

No. HD/SP-49/EoI/01/CC/2023-24

Development of content for skilling and capacity building of informal actors on dismantling and segregation of E-Waste



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INTRODUCTION:

Centre for Materials for Electronics Technology (CMET) Hyderabad, Central Institute of Petrochemicals Engineering & Technology (CIPET), Bhubaneswar and CSIR-National Metallurgical Laboratory (CSIR-NML), Jamshedpur have been awarded a project on the management of E-waste by Ministry of Electronics and Information Technology, (MeitY), Government of India. It involves disseminating technology for recycling printed circuit boards & recycling of e-waste plastics through the setting up e-waste recycling common facility centres in clusters of micro-entrepreneurs. The dissemination of technology would be done by appointing "Accelerators" who will be responsible for setting up these clusters in different states of the country. Thirty such clusters will be set up and accelerators will be responsible for hand-holding these micro-enterprises to train and build their capacities on utilizing the indigenously developed technologies to manage their businesses and ensure environmentally sound e-waste recycling.

One of the major objectives of the projects is to train 15000 persons engaged in e-waste management through scientific methods of dismantling, segregation and identification of value chain and to convert them to micro-entrepreneurs. A total of 106 electronics and electrical equipment have been brought under the E-Waste category for EPR compliance as per the latest e-management rules – 2022. Under this program, content creation (manuals) for the dismantling and segregation activity for various e-waste categories will be taken up as the first task. It involves the development of manuals for dismantling, segregation and identification of value chain, etc. PowerPoint presentations and videos are also to be prepared for skilling and awareness creation. All the created content (manuals), various scripts, PowerPoint presentations and video recordings shall be translated from English into different Indian languages, including Hindi, Tamil, Telugu, Marathi, Malayalam, Kannada, Gujarati, Punjabi, Oriya, Bengali, and Assamese.

1. SCOPE OF WORK:

The scope of work includes creating detailed content on e-waste dismantling and segregation, which will be utilized in the skill and entrepreneurship development of informal actors and help them to formalize as micro-entrepreneurs.

The firms/agencies/institutes shall primarily provide the services on the following listed items:

- Development of detailed content (a manual) on e-waste dismantling, segregation and value chain identification of all e-waste items listed in E-Waste Management Rules, 2022. The training material should also focus on skill and entrepreneurship development on e-waste dismantling and segregation.
- Development of Standard Operating Procedures (SOPs), posters, brochures, development of scripts for videos, PowerPoint presentations and video recordings (including 3-D animated videos).
- Content creation for MSME – CDP program, cluster formation, etc.
- Up-dation and translating all the created contents, such as manuals, scripts, presentations, video recordings, etc., in various languages as mentioned in the Introduction section (1). The same will be used for the courses and training with identified master trainers. Trainees will be provided with all these materials for skill and capacity building.
- The training content shall include learning material (through the use of multimedia

i.e. Videos/Animations with Voiceovers, Posters, PowerPoint presentations, etc.) and evaluation sheets

- The content shall be developed from scratch, including planning, analysis, design, development and evaluation.
- A designated Committee shall evaluate all the contents at each step of the project i.e. planning, analysis, designing and development before finalization.
- Case studies (Real-life scenario-based examples) may also be provided for each topic and sub-topic; the same shall be provided preferably through Videos, simulations, and animations.
- All videos/ animations/ posters/ presentations etc. (all types of Multimedia) shall be of professional quality.
- The design of content and templates being used shall be as per the requirement/guidelines of C-MET.
- The content should be web-optimized and playable on mobile/ tablet/ laptop also.
- Provide a clear project plan with modular milestones and deliverables in discussion with C-MET and regular updates of the same shall be provided.
- The eLearning Content design should not include the use of tools and software that have a dependency on the subscriptions for extracting source files or for any further modifications and should not have any copyright-related issues.
- Once the content is reviewed and finalized, the production team should develop the content into the respective media – Animated Video (photographic, illustrated, demos), PDFs, PPTs, MP4, etc. and shall be complying with requirements.

Content Requirements:

i) Type of Learning Content:

- a. It shall include manual, free-flow web module content, quiz/question banks, Hand notes (Hands-on), and class diagram content.
- b. It should include MP4 videos with voiceovers and integrated audio files wherever required.
- c. The draft training content shall be created and submitted for review, which shall be finalized after incorporating feedback from C-MET.
- d. The Modules/Sub-Modules shall be prepared after integrating multiple training contents and finalized after review by C-MET and incorporating feedback received.

ii) Training material tagging and formats.

