

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY

(Department of Chemicals & Petrochemicals,
Ministry of Chemicals & Fertilizers, Govt. of India)

CIPET Head Office
T.V.K. Industrial Estate, Guindy, Chennai: 600 032
Website: www.cipet.gov.in



Expression of Interest (EOI) For Selection of Suppliers for the Supply, Installation, Commissioning and Testing of Equipment/Machinery for Plastics Waste Management Centres of CIPET

Eol. No. CIPET HO/Pur/PWMC/2022/001

Date: 03/06/2022

EXPRESSION OF INTEREST (EOI)

Central Institute of Petrochemicals Engineering Technology (CIPET), Head Office invites online Expression of Interest (EOI) from eligible, reputed companies/firms/manufacturers/ OEM/Authorized dealers for the Supply, Installation, Commissioning and Testing of Equipment/Machinery for Plastics Waste Management Centres of CIPET as specified in this EOI Document.

The Expression of Interest Document can be downloaded from <https://www.tenderwizard.com/CIPET> OR Central Public Procurement (CPP) Portal <https://eprocure.gov.in> OR the Institute website - <https://www.cipet.gov.in/tender-notice/index.php> or through Gem portal <https://gem.gov.in>

Schedule of Dates

Sl. No.	Particulars	Date	Time
1	Date of Online Publication/Download of Eol Document	03/06/2022	16:30 hrs
2	Submission Start Date	03/06/2022	17 :00 hrs
3	Last date for Submission of Eol Response	27/06/2022	10:30 hrs
4	Opening of Eol Responses	27/06/2022	11:00 hrs
5	Preliminary short listed candidates will be called for Technical presentation	Tentatively 01st week of July	
6	Declaration of Shortlisted Firms	To be updated in website	

No manual document will be accepted. All documents should be submitted online through <https://www.tenderwizard.com/CIPET> using valid DSC key.

Any queries relating to the process of online bid submission may contact to the Helpdesk Support - **Phone No. 044-22254788** between Monday – Friday – 09:00 AM to 05:30 PM and can represent your clarifications in the e-mail id: purchaseho@cipet.gov.in

EOI NOTIFICATION

1. OBJECTIVES OF EOI:

CIPET, Head Office invites (EOI) from eligible, reputed companies/firms/manufacturers/OEM/Authorized dealers for the Supply, Installation, Commissioning and Testing of Equipment/Machinery for Plastics Waste Management Centres of CIPET.

2. About CIPET:

Central Institute of Petrochemicals Engineering & Technology (CIPET) is a premier national institution under the aegis of the Ministry of Chemicals & Fertilizers, Govt. of India fully devoted to Skill, Technology Support Services, Academic and Research Development (STAR). CIPET operates on hub & spokes model with 40 locations - Institute of Petrochemicals Technology (IPT), Centre for Skilling and Technical Services (CSTS), School for Advance Research in Petrochemicals (SARP) & Petrochemical Data Services spread across the length & breadth of the country catering to the needs of Polymer and allied industries.

CIPET stands tall not only as a premier institute in the country but also emerged as a global institution renowned for its research & development process and high- quality training in the field of plastics. CIPET has been accredited by ISO/IEC - 17025, ISO/IEC-17020 and ISO9001:2015 certified on Design, Development and Conduct of specialized training courses in Plastics Engineering & Technology and rendering technical/consultancy services in Design, Tooling, Plastics Processing & Testing to the plastics & allied industry. Besides, STAR activities, CIPET also play a pivotal role in developing employment opportunities especially for youth, self- employment and entrepreneur development through various skill development training programs.

