2.3. 'Bidder' means a vendor/firm/start up/company submitting the proposal in response to this EOI.

- 2.4. 'Contract' means the agreement signed by successful bidder and the NCB at the conclusion of bidding process, wherever required.
- 2.5. 'Proposal' means that Technical proposal including any documents submitted by the bidder as per the formats prescribed in the EOI.
- 2.6. 'Solution' means providing services for complete scope of work and software & hardware details of the project to develop, build, execute collaborative R&D work.

3. Objectives of the EOI:

NCB-Ballabgarh is working to execute collaborative R&D project with AI knowledge partner in the area of vision based AI covering objects classification, detection and segmentation to determine moisture content and biogenic content of RDF using artificial intelligence based prediction models for the Indian cement industry. Therefore, Expression of Interest (EoI) is invited from Start-ups/ Companies/ Firms in the field of artificial intelligence/deep learning targeting the enhanced usage of RDF in the cement industry.

The Expression of Interest (EOI) is issued for inviting proposals to bring out the details with respect to scope of services/work that are necessary for operational aspects focusing R&D project, infra requirements, models (on-premises or public cloud) of the project to be undertaken.

The EOI document is neither an offer letter nor a legal contract.

After receiving the details as sought, NCB will come up with Request for Proposal (RFP) for selection of service provider in implementing the above project.

4. Invitation of EOI:

NCB invites proposals from the eligible entities to submit complete scope of work and software & hardware details for the project to develop, build, execute collaborative R&D project.

No contractual obligation on behalf of the NCB whatsoever shall arise from the EOI process unless and until a formal contract is signed & executed by duly authorized officers of the NCB and the successful bidder.

Bidders are expected to examine all instructions, forms, terms, specifications, and other

information in the EOI document. The procedure and terms & conditions for submission of bid are enumerated in this EOI.

The Document can be downloaded from NCB Website www.ncbindia.com/tender.php or from Government portal gem.gov.in.

5. Eligibility Criteria:

Only those Bidders fulfilling the eligibility criteria should respond to the EOI. Eligibility criterion for the Bidder to qualify this stage is clearly mentioned in **Annexure C**. The Bidder would need to provide supporting documents as part of the eligibility proof. Bids received from the Bidders who do not fulfill any of the eligibility criteria are liable to be rejected.

6. Project background & Scope of Work:

Indian cement industry is moving toward alternative fuels utilization because of the high cost and scarcity of traditional fossil fuels. Municipal solid waste (MSW) based refuse derived fuel (RDF) is one of the promising alternative fuel for Indian cement industry. RDF obtained from MSW is generally 15-20 % which is the combustible fraction (paper, plastic, wood, cloth, etc.) of MSW as shown in Fig 1. Biogenic content covers paper, wood while plastic is non biogenic.

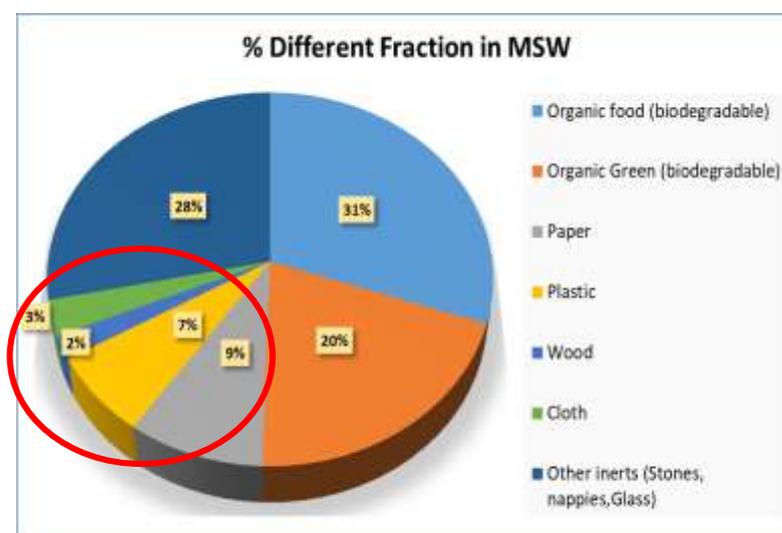


Fig 1. Typical composition MSW

MSW composition varies with source and location. RDF has both biogenic and non-biogenic content which varies depending upon its paper and plastic content. Moreover, mixing of this waste with plastics or other solid waste increases the complexity of the material before feeding to calciner. The cement plants are still looking for solutions to