- a. Each training material shall be provided with a Title, description, learning objective, level of Complexity, and duration.
- b. The training materials shall provide the competencies that could be acquired by learning it.

- b) All the files/multimedia/documents created shall be in line with the requirements of the platform provided.

Technical requirements:

The party shall encompass the following technical requirements:

- a) Experience and active presence in the E-waste Sector and demonstrable work in the field of content creation. The firms/agencies/institutes must have a proven track record of working within the e-waste sector.
- b) The firms/agencies/institutes should have worked specifically in the domain area and showcasing their understanding of the informal sector and expertise in content creation for skilling them.
- c) Human Resources:
 - The firms/agencies/institutes should have an adequate team of skilled professionals to handle the assignment effectively.
 - The team members should possess relevant experience and knowledge in content development for the e-waste sector.
- d) Experience in developing content on skill and entrepreneurship development in the e-waste sector:
 - The firms/agencies/institutes should have prior experience in creating content related to skill development and entrepreneurship in the e-waste sector.
 - The firms/agencies/institutes should demonstrate their ability to develop engaging and informative content that effectively addresses the needs of the targeted participants/people.

a) Instructions to Bidders & Eligibility Criteria:

Qualifying Requirements:

The bidder must meet the following criteria for validation of their bid.

- The bidder should be a registered firm/company/partnership in India.
- The bidder must be working in the field of providing training/development of training material for digital learning.
- The firms/agencies/institutes must have at least 5 years of working experience in content creation with key aspects of the work in the areas of
 1. Vast knowledge base on various aspects and implementation strategies, inventorisation of E-waste management rules 2022.
 2. Implementation of the development content in the training, skilling, and entrepreneurship development
 3. Knowledge of Government schemes, preferably cluster development programs as one of the topics
 4. Demonstrated technical expertise in providing training in dismantling/recycling e-waste.
 5. Experience in formulating the content in different Indian languages.
- The firms/agencies/institutes must be of Indian origin.
- The firms/agencies/institutes must have worked with government agencies/private sectors on similar kinds of projects on required technical and technological skills through the development of the content.
- The bidder should have developed at least 03 e-learning modules in the relevant sectors during the preceding five (05) Years as of the date of submission.
- The bidder shall have previous work experience in similar lines with the work orders (in last five years) of value as;

- a. Single order valuing Rs 40 lakh (Rupees forty lakh only)
OR
 - b. Two orders valuing Rs 25 lakh (Rupees twenty-five lakh only) each
OR
 - c. Three orders valuing Rs 20 lakh (Rupees twenty lakh only) each
- The average annual turnover of the Bidder in the preceding three (3) financial years, as of submission date, should not be less than INR 1 crore (Rupees one Crore only).
 - The bidder should not be blacklisted by any Central /State Government /Public Sector Undertaking in India.

NOTE:

1. While computing the turnover, other income shall not be considered.
2. When audited results for the last financial year as of the date of Submission is not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. If the Bidder cannot submit the Certificate from practicing CA certifying its financial parameters, the audited results of three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters.
3. In case of orders under execution, the value of work executed till the date of Submission as certified by the Client shall be considered. However, the job executed should include developing and delivering e-learning courses or modules.

6. SHORTLISTING OF BIDS:

C-MET would shortlist the parties in the following manner:

- a) A committee formed by the Competent Authority of C-MET would scrutinize all bids received and verify details as per the documents submitted for each of the qualifying criteria, including turnover, experience of key personnel, national presence, experience in conducting similar work, etc., amongst others.
- b) Apart from the criteria as given above, the information furnished by the parties on the methodology proposed to be adopted for carrying out this assignment, along with details of stakeholder interaction, will also form part of the qualifying criteria. The Screened-in firms/agencies/institutes shall be invited for a presentation to the expert committee.
- c) C-MET reserves the right to reject any party from being shortlisted without assigning any reason, and its decision will be final. No correspondence would be entertained in this regard.

Please note:

- a) Bid not received in the format or those incomplete in any respect, including non-submission of supporting documents shall be summarily rejected.
- b) C-MET shall not reimburse any costs incurred by the Bidder on account of preparation/submission and/or any other costs incurred.

- c) C-MET may ask the firms/agencies/institutes to present at their cost to understand the methodology proposed to be adopted by the party for the assignment.