Headquartered in Chennai, CIPET has IPT centres at Ahmedabad, Bhubaneswar, Chennai, Lucknow, Kochi, Raipur, Jaipur and Murthal and CSTS centres at Agartala, Amritsar, Aurangabad, Baddi, Balasore, Bhopal, Bhubaneswar, Chandrapur, Dehradun, Guwahati, Gwalior, Hajipur, Haldia, Hyderabad, Imphal, Jaipur, Korba, Madurai, Mysore, Ranchi, Valsad, Varanasi and Vijayawada. All the centres are equipped with excellent infrastructure facilities in the areas of Design, CAD/CAM/CAE, Tooling & Mould Manufacturing, Plastics Processing, Testing and Quality Assurance of India. The infrastructure facilities in terms of Machinery, Equipment and Technology are continuously upgraded and modernized in tune with the global plastics industry.

CIPET is in process of setting up of Plastics Waste Management Centres at 04 locations in India (Varanasi, Ahmedabad, Patna, Bengaluru). **Initially, CIPET plans to implement at Varanasi location in Phase – I.**

3. Scope of Work

Supply, Installation, Commissioning and Testing of Set of equipments/machinery as per the package mentioned.

3.1 Detailed Technical specifications is enclosed as Annexure – A.

Sl. no.	Package	Name of Equipment/Machinery intended for EOI	Page no.
1	Package-A	Sorting and Separation Equipments	12 to 14
2	Package B	Automatic Inline Washing & Size Reduction Machinery	15
3	Package C	Inline Single Screw Two Stage Extruder Cutter Compactor Plant with Water Die Face Cutter	16 to 17
4	Package D	Multi-daylight Compression Moulding Machine 200T with molds	18
5	Package E	10 KLD Packaged Effluent Treatment Plant (ETP)	19
6	Package F	Pyrolysis Plant	20 to 22
7	Package G	Automatic Compositing Machine for Organic Waste	23

Note:

- 1) The Bidder can apply for one full package or more than one package as per their expertise and capabilities. However separate EOI has to be submitted for each package.
- 2) Bidders may attach the details of equipment/machinery with complete specification duly authorized along with documents i.e., Leaflet, catalogue, literature, test reports if any.

4. Eligibility Criteria:

1. A registered Company/Manufacturer/OEM or their Authorized Dealers should have similar work experience and annual turnover more than Rs.1.00 Crore during the last three financial years.
2. The Bidder should have a valid License/Registration, GSTIN No., PAN No., Bank Account No. & IFSC Code & registered office in India.
3. The Bidder should not have been blacklisted by any Govt. Dept./Semi-Govt./Dept. or any other organization.
4. Information regarding past experience for Supply & Installation of the same/similar equipment/machinery in India should be furnished as per the form 2 & 3. Documentary Evidence to be supported by Purchase Orders and Project/installation completion certificates.
5. Bidders shall have sufficient manufacturing capacity /tie-ups and should have the after sales support infrastructure.

6. In case, the Bidder offers to supply machines / equipments, which are not manufactured by them, the Bidder should be duly authorized by the Principal/OEM as authorized dealer to supply the machines / equipments. Relevant document to be submitted and also as per CIPET format form no 4 (page no -11) need to be submitted.
7. Preference will be given to the Manufacturers/ their authorized dealers having more than 3 years of association with same manufacturers to ensure effective after sales service support.
8. If the Bidder has already supplied / received order to supply any similar equipment / machine to CIPET or any Government organization, the performance, timeline and quality of supply and services will be considered as qualifying criteria.
9. Bidders should provide relative supporting documents to support all claims/information provided in Vendor evaluation format as per Annexure – II – page no. 24 to 28. **If, Bidder is not an OEM then the Authorized Dealers should submit the OEM documents/information for the Vendor evaluation format.**