control chloride content leading to build ups, reduce the high specific heat consumption due to enhanced AF usage. The varying particle size of RDF results in incomplete combustion and CO formation.

It is reported in literature that the classification of RDF particles is more difficult, since the original waste objects are shredded into particles of random shape and is highly heterogeneous. Also a compilation based on publicly available images like google images is not possible for RDF since virtually no images of single RDF particles can be found. Thus, database has to be created and AI based techniques needs to be explored for quick determination of biogenic content and moisture content in RDF.

The existing transfer chute and belt conveyor set up at NCB-Ballabgarh as shown in Fig 2 shall be utilized for experimentation work.



Fig 2: Chute belt conveyor system at NCB

The high resolution cameras will be required to capture the photographs of the RDF placed on conveyor belt for process modelling purpose. Some thermal and other sensors along with secondary data may be deployed to assist the model development. First of all, a database will be created based on the photographs of the actual RDF collected from the cement plant. The process modelling will be done based on the artificial intelligence/ machine learning/ computer vision & deep learning. The model should be able to predict the biogenic and moisture content of RDF. After the successful development of the model, the model shall be validated on real time. Further, a techno-economic analysis of system installation for a cement plant shall be carried out covering impact assessment on specific heat consumption.

7. Deliverables:

S. No.	Deliverable	Due Timeline (From date of release of work order)
1	Inception report & detailed work plan	1 st month

2	Installation of high resolution cameras, sensors, inhouse server	2 nd month
3	Creation of labeled dataset using RDF sample images including sensors (RDF samples will be provided by NCB)	8 th month
4	AI model development, demonstration & validation for NCB set up	10 th month
7	Techno economic analysis of system installation in a cement plant (data to be provided by NCB)	11 th month
8	Final report, software tool & deployment guidelines	12 th month

Note: Above mentioned deliverables and scope of work are indicative only hence bidders may provide their accurate deliverables and scope of work as part of Annexure-D and E with maximum duration of 1 year for project completion.

8. General Terms and Conditions:

- 8.1. After receiving the EOI details as sought, NCB will come up with RFP for selection of service provider in implementing the above project.
- 8.2. The scope/ responsibility of NCB and the selected bidder will be clearly defined in the upcoming RFP.
- 8.3. The duration of the project completion is 1 year; however, it can be increased as per the requirement of NCB and the final decision will be taken only by NCB.
- 8.4. Selected bidder shall arrange skilled manpower and other requirements for creating database of RDF (RDF samples provided by NCB) by conducting the experiments at NCB set up and for modelling/simulation purpose. A project coordinator is to be appointed by bidder at NCB-B at the start of the project till completion to monitor project timelines, server data management and to prepare/ finalize various research findings.
- 8.5. AI tools required for developing and validating the models will be in scope of bidder.
- 8.6. Selected bidder will share their findings to NCB and will submit a comprehensive report.
- 8.7. The modelling, validation based on experimental investigation will be in the scope of bidder.
- 8.8. Any intellectual property rights [patents/ design/ trademark/ copyrights] obtained by the NCB prior to signing of the agreement shall remain the property of NCB. The other party shall have no right to that intellectual property.