7. DOCUMENTS TO BE SUBMITTED:

- a) Covering letter for bid submission (Form 1 & 2) – Annexure I
- b) Profile of the firm/agency/institute – Annexure II
- c) Profile of the personnel of the firm/agency/institute who will handle the assignment – Annexure III
- d) Information regarding any conflict of interests as referred to the scope of the assignment – Annexure IV
- e) Details of different procedures being followed by the firm/agency/institute earlier- Annexure V
- f) Pre-qualification criteria on the letterhead of the firm/agency/institute – Annexure VI
- g) Annexure VII with detailed bifurcation of the work elements (without price along with technical bid)
- h) Technical bid (details in Section 9)
- i) Annexure VIII to be submitted in separate packet for price bid.

8. IMPLEMENTATION OF THE PROGRAM:

Duration of program: 150 days

Sr. No.	Activities	Time (days)
1	Submission of the Manual (in English)	0-60
2	Modification, if any, and approval	60-75
3	Submission of SOPs, Power point slides, and scripts for videos (in English)	75-90
4	Modification, if any and approval	90-100
5	Submission of videos	100-120
6	Submission of the manual in languages as mentioned in the introduction section (1.)	100-130
7	Submission of SOPs, videos in other languages	130-150

Note: Party shall provide service for one year after the implementation of the program for any modification or improvements of the content developed.

Manual should consist of

- a) Introduction to e-waste, constitution, generation, global and Indian scenario,

- importance of capacity building, average life of EEE
- b) E-Waste management rules in India, evolution of e-waste rules, E-waste management rules 2022, definitions, schedules, forms, stake holders and their responsibilities, recycling process, latest amendments etc
 - c) e-waste value chain analysis
 - d) Dismantling tools and safety gears, importance of PPE, safety gears, preventive measures in case of accidents in the facility,
 - e) E-waste dismantling, segregation, and recycling: definitions; importance of segregation, dismantling and recycling,
 - f) Impacts of E-waste: Health and environmental; RoHS guidelines, RoHS compliance certification facilities in the country
 - g) Setting up of dismantling/ segregation/ recycling facility: CPCB guidelines, requirements for dismantling & recycling facility, e-waste handling practices, business plan models, EMS plan etc.
 - h) Hazards associated with e- waste recycling process, hazards emanating from fire, air, water, workplace checklist, medical kits, etc,
 - i) Chemical composition of the segregated parts: metals, plastics. Components and hazardous parts
 - j) Segregation of e waste plastics: types of plastics, segregation based on composition, recyclability etc.; simple techniques for identification of different types of plastics.
 - k) Inventorisation of E-Waste and segregated products
 - l) Government startup/subsidy schemes
 - m) Emerging technologies in E-Waste recycling

It should be prepared in English in word format, with adequate illustrations. Tables, figures etc should be systematically numbered. There should not be any copyright issues; references should be included wherever possible. After approval it should be translated to other languages

Power point slides: Presentation slides should be made for each chapter of the above manual. All the salient points of the manual should be addressed in the presentation slides. Presentations will be made for a set required for around 45 minutes of class. After approval, it should be translated into other languages. Slides also should be converted to videos with voice-over over which can be used by resource persons as models and also can be used as e-learning material. Model questions (10 to 15) with answer keys should be prepared for evaluation.

SoPs: Standard operating procedures should be prepared for the handling, dismantling and segregation of all the different e-waste items (106 Nos) scheduled in the latest e waste management rules. SoPs should address key issues such as safety, environmental issues, value chain, reusability of components etc. SoPs should be prepared in English language. After approval it should be translated to other languages

Videos: Videos should be recorded for the dismantling of all the different types of e-waste items as per the approved SoPs and scripts. While recording, all the safety norms should be complied with. These videos should be compatible with the e-learning platform, and should be playable by projectors while teaching etc. The duration of videos can range from five minutes to fifteen minutes based on the complexity, environmental issues and value chain.

15 minutes: 15 Nos.

10 minutes: 50 Nos.

5 minutes: 41 Nos.

Animation videos: In addition, to dismantling videos, animation videos (5 Nos of 3 minutes duration each) for e-waste awareness are to be prepared.

Posters: Designing of five posters for e-waste awareness, dismantling and recycling to be prepared as ready to print forms.

9. SUBMISSION OF BID:

a) Technical proposal:

A detailed technical proposal is to be prepared describing a

- a) Implementation plan with details of the proposed manual, SoPs and videos. It should also contain the association with professional agencies, if required, for scripting, videography, etc. Support documents should be attached,
- b) Details of Infrastructural facilities to be utilized for recording of dismantling videos. Please provide documentary support also.

b) Financial proposal:

Price bid in the prescribed format (Annexure VII) should be submitted separately.