General Terms & conditions

10. The Bidder can apply for one full package or more than one package as per their expertise and capabilities. However separate EOI has to be submitted for each package
11. The Technical specifications of the offered equipment/machinery should be of recent model & make and its spares should be available in the market for minimum 6 years.
12. Details of product offered shall be supported with complete specification duly authorized along with documents i.e., Leaflet, catalogue, literature, test reports etc.
13. The following information/ documents should be part of the proposal
 - a) Copies of audited balance sheet of last three consecutive years/ CA certificate certifying annual turnover & financial status.
 - b) Copies of Permanent Account Number (PAN) and latest Income Tax Return (ITR).
 - c) GST Registration and copy of latest GST return file for last three consecutive years
14. Technical/Commercial Bids shall be called through GeM portal from technically qualified and shortlisted bidders at later stage.
15. Govt. of India guidelines in Make in India policy, Relaxation of Norms for Startup and Micro & Small Enterprises in Public Procurement will be followed.
16. Relaxation in Prior Turnover and Experience:
CIPET reserves its right to relax the condition of prior turnover and prior experience for start-up enterprises subject to meeting of quality & technical specifications. The decision of the CIPET in this regard shall be final.

5. Amendment of Bidding Documents:

At any time prior to the deadline for submission of EOI, CIPET may, for any reason, whether at their own initiative or in response to a clarification requested by a prospective bidder, modify the EOI _ Technical Specifications by amendment.

6. EMD

Nil

7. Submission of Bid:

Prospective parties may submit their “Expression of Interest (EOI) for Supply, Installation, Commissioning and Testing of Set of equipment/machinery along-with relevant details through online, by uploading scanned copy (signed & stamped by the authorized signatory) in pdf format through portal <https://www.tenderwizard.com/CIPET>

No manual document will be accepted.

The bidder is expected to examine all instructions, terms & conditions, specifications in the EOI form. Failure to furnish information required in every respect will be the Bidders risk and may result into rejection of the bid(s).

Any EOI received after the scheduled date & time or incomplete in any manner will not be accepted.

8. Process:

Preliminary Shortlisted bidders/suppliers, who qualifies as per Eligibility Criteria will be invited for a technical presentation as part of the technical evaluation. The date for presentation will be intimated later. During the presentation, Bidders should present the equipment/machinery offered as per technical specifications and packages.

Technical committee will visit to verify the capacity and capability of the bidders to assess the performance of similar equipments/machinery supplied by them.

The Bidders will be evaluated as per the evaluation criteria & as per the Vendor evaluation format given in the Annexure -II (refer page no. 24 to 28) .So Bidders should provide relative supporting documents to support all claims/information provided in Vendor evaluation format.

9. Prospective Bidders / Parties acknowledge and agrees that:

CIPET has issued this Expression of Interest with the best intention to explore the market for eligible and interested Bidders and has no compulsions to enter into definitive contractual agreements.

Prospective Bidders / Parties acknowledge and agree that response to the EOI is purely voluntary action on their part and for any expenditure on this account by them, CIPET will have no obligation or liability to the prospective bidders / parties in the event of cancellation of EOI.

10. CIPET is the final authority and the decision will be final and binding on the supplier for any disputes. All legal disputes will have the jurisdiction of Chennai only.

Form 1

Eol. No.- _____

Date: _____

Covering Letter on Letterhead of the Bidder with Correspondence Details

To
The Principal Director (T)
CIPET Head office,
TVK Industrial Area, Guindy, Chennai– 600032.
Tamil Nadu.

Sub: Expression of Interest for Supply, Installation, Commissioning and Testing of equipment/machinery of Plastic Waste Management System for CIPET

EOI applied for which Package – A/B/C/D/E/F/G/Full Package (Tick which ever applicable)

Dear Sir,

This is with reference to your advertisement inviting Eol for Supply, Installation, Commissioning and Testing of equipment/machinery of Plastic Waste Management System for CIPET. We, the undersigned, provide the below details for your kind consideration.

