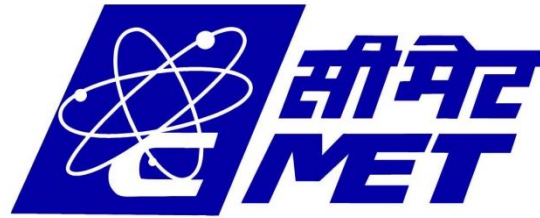


**Centre for Materials for Electronics Technology
(C-MET)**



Inviting

**Expression of Interest (EOI)
&
Transfer of Technology**

Under



**Centre of Excellence
on
E -Waste Management**

www.cmet.gov.in

TABLE OF CONTENTS

Sl. No.	Particulars	Page No.
I.	General	2-7
	1. Background	2
	2. Objective	2
	3. Purpose	3
	4. Definitions	3
	5. Details of Technology Offered for Transfer	3
	6. Cost of the technology & Payment terms	4
	7. Advertisement and submission of the EOI	5
	8. Procedure for selection and selection criteria	5
	9. Documents to be submitted	5
	10. Submission of EOI	6
II.	Annexure I	7
III.	Annexure II	8
IV.	Annexure III	9
V.	Annexure IV	10
VI.	Annexure V	11
VII.	Annexure VI	12

I. GENERAL

1. Background

Centre for Materials for Electronics Technology (C-MET), has been set up as a registered Scientific Society, in the year 1990 by Ministry of Electronics and Information Technology (MeitY), Government of India. One of the main objectives of C-MET is to develop technologies, up to the level of Pilot Scale production for a range of electronic materials and transfer the same to Industry for commercialization. C-MET is engaged in the development of process/product/technology in the area of Electronic materials, components and devices to cater to India's strategic and industrial applications, exploiting indigenous resources of raw materials and transfer of the technologies developed in such endeavors.

C-MET indigenously developed many technologies under various research programmes. Some of the Technologies have already been transferred to the Industries and some are under the process of being transferred on as-is-where-is basis. Once these technologies are used by Industries to manufacture end products, it would be a big leap to the Indian Economy.

C-MET, Hyderabad is implementing a societally important project titled "Establishment of a Centre of Excellence on E-waste management", called CoE hereafter, with the aegis of MeitY, Government of India, Government of Telangana (GoT) and industry partner with 40:40:20 funding. Basic objective of the project is to provide environmentally benign E-Waste recycling technologies to industries, thereby promote resource efficiency and circular economy in the country.

C-MET, Hyderabad has already set up necessary pilot-scale infrastructure facilities to process the E-waste recycling. C-MET has now developed technology for the recovery of the valuable metal contents from discarded lithium ion batteries which is at Technology Readiness Level (TRL) – 5 and ready for transfer to industries on as-is-where-is basis. As a part of the process of technology transfer, C-MET invites EOI from interested parties for absorbing the said technology.

2. Objective

To transfer the technology developed by C-MET, on non-exclusive basis, to parties interested in the selective recovery of Li, Co, Mn and Ni values from assorted types of discarded lithium ion batteries for the commercial exploitation of the technology.

3. Purpose

The purpose of this advertisement is to invite the parties to submit EOI for absorbing the technology developed for effective recycling of discarded lithium ion batteries, hereinafter called LIB Recycling Technology. Based on the EOIs received from the interested parties, C-MET will be selecting the eligible parties for absorbing the said technology.

4. Definitions

- (a) "C-MET" means Centre for Materials for Electronics Technology, Hyderabad
- (b) "Proposer" means any entity or person or association of persons who submits an application in the prescribed form in response to this advertisement, expressing interest to absorb the LIB Recycling Technology.
- (c) "Day" means calendar day.
- (d) "Government" means the Government of India.
- (e) "Application Form" means the prescribed Form to be submitted by the "Proposer(s)".
- (f) "Grantee" means the Proposer to whom the LIB Recycling Technology is transferred
- (g) ToT means Transfer of LIB Recycling Technology
- (h) Know-How is the technical process as detailed in the Technical know-how document

5. Details of Technology Offered for Transfer

Technology package for the selective recovery of Li, Co, Mn and Ni values from assorted types of discarded lithium ion batteries. The technology envisages the high recovery (>95% of the content) of Li, Co, Mn and Ni values in the form of their corresponding oxides as Li_2CO_3 , Co_3O_4 , MnO_2 , and NiO respectively, with purity equal to or higher than 98 %.

