



CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET)
(Scientific Society, Ministry of Electronics and Information Technology (MeitY), Govt. of India)
IDA PHASE – III, CHERLAPALLY, HCL (PO), HYDERABAD – 500 051
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Advt. No. : C-MET/HD/SP-41/EOI/15 (3)/2020-2021

EoI for EMPANELMENT OF CONSULTANTS

C-MET invites applications from qualified and experienced engineers/scientists for empanelment as “Consultants” for consulting, advising, designing, vetting, identification of vendors and guiding the scientific/technical programs under MeitY sponsored project entitled “*Establishment of Centre of Excellence on E-waste Management*”. The empanelment is co-terminus with the project duration (i.e. 29.09.2024).

Sl. No.	Name of the Position	Educational Qualifications and Experience	Fee payable
1	Consultant	Applicants must be well experienced (minimum of 15 years) in the following areas preferably with MSc./M.Tech./Ph.D. in the areas of : 1. Metallurgy 2. Mechanical Engineering 3. Instrumentation Engineering 4. Chemical Engineering 5. Electronics Engineering 6. Electrical Engineering 7. Materials science/Ceramics 8. Physics 9. Chemistry Applicants with experience as scientists/engineers in a Research & Development institution shall be preferred	Rs.5000 per day

Interested individuals may please apply along with their curriculum vitae (CV) by attaching the testimonials in support of their educational qualifications and experience.

Sd/-
DIRECTOR

INVITATION
FOR
EXPRESSION OF INTEREST
FOR

Empanelment of Consultants for the
MeitY sponsored Project
***Establishment of Centre of
Excellence on E-waste
Management***

RESPONSE FORM

LAST DATE FOR SUBMISSION: 11th July 2020

1. INTRODUCTION:

Centre for Materials for Electronics technology (C-MET) has been awarded a project on management of E-waste by Ministry of Electronics and Information Technology, (MeitY), Government of India. It involves “Establishment of a Centre of Excellence on E-waste management”, called CoE hereinafter. One of the objectives of the CoE is to drive e-waste recycling and refurbishing to support GoI missions “Swatch Bharat” and “Make in India”. C-MET, Hyderabad has been chosen as the centre for pursuing the objectives of the project. C-MET, Hyderabad has developed a process know-how for the recovery of metals from spent printed circuit boards. C-MET, Hyderabad has also set up necessary infrastructure facilities to process the E-waste in an environment friendly manner, on a pilot scale. Another objective of the project is to encourage establishment of start-ups to collaborate/partner C-MET by getting trained in different aspects of the process involved in E-waste management and to commence their own industries in the relevant areas. The CoE is interested in identifying competent and experienced experts for empanelment as Consultants to render advice/guidance/consultation on various aspects encompassing the project objectives.

2. OBJECTIVE OF THE EOI:

This EOI is meant for inviting the interested parties to submit their applications for empanelment as consultants. Based on the submissions received, a few consultants shall be kept in the panel to provide their expertise on need basis.

3. SCOPE OF WORK:

The empaneled consultants are required to provide their advice/guidance/consultation in the following scientific areas of the project on a regular/periodical basis:

- A. Design of various smelting furnaces
- B. Development of proprietary refractive materials

- C. Development of proprietary fluxing solutions from PCB smelting, anode mud smelting LIB smelting etc.
- D. Augmentation and automation of process equipment
- E. Yield improvement in spent PCB recycling process
- F. Recovery of Palladium and PMG elements from Anode Mud
- G. Removal of Tin from black copper during smelting
- H. Process technology for converting slag in to usable input material for Cement industry
- I. Recovery of valuable metals from spent Li-Ion battery
- J. Recovery of rare earth metals from EoL magnets/ phosphors/Metal hydride batteries
- K. Separation of rare earth oxides from mixed rare earth
- L. Recovery of valuable metals and semiconductor materials from spent Silicon solar cells
- M. Design of proprietary furnace for e-waste processing as per requirement
- N. Design and development of microwave heating systems for E-Waste recycling
- O. Design and development of electro refining/elctrowinning systems for copper, gold silver
- P. Development of sequential electrowinning system for mixed metals from aqueous solution to recover valuable materials from spent solar modules
- Q. Cost effective Solution for the removal of flue gases during calcination of spent PCBs
- R. Pollution control solution for wet and dry effluents during E-Waste recycling
- S. Cost effective recovery solution for Platinum Metal Group from e-waste
- T. Upscaling of bench scale operations to pilot plant operations
- U. Outreach to informal e-waste collector/dismantler/recyclers
- V. Design of crushing systems such as shredder, milling mill, etc