S.No.	Description	Firm's Response
1.	Name and complete address of the firm	Name: Address: Email Id: Contact no: Month & Year of Establishment:
2.	Name of the Proprietor/Partner/Director and complete address	Name: Designation: Address: Email Id: Contact no:
3.	Type of the Organization & Legal Status (Whether Company, Proprietorship, Partnership, Society/Trust/MSJE or any other)	
4.	Name and contact details of the Authorized person/Supplier/Manufacturer	Name: Designation: Address: Email Id: Contact number:
5.	Mandatory Documents:	Attached (Yes or No)
	Profile of their company with area, man power details & the manufacturing facilities	
A)	Copy of Registration of GST	
B)	Copy of PAN Card	
C)	Certificate of Registration for NSIC / MSME / Startup / Others	

D)	Bank account details:	
E)	Authorization certificate from OEM (If not a Manufacturer for the machine / equipment) as per Form 4	
F)	Financial status of the firm (audited balance sheet & Profit and loss statement of last three consecutive Financial Years) along with CA Certifying Annual turnover.	
G)	Latest IT returns of the firm	
H)	Experience of the last three years (attach proof) as per Form2& Form3	
I)	Blacklisting An Declaration to be given by the authorized signatory	
J)	Technical Leaflet, catalogue, literature, test reports etc. for packages	

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading, we are liable to be disqualified from the EOI selection process.

We agree to abide by the conditions set forth in this EOI.

We hereby declare that our proposal submitted in response to this EOI is made in good faith and the information contained is true and correct to the best of our knowledge and belief.

Sincerely,

Signature of Bidder

Name: _____

Designation: _____

Form 2

List of Government Organizations/Dept./Private sector or any other for whom the Bidder has Supplied and Installed the same / similar equipments during last three years(must be supported with work/Purchase orders)

Name of the organization	Name of Contact Person	Contact No./email id

Signature of the Bidder

Name _____

Designation _____

Form 3

PREVIOUS SUPPLY ORDER DETAILS

(for Similar/Same Goods/Equipment for a period of last three years)

Name of the Firm _____

Order placed by (Full address of Purchaser)	Order No. and Date	Description and quantity of ordered equipment	Value of order	Date of Completion of delivery as per contract	Has the equipment been installed satisfactorily(Attach a Certificate from the Purchaser/Consignee)	Contact person along with Telephone No. , Fax No. and email id)

Signature and Seal of the Manufacturer / Bidder

Place _____

Date: _____

Form 4
ORIGINAL EQUIPMENT MANUFACTURER (OEM)
Manufacturing authorization form (MAF)
(On Letter Head of Manufacturer)

EOI No.:-.....

Date:-.....

To
The Principal Director (T)
CIPET Head office,
TVK Industrial Area, Guindy, Chennai –
600032.
Tamil Nadu.

Dear Sir,

We manufactures of original equipment at (.....address factory.....) do here by authorize M/s (Name and address of Agent) to submit technical offer against the **EOI for Package - A, B, C, D, E, F, G / Full Package (Tick which ever applicable)**

M/s.....is authorized to Submit the bid and conclude the contract in regard to this business.

We here by extend our full guarantee and warranty for the goods offered by the above firm. The dealer is associated with us from the period _____ to _____ (DD/MM/YYYY)

Yours Faithfully,

(Signature)

(Name & Seal of Manufactures)

Annexure-A
(Set of equipments for each location)

COMPLETE PACKAGE
TECHNICAL SPECIFICATION FOR PWMC EQUIPMENTS

Package-A

Sorting and Separation Equipments

01. Sorting & Separation Equipment			
S. no.	Items	Unit	Specification
a. Material feed system with Zig zag Air Classifier			
1	Material feed system with Zig Zag classifier equipped with Blower Motor, Rotating valve, cyclone separator etc		Bidder to specify rating of major components such as valve size, cyclone size, motor capacity etc.
	The equipment should be capable of separating out dust and other fluffy non rigid waste/ contaminants, such as labels, paper, and plastic wrappers from grinded/chopped/ agglomerated rigid plastics waste.		Should comply
	a) Blower Motor & Rotary valve Motor rating	KW	Suitable for 150-200 kg/hr output
	b) Rotary Valve diameter	mm	Suitable for 150-200 kg/hr output
	c) Cyclone separator volume	L	Suitable for above capacity
2	Output	Kg/Hr	150-200 kg/hr
b. Film Grabber with belt conveyor			
3	The system should have Rotary drum with panel control, Gear motors, centrifugal fan, feeding hopper, discharge hopper speed control etc	Kg/Hr	150-200 kg/hr output
4	Belt conveyor made up of Polyester/Nylon for input feed of waste material, with variable speed drives etc		The construction should be of mild steel with Zinc coated epoxy painted Mild steel