The package includes;

- a) The Technical Know-How document
- b) Training for five (5) days to maximum of three (3) people at C-MET site
- c) Hand-holding for three months from date of completion of training. Hand-holding means technical support through remote guidance/help/trouble shooting in setting-up the plant
- d) Technical support for period of six months from the date of completion of Training. Technical support will include remote guidance/help in setting-up plant scale processing facility (100 kg batteries per day capacity). The technical support will be provided remotely through audio/video calls. However, for any support at proposer's plant site, the financial expenses of Scientist/technical staff's visit, as per C-MET

norms, needs to be borne by the proposer. Such visits shall be limited to a maximum of three days in each spell. The dates to provide such support at grantee's site shall be at the discretion of C-MET and shall be based on the availability of the concerned scientists and technical staff and the prevailing pandemic situation.

- e) It is estimated that, plant facility for discarded batteries to black mass operations for the capacity indicated in this document can be set-up in 1000 SFT area, whereas area required for solvent extraction facility with other balancing facilities/infrastructure is estimated as 1500 SFT. Storage of input (discarded batteries) and output (recycled products) is excluded in the estimates of the area given above.
- f) The appropriate area for setting up LIB recycling plant has to be identified in consultation with the local Pollution Control Board.
- g) The capital investment for setting up processing facility for above mentioned capacity is estimated at about Rs 50 lakhs, excluding land, civil works and other utilities.
- h) Technology demonstration at C-MET shall be provided during the training, details of which are given below:
 - Discarded batteries to black mass for 100 kg.
 - The battery material for demonstration shall be provided from Grantee.
 - Black mass to aqueous feed at scale of 10 kg batteries per batch i.e. generation of 100 liters aqueous feed containing all valuable contents.
 - Selective extraction of Li, Co, Mn and Ni from 100 litres of generated feed including feed preparation, solvent preparations, product filtrations to final products.

However, it is the responsibility of the grantee to independently assess the sourcing of the input material, marketing of the recovered material, financial viability, existing or potential competition, alternate technologies that are available or likely to emerge, risk factors etc. before submitting the EOI. C-MET does not accept any responsibility in these matters.

6. Cost of the technology & Payment Terms

The ToT shall be provided to the interested industries on non-exclusive basis at the ToT cost of Rs 5.69 lakhs plus applicable taxes for each plant.

The selected Proposer(s) would be required to pay 50% of the fee plus applicable taxes within 15 days of allotment letter issued by C-MET. Balance amount plus applicable taxes, is to be paid before commencement of training. ToT fee paid by the Grantee is not refundable and does not attract any interest in case of any delay in commencement of training.

7. Advertisement & Submission of the EOI

The advertisement inviting EOIs is in the nature of rolling one, without any last date for submission of EOI. However, it is advised that the interested parties may submit the EOIs at the earliest to gain the advantage of being the early birds.

8. Procedure for selection and selection criteria

After receipt of EOIs, an expert committee shall evaluate, on monthly basis, and recommend the parties to whom the technology is to be transferred. The expert committee may devise its own criteria which shall be one or more of the following;

- Registration as a recycler with the competent Government agency
- Experience as an aggregator, dismantler, producer responsibility organization (PRO) or recycler in any of the waste recycling
- Registration as a start-up for waste management
- Financial strength to set-up the plant
- Willingness to set-up the plant within a period of six months
- Any other criteria as deemed essential by the committee

Based on the ranking provided by the expert committee, in line with the above selection criteria, the technology will be transferred to the parties in a phased manner. The training will be scheduled for the party/parties based on the date of full receipt of ToT fee on first-come-first-serve basis.