- 8.9. The selected bidder shall not have the option to commercially exploit/ use the intellectual property generated in the collaborative PROJECT prior to the permission from the NCB.
- 8.10. The procedural formalities for securing and maintaining the intellectual property rights [patents/trademark/copyright] if any, shall be the responsibility of NCB. The question of whether or not intellectual property right should be secured and the territory where these shall be secured shall be decided only by NCB.
- 8.11. In case of any dispute arising out of this EOI/ consequent agreement, the competent authority of NCB will be the final authority in resolving the issues.
- 8.12. The model deployment later at cement plant will be explored jointly by NCB and bidder on case to case basis.
- 8.13. It must be noted that this EOI is published for obtaining technical offer for “Determination of moisture content and biogenic content of RDF using Artificial Intelligence based prediction models for the Indian Cement Industry”. However, this EoI has been published without any financial commitment (Non-Committal EoI) from either side forwards any of the participating firms.
- 8.14. The Competent Authority of NCB is not bound to accept the EoI if any technical discrepancies are found in the EOI. However, it reserves the right to accept/reject the EoI, and the decision of the Authority in this regard shall be final and binding on the Bidder.
- 8.15. Participation in EoI will be considered as a qualification of the bidder in regular tender inquiry to be published later.

9. Technical Offer:

Interested bidders may submit all information requested in the following documents.

- 9.1. Annexure A- Bidder’s Profile
- 9.2. Annexure B- Undertaking by Bidder
- 9.3. Annexure C- Eligibility Criteria
- 9.4. Annexure D- Project Requirements
- 9.5. Annexure E- Presentation by Bidder

10. Contact Information:

For any technical query, please contact: Dr. Kapil Kukreja - Head of Centre, Centre for Mining, Environment, Plant Engg. & Operation, Email: ncbcmeb@ncbindia.com
Phone: +91-129-2666642

For any commercial/administrative query, please contact: Sh. Anil Popuri- Head of Services (Material Management Services) Email: - mmsb@ncbindia.com Contact No.- +91-129-2666641.

11. Dispute Resolution and Jurisdiction:

Notwithstanding anything contained herein above, in case of any dispute, claim and legal action arising out of this EOI, the parties shall be subject to the jurisdiction of courts at Faridabad, Haryana State, India only. Law of India will be applicable for Dispute Resolution.

12. Submission of Bids:

Bidders can download the documents & corrigendum from the site <https://ncbindia.com/tender/php>. The bidders have to submit bids in Hard copies to the following address:

“To,

Sh Anil Popuri- Head of Services (Material Management Services)

National Council for Cement and Building Materials, 34 Km Stone, Delhi-Mathura Road (NH2) Ballabgarh-121 004, Haryana, India”

NCB may, at its discretion, extend this deadline for submission of bids by releasing a corrigendum to this EOI document.

13. Annexure-A: Bidder's Profile

#	Parameters	Response
1	Name of the Firm/Company	
2	Year of Incorporation in India	
3	Names of the Partners/Directors	
4	Addresses of Firm/Company	
	a) Head Office	
	b) Local Office in Mumbai	
5	Authorized Contact person	
	a) Name and Designation	
	b) Telephone number	
	c) E-mail ID.	
6	Site details where the bidder has experience in performing the similar exercise.	Name of The Company: Brief Detail of the Work Done: Details can be given as annexure.

Authorized Signatories
(Name, Designation and Seal of the Company)

14. Annexure-B Undertaking by Bidder:

Place:

Date:

To:

Sh Anil Popuri- Head of Services (Material Management Services)
National Council for Cement and Building Materials,
34 Km Stone, Delhi-Mathura Road, Ballabgarh-121 004, Haryana, INDIA.

Undertaking (To be submitted by all Bidders on their letter head)

We _____ (bidder name), hereby undertake that-

- As on date of submission of tender, we are not blacklisted by the Central Government / any of the State Governments / PSUs in India or any Financial Institution in India.
- We also undertake that we are not involved in any legal case that may affect the solvency/existence of our firm or in any other way that may affect the capability to provide/continue the services to NCB.