4. SELECTION CRITERIA:

The expert members are expected have the experience/knowledge in following

- a) Automation of process systems viz. dismantling the populated Printed Circuit Boards (PCBs)
- b) Design & development of the instrumentation including PLCs for different equipment required for PCBs recycling

- c) Nonferrous metallurgy, precious metal refining, electrorefining, pyro metallurgy, solvent extraction, ETP operation etc.
- d) Design & development of smelting systems, electrorefining systems, pollution control systems, solvent extraction systems, leaching systems
- e) Smelting of the PCBs and scale-up operations
- f) Treatment of different effluents out of the above processes
- g) Leaching and extraction of precious metals from the PCBs
- h) Recycling of permanent magnets
- i) Recycling of solar panels
- j) Recycling of Li-ion and other batteries
- k) Any other areas/materials related to e-waste recycling
- l) E-Waste awareness and outreach to informal sector
- m) Fire assay and other estimation techniques for E-Waste raw materials, intermediates and products

4. SHORTLISTING OF APPLICANTS:

- a. The documents submitted by the applicants in response to the invitation for EOI shall be examined a by an expert committee to be constituted by CoE. The committee shall shortlist the applicants based on the eligibility criteria
- b. The shortlisted shall be required to visit CMET for personal interaction
- c. More than one expert may be empaneled for each of activity

5. DOCUMENTS TO BE SUBMITTED:

- a. Letter for EOI submission – Annexure I
- b. Profile of the expert – Annexure II
- c. Information regarding any conflict of interests as referred to the scope of the assignment – Annexure III
- d. Details of similar works carried out in the past – Annexure IV

6. SUBMISSION OF EOI:

- a. All the requisite documents shall be placed in a sealed enveloped which shall be superscribed “**Expression of Interest for empanelment of consultants**”
- b. The sealed enveloped shall be submitted to Director, C-MET, IDA Phase-III, Chelapally, Hyderabad – 500 051. Soft copy of application, duly signed and scanned, may also be sent to fao-coeh@cmet.gov.in
- c. The last date for submission is **11th July 2020.**

7. The applicants shall bear all costs associated with the preparation of their proposals and C-MET shall not pay or reimburse any expenses in this regard. C-MET is not bound to accept any applications and reserves the right to cancel the selection process at any time without any liability accruing to it.
8. CMET shall provide necessary work-space to the consultants when they visit C-MET
9. Travelling costs to visit C-MET shall be borne by C-MET as per rules.
10. Consultants who are located outside Hyderabad shall be paid air fare by economy class by shortest route from their normal place of residence to Hyderabad. They shall be provided/reimbursed taxi fare to & fro. Actual accommodation charges of any Government Guest House shall be reimbursed..
11. Selected/empaneled consultants are required to visit C-MET on need basis for the requisite number of days as may be communicated by the project-in-charge.
12. When not in C-MET, the empaneled consultants may be required to provide their service through remote means – either telephonically or any other digital means.
13. C-MET reserves the right to accept or reject any or all proposals without assigning any reasons whatsoever and its decision shall be final and binding on all the applicants.

DIRECTOR
C-MET, HYDERABAD

ANNEXURE – I

DRAFT LETTER FOR EOI SUBMISSION TO BE SUBMITTED ON THE LETTER
HEAD OF THE CB/FI

Ref: No.

Date:

The Director

C-MET

IDA Cherlapally, Phase - III

Hyderabad – 500 051

Dear Sir

I, the undersigned, offer to provide the services as required in your invitation for EOI dated: 19.6.2020. I am hereby submitting my proposal with all the requisite information and documents.

I hereby certify that all the information and statements made in this proposal are true and accept that any misstatement or misrepresentation in the enclosed documents may lead to my disqualification.

I understand that you are not bound to accept/reject any proposal without assigning any reason.

Yours faithfully

SIGNATURE & NAME

ANNEXURE - II

Profile

Name	
Address for Communication	Pl. include mobile number/land-line number/email-id
Educational Qualifications	Starting from graduation level
Experience	List out all relevant experience with organisation in which worked, designation, work-experience areas/fields
Areas of interest for empanelment	

ANNEXURE III

**INFORMATION REGARDING ANY CONFLICTING ACTIVITIES AND
DECLARATION THEREOF**

Are you engaged in any activities which conflict with the proposed activities of CoE as mentioned in this document?

If yes:

Please furnish information of activities the institution is engaged in, which in your opinion, is of a nature that conflicts with the assignment desired to be awarded by CoE.

If no:

I hereby declare that I am not either directly or indirectly engaged in any activities which can be termed as conflicting activities as mentioned in the EOI document. It is understood that any misrepresentation or misstatement in this regard shall render me to be disqualified from the entire process.

Signature

Name

Designation