9. Documents to be submitted

- a. Letter for EOI submission – Annexure I
- b. Profile of the party – Annexure II
- c. Information regarding any conflict of interests in respect of LIB recycling technology – Annexure III
- d. In the case of start-up complete details of the company including their financial soundness/ source of funds - Annexure - IV
- e. A write up on how the party plans to bring the set up the recycling plant and proposed location of the plant – Annexure - V
- f. Educational background and relevant work experience of party's key persons (maximum of 5 persons) – Annexure - VI
- g. Solvency certificate from the party's bankers for at least 50% of the capital cost

PL. FILL ALL THE ANNEXURES BY PROVIDING RELEVANT DATA/INFORMATION. ADDITIONAL INFORMATION, WHICH IS NOT SOUGHT, BUT IF FELT RELEVANT AND IMPORTANT BY THE PARTY FOR OBTAINING THE LIB RECYCLING TECHNOLOGY, MAY ALSO BE PROVIDED

10. Submission of EOI

- a. All the requisite documents shall be placed in a sealed envelope which shall be superscribed "**Expression of Interest for ToT of LIB recycling**"
 - b. The sealed envelope shall be submitted to Director, C-MET, IDA Phase-III, Cherlapally, Hyderabad – 500 051
 - c. As this is a rolling advertisement, interested parties can submit their application at any time and no last date is prescribed. However, it is advised to submit the EOI at the earliest for early bird advantage.
11. The party shall bear all costs associated with the preparation of their proposals and C-MET shall not pay or reimburse any expenses in this regard.
 12. The application(s) and material(s) submitted by the Proposer(s) in response to this EOI will become the property of the C-MET.
 13. C-MET is not bound to accept any proposal and reserves the right to cancel the selection process at any time without any liability accruing to it.
 14. 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.

Signature of the authorized signatory:

**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

We, the undersigned, submit our interest to absorb the LIB Recycling Technology package offered in your invitation for EOI vide advertisement dated:26.8.2022 We are hereby submitting our proposal with all the requisite information and documents.

We 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 our disqualification.

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

Yours faithfully

Authorized Signatory
NAME & DESIGNATION

Profile of the Party

Name of the party			
Year of Registration			
Registered Office address			
Legal status			
Number of employees			
No. of branches, if any			
Turnover (Rs. lakhs)	2021-22	2020-21	2019-20

Certification from the authorized signatory

I the undersigned certify that to the best of my knowledge and belief the above mentioned particulars correct.

Signature of the authorized signatory

Name

Designation

INFORMATION REGARDING ANY CONFLICTING ACTIVITIES AND DECLARATION THEREOF

Is the party 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/We hereby declare that our organisation is 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 our organisation to be disqualified from the entire process.

Signature of the authorized signatory

Name

Designation

ANNEXURE – IV

In case of Start-up the following details are to be filled

Particulars	Details
Name of the start up	
Form of the start-up: (Sole Proprietor/Partnership/Company/Any other)	
No. of members (in case the start-up is other than sole proprietor)	
Year of registration as start-up	
Registration No. (pl. enclose a copy of the registration certificate)	
Place and State in which registered	
Registered address	
Do the objectives of the start-up include recycling of waste	
Do the objectives of the start-up include recycling of e-waste, in particular	
Objectives of the start-up(in brief) : (Attach a separate sheet, if the space is insufficient)	
Amount of Capital invested as on 31.3.2022 (Rs. Lakhs)	
Amount of Borrowings as on 31.3.2022 (Rs. Lakhs)	

Plan of action to set up the LIB Recycling Plant

Sl. No.	Particulars	
1	How many Plants are being planned to be set up	
2	Location or locations of the plant (Pl. provide the name of the District and State)	
3	Per day capacity of the plant (s) to be set up	
4	What is the period in which the plant(s) will be set up	
5	Do you have qualified/experienced human resources? If yes, details thereof. If no, how do you propose to source the same?	
6	Do you have land/building/other infrastructure available? If yes, details thereof. (like own land/building/ leased infrastructure, land area, built-up area, permanent/ temporary structure etc). If no, how do you propose to source the same?	
7	Do you have financial resources? If yes details thereof. If no, how do you propose to source the same?	
8	Do you have in-house competency to set up the plant or do you propose to out-source to a turn-key solution provider?	
9	Any other information which adds value to your application. Attach a separate sheet if space is insufficient.	

Please provide all the relevant and important information, since the committee may add weightage to each of the parameters listed or not listed in the above.

Educational qualifications and experience of the key person(s)

Key Person no.1

Name of the Key Person	
Designation	
Academic Qualification(s)	
Experience (No of years)	
Field(s) in which experience has been acquired, with particular reference to waste management	

Pl. provide the details of a maximum of 5 key persons.