Payment schedule:

1. 30% advance payment against the submission of bank guarantee and against the submission of performance security deposit @ 10% of the total order value (includes GST) valid under completion of the defect liability period @ 12 months + 60 days.
2. 30% against the submission of manual, SOPs, presentations slides, scripts, videos (English) and approval of the same
3. 40% against submission of manual, SOPs, presentation slides and videos translated to different Indian languages as per section (1) and approval of the same and acceptance thereof.

* Payment conditions are not final. It is subjected to the scrutiny of the expert committee and competitive authority.

PRE-BID MEETING: The Pre-bid meeting will be held on 26.05.2024 at 1200 hours through Hybrid mode (online/physical). Interested firms are requested to inform their participation by e-mail to rajesh@cmet.gov.in and ajay.kaushal@cmet.gov.in on or before 25.05.2024 so as to arrange web-link. The firms participating in the pre-bid meeting will only be qualified against the tender.

Rights Reserved:

C-MET reserves the right to modify/cancel the bid partially or fully without assigning any reasons whatsoever and its decision shall be final and binding on all the applicants. Also, any typo graphical errors are subject to further corrections.

The Firm/agency/Institute shall submit the following Forms duly completed:

Form 1. Covering Letter

Form 2. The Firm/agency/Institute information and qualification

Form1: Covering Letter

(To be submitted with supporting documents, if any)

(On Firm/Agency/Institute Letterhead)

(Strike out alternative phrases not relevant to you)

Firm/Agency/Institute Reference No.....

Date.....

Name.....

Address and Contact Details.....

To
The Director,
C-MET, IDA Phase – III
Cherlapally, HCL Post
Hyderabad – 500 051

Ref: [Tender Reference Number]

Sir,

Having examined the above mentioned Document, we, the undersigned, hereby submit our BID for the performance of Services in conformity with the said bid Document.

(Please tick appropriate boxes or strike out sentences/phrases not applicable to you)

- 1) About us: We[Name of Agency/Institute], hereby certify that, We are having required experience, past performance, personnel, and financial capability, with offices.
- 2) Our Eligibility and Qualifications to participate: We comply with all the eligibility criteria stipulated in this bid Document, we fully meet the qualification criteria stipulated in this bid Document, and the relevant details are submitted along with documents in Form 2.
- 3) Affirmation of terms and conditions of the BID Document: We have understood the complete terms and conditions of the bid Document. We accept and comply with these terms and conditions without reservations, although we are not signing and submitting some of the sections of the bid Document.
- 4) Signatories: We confirm that we are duly authorized to submit this BID and make commitments on behalf of the

Firm/Agency/Institute. We acknowledge that our digital/digitized signature is valid and legally binding.

- 5) Rights of the C-MET to Reject BID(s): We understand that you are not bound to accept any BID you may receive against your above-referred bidDocument.

.....(Signature with date)

.....(Name and designation)

Duly authorized to sign BID for and on behalf of
[Name, address & Seal of Firm/Agency/Institute]

Form2: Firm/ Agency/ Institute information and qualification

(To be submitted as part of BID) (On Firm/Agency/Institute Letter-head)

(Strike out alternative phrases not relevant to you)

Firm/Agency/Institute Reference No.....

Date.....

Name.....

Address and Contact Details.....

To
The Director,
C-MET, IDA Phase – III
Cherlapally, HCL Post
Hyderabad – 500 051

Ref:[Tender Reference Number]

[Note to Firm/Agency/Institute: Furnish stipulated documents supporting the fulfilment of qualifying criteria. The list below is indicative only. You may attach more documents as required. Non-submission or incomplete submission of documents may lead to rejection of the BID as nonresponsive. Also, highlight deviations from Qualification Criteria in this Form]

1. We are a registered firm/company/partnership in India. Supporting Documents Attached as Annexure-.....
2. We have not been blacklisted by any Central /State Government / Public Sector Undertaking in India.
3. We have been working in the field of providing training/development of contents for skilling and capacity building on dismantling and segregation of E-Waste for the last....(Years)
4. We have an average annual turnover of Rs.....,(in words.....) in the preceding three (3) financial years as of the submission date of BID. Authorized Certificates in this regard are attached as Annexure-.....
5. The details of e-learning modules in the Development of content for skilling and capacity building on dismantling and segregation of E-Waste during the preceding five (05) Years as of the date of BID submission are as under:

S No	Name, address of the Firm/ Agency/ Institute	Nature of the content development	Cost of Project exclusive of taxes	Duration of the work	Remarks if any (Please attach completion certificate)
1					
2					
3					

Certified true copies of the last 3 work orders are enclosed as ready reference.