c. Ballistic separator double-stage equipment with belt conveyor

5	The setup should have Ballistic separator with blades, screening decks, gear motors, paddles etc		Shall be able to handle 150-200 Kg/hr output
6	Belt conveyor made up of Polyester/Nylon for input feed of waste material, with variable speed drives etc The construction should be of Mild steel material with Zinc coated epoxy painted	Kg/Hr	150-200 kg/hr

d. Manual Sorting Equipment

7	Belt Type width, length etc.	-	Flat Belt/ Cleated Belt (Polyester – Nylon/ Nylon – Nylon type). Shall be able to handle 150-200 Kg/Hr. Length of belt conveyor should be suitable for 3-4 persons each side.
8	Construction	-	Roller mounted having construction of structural part of Mild steel with Zinc coated epoxy painted.
9	Frame Configuration	-	Frame width, Height (suitable for manual sorting)
10	Output	Kg/Hr	150-200 kg/hr and above
11	Motor	KW	Please Specify
12	Speed	MPM	Adjustable through variable frequency drive, Please Specify range
13	Built in Safety Features		Appropriate safety features to be incorporated

e. Plastics Pipe, Lumps, Shredder, Crusher Grinder machine

14	Usage (Feed Material)		Plastics waste especially Rigid, HDPE and PVC Pipes directly from feed throat.
15	Capacity	Kg/hr	200
16	Shredder Motor power	KW	Bidder to specify (suitable for the above capacity)
17	Crusher Motor power	KW	Bidder to specify (suitable for the above capacity)
18	Shredder Motor speed	RPM	Bidder to specify (suitable for the above capacity)

19	Crusher Motor speed	RPM	Bidder to specify (suitable for the above capacity)
20	Blade steel		Heat treated tool steel having hardness HRC 60 or above Good wear resistance is required.
21	Rotary and Stationery blade of shredder (Nos.)		Shall be able to meet specified output requirement.
22	Rotary and Stationery blade of crusher (Nos.)		Shall be able to meet specified output requirement.
23	Screen hole dia of Shredder	mm	20-40 mm
24	Screen hole dia of crusher	mm	8 to 12 mm
25	Other Features Required		shredding and crushing function on one machine strong frame structure, air cooling or water cooling design, electrical cabinet with reputed PLC control system, auto control for co-rotation and reversal, Auto protection while over-load.
All the equipment structures should be robust, properly treated with anti - rust coating with epoxy painted.			

Package B

Automatic Inline Washing & Size Reduction Machinery
MATERIAL: HD, LD, PP FILM, MLP FILMS & Rigid Grinded Material
OUTPUT: 150-200 KGS/HR