Yours faithfully,

Authorized Signatories

(Name, Designation and Seal of the Company)

15. Annexure-C Eligibility Criteria:

Sl. No	Pre-Qualification Criteria	Detail of Proof to be Attached	Marks	Compliance (Yes/No)
1	The Bidder should be a company registered in India as per Company Act 1956 /2013 or a partnership firm / a Limited Liability Partnership company under the Limited Liability Partnership Act 2008 in India and should be in existence for the last 3 years from the date of issuance of EOI.	(Certificate of incorporation /certificate for commencement of business/GST Registration Certificate, PAN Certificate/other relevant documentary proof is to be submitted)	10	
2	Bidder/Bidder's should submit an audited balance sheet and Income tax return for the last three financial years.	Copies of the audited balance sheet and Profit/Loss statement of the company are to be submitted.	10	
3	Bidders must have 3 years of past experience in implementation of applications in the area of vision-based AI, covering object classification, detection, and segmentation and at least one successful industry-facing R&D/commercialization projects in the last 3 years. The firm should submit supporting documents in favour of their claim.	Proof of purchase order/work order to be submitted, indicating the company is providing such services.	10	
4	The Bidder should have qualified technical manpower and required infrastructure/ operation/ maintenance as per process requirement of the aforementioned artificial Intelligence/ machine learning/ computer vision & deep learning.	The firm should submit supporting documents in favors of their claim.	10	

5	Submit Project Requirements (Bill of Materials)	Annexure D	10	
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Authorized Signatories

(Name, Designation, and Seal of the Company)

Note: - Bidders who score 35 or more marks in the Annexure-C Eligibility Criteria, will be declared eligible and permitted to present their presentation in the given format (Annexure E: Presentation by Bidder).

16. Annexure D: Project Requirements (Bill of Materials):

A	Proposed AI Solution with Strategy and Roadmap. <ul style="list-style-type: none"> • Problem Statement & Objectives of the Project. • Proposed AI Solution & Methodology. • Project Deliverables (Refer EOI page-7)/Timeline/ and Phases. • Expected Outcomes. • Risk Assessment and Mitigation. 		Brief Details: Details can be given as an annexure.
B	Hardware Requirements List:		
	Sr. No	Item Details	Qty.
	1		
	2		
	3		
	4		
	5		
C	Software/Drivers /AI Models Requirements List:		
	Sr. No	Item Details	Qty.
	1		
	2		
	3		
	4		
	5		
D	Manpower Requirements List.		
	Sr. No	Roles/Designations Details	Nos.
	1		
	2		
	3		
	4		
	5		
E	Miscellaneous Requirements List		
	Sr. No	Details	Remarks
	1		
	2		
	3		
	4		
	5		

Authorized Signatories

(Name, Designation and Seal of the Company)

17. Annexure E: Presentation by Bidder:

The bidder's presentation will be a significant part of the evaluation. It will provide a platform for bidders to showcase their organization, illustrate the Proposed AI Solution with Strategy and Roadmap. Below is a structured outline that bidders can use as a template for their presentation:

1. Bidder Introduction (Marks-5)

- i) Location: Headquarters and other offices:
- ii) Current Team Size (global/local)
- iii) Stage of funding (for start-ups):
- iv) Years of experience in AI:

2. Relevant case studies demonstrating similar work have been carried out. (Marks-10)

3. Proposed AI Solution with Strategy and Roadmap. (Marks-10)

- i) Problem Statement & Objectives of the Project.
- ii) Proposed AI Solution & Methodology.
- iii) Project Deliverables (Refer EoI page-7) /Timeline/Phases.
- iv) Expected Outcomes.
- v) Risk Assessment and Mitigation.

4. Resource Requirements (Bill of Materials). (Marks-10)

- i) Hardware List (Sensors, high-quality cameras, Server (on-prem/cloud), etc.).
- ii) Software's/Drivers /AI Models (Existing or Need to Develop).
- iii) Manpower Deployment.

5. Costing Model. (Marks-10)

- i) CapEx (capital expenditures) Vs OpEx (operational expenditures)

6. Q&A (Marks-5)

Bidders are invited to supplement their presentations with additional content to showcase their capabilities.

Note: - Bidders who score 35 or more marks in the presentation will be declared eligible and permitted to submit their Technical and Financial Proposals for the RFP, which will be issued subsequently.