.....

(Signature with date)

..... (Name
and designation)

Duly authorized to sign BID for and on behalf of

.....

.....
[Name, address & Seal of Firm/Agency/Institute]

Profile of the firm/agency/institute

Name of the firm/ agency/institute			
Year of Registration			
Registered Office address			
Legal status			
Number of employees			
No. of branches, if any			
Turnover (Rs. lakhs) *	2022-23	2021-22	2020-21

* Supported by the audited statement of accounts. For 2023-24, a provisional certificate duly signed by an authorized signatory is acceptable.

.....

(Signature with date)

..... (Name
and designation)

Duly authorized to sign BID for and on behalf of

.....

.....
[Name, address & Seal of Firm/Agency/Institute]

Details of the skilled personnel of the firm/agency/institute who will handle the assignment (separate form for each)

Sl. No.	Particulars	
1	Name of the skilled personnel	
2	Date of Birth	
3	Educational Qualification	
4	Content development in the e-waste sector, if any	
5	Training conducted with informal actors	
6	Work experience of the last ten years	
7	Special qualifications and assignments (Please emphasize those assignments that best illustrate the person's capability to handle the current assignment)	
8	Special achievements if any	
9	Contact details	

Certification from the officer

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

.....

(Signature with date)

..... (Name

and designation)

Duly authorized to sign BID for and on behalf of

.....

.....

[Name, address & Seal of Firm/Agency/Institute]

ANNEXURE IV

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

Is the firm/ agency/institute engaged in any activities which conflict with the proposed activities of the development of content for training on dismantling, segregation and value chain identification?

If yes:

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

If no:

We hereby declare that our firm/Agency/institute is not directly or indirectly engaged in any activities that can be termed as conflicting activities as mentioned in the BID document. It is understood that any misrepresentation or misstatement in this regard shall render our organization to be disqualified from the entire process.

.....

(Signature with date)

..... (Name

and designation)

Duly authorized to sign BID for and on behalf of

.....

.....
[Name, address & Seal of Firm/Agency/Institute]

Annexure - V

Details of procedures being followed by the firm/agency/institute in similar previous assignments.

- 1
- 2
- 3

Annexure – VI

**(In the company's letterhead)
PRE-QUALIFICATION CRITERIA**

The firm/agency/institute should have Proof of experience in the execution of similar works in Govt. Dept, R&D organisations, PSUs or Private companies or NGOs or International agencies such as the International Telecom Union (ITU), UN, United Nations University (UNU) during the last three years ending the last day of the month before the one the application invited.

**(Work orders/work completion certificates issued on or after
01.04.2019 to 31.03.2024 will be considered)**

Details of the previous work orders with completion certificates (only content creation related and with order value complying to as mentioned in the qualifying Requirements)

S No	Details of work order	Amount of work order	Date of commencement/ completion of work	Copies of WOs* and certificates attached (Yes/No)	Remarks
01					
02					

Details of the ongoing work orders with stage of completion (if any).

SI No	Details of work order	Amount of work order	Copies of WOs* and certificates attached (Yes/No)	Remarks
01				

- *Note: The copies of work orders & performance/completion certificates duly attested for proof of experience will be submitted along with the BID.
- Failing to upload/provide the required documents as sought in the bid will result in technical disqualification of the submitted bid.
..... (Signature with date)
..... (Name and designation)
Duly authorized to sign BID for and on behalf of
.....[Name, address & Seal of
Firm/Agency/Institute]

Annexure VII

BID FORM AND PRICE SCHEDULE
(To be submitted along with Technical Bid)

Name of the services:

Sl. No.	Description	Units	Unit Price (Rs.)	Amount (Rs.)
1	Detailed bifurcation of content development for each item (with work element) Manuals, power presentations, posters, videos, Translation to 11 languages		XXXXXX	XXXXXX
	GST:			
	Total:			XXXXXXX

Annexure VIII

BID FORM AND PRICE SCHEDULE
(Price Bid)

Name of the services:

Sl. No.	Description	Units	Unit Price (Rs.)	Amount (Rs.)
1	Detailed bifurcation of content development for each item Manuals, power presentations, posters, videos, Translation to 11 languages			
	GST:			
	Total:			