S. no.	Items	Specification
1	Conveyor	Suitable plastics Belt should be integral Package of machine for handling required capacity (i.e 150-200 kgs/hr)
2	Single Shaft Shredder	Hydraulic powered cylinder with electrical motor main shaft machine with adequate Nos. of Rotor knives & Stator knives with suitable screen for required output
3	Screw Conveyor 1	Suitable for the above capacity
4	Friction washer 1	Adequate size of rotor and motor for required output per hour
5	Floating tank (with screw) 1	Stainless steel Adequate size & Nos. of Paddles / screw for required output per hour
6	Screw Conveyor 2	Suitable for the above capacity
7	Friction washer 2	Adequate size of rotor and motor for required output per hour
8	Floating tank (with screw) 2	Stainless steel Adequate size & Nos. of Paddles / screw for required output per hour
9	Screw Conveyor 3	Suitable for the above capacity
10	Friction washer 3	Adequate size of rotor and motor for required output per hour
11	Screw Conveyor 4	Suitable for the above capacity
12	Centrifugal dewatering machine	Adequate size of rotor and motor for required output per hour Screen size for sufficient cleaning
13	Blower	Adequate size of motor with two outlets suitable to connects to squeezer & dryer.
14	Squeezer	Suitable Spiral Diameter having adequate size of motor for required output per hour
15	Electrical control panel	A synchronize control Panel with remote and local control possibilities for all the equipments in package.
	<ul style="list-style-type: none"> ➤ Suitable capacity High efficiency motor of ISI certified reputed Make with AC frequency drive of same company for handling where ever required. ➤ The entire equipment in above should work in proper synchronization to yield desired output. ➤ All water contact machine Packages should be made of stainless steel preferably SS316 grade. 	

Package C		
Inline Single Screw Two Stage Extruder Cutter Compactor Plant With Water Die Face Cutter		
MATERIAL: PRE-WASHED SHREDDDED/GRINDED HD, LD, PP FILM, MLP FILMS		
OUTPUT: 125-150KGS/HR		
S. no.	Items	Specification
1	Belt driven conveyor	Suitable Belt should be integral Package of machine for handling required capacity (i.e 150-200 kgs/hr)
2	MOC	Robust Mild steel structure, fabrication with covers Fitted with caster wheels to move it easily Epoxy powder coating for all metal Packages.
3	Motor	Run by Suitable capacity High efficiency ISI Marked of reputed make with AC frequency drive of same company Geared Motor
4	COMPACTOR MACHINE /FORCE FEEDER	
	a) Bottom Vessel	Stainless steel
	b) Other Packages	Stainless steel
	c) Top Cover	Carbon steel
	d) Stationary Blades	Adequate Nos of blade for required output
	e) Rotary Blades	Adequate Nos of blade for required output
	f) AC Motor Power : AC frequency drive operated	Suitable capacity High efficiency motor of ISI certified reputed Make with AC frequency drive of same company for handling where ever required. (i.e 150-200 kgs/hr)
5	TWO STAGE SINGLE SCREW EXTRUDERS WITH PANEL BOARD (Mother& baby /Tandem type)	
	a) GEAR BOX	High torque, low noise with High carbon carburized Mild steel of reputed brand
6	MOTOR	
	a) HP	Suitable capacity High efficiency High efficiency Motor, please specify
	b) RPM	Please specify
	c) Standard	Suitable capacity High efficiency motor of ISI certified reputed Make with AC frequency drive of same company for handling where ever required.
	d) Mounting	Foot Mounted/ Suitably mounted as per the machine requirement.
7	SCREW	
	a) Screw Dia	75-80 mm (Suitable capacity for required output)
	b) L/D Ratio	40:1
	c) Material of construction	En-series
	d) Heat Treatment	Toughened, Nitrided and Ground
8	BARREL	
	a) Barrel Size	Suitable capacity for required output
	b) L/D Ratio	Suitable for the screw
	c) Heat Treatment	Duly toughened and nitrided.
	d) Water Cooling	Provided on Barrel below the Feed suction
	e) Blower	For barrel cooling
	f) Vent	2 Nos with water ring vacuum pump

9	Condensing Unit with Heat Exchanger	
a)	Vacuum Pump	Suitable capacity for required output
10	HEATER	
a)	Heating Type	Ceramic heaters
b)	Construction	Provided with blowers to cool & control excess heat
11	BASE FRAME	
a)	Material of Construction	Heavy duty frame work, stand for no vibration and duly give mounting and locking base for easy installation, Epoxy powder coating for all metal Packages.
12	MELT FILTER (SCRAPPER TYPE)	
		Disc Size 500mm or higher
		Automatic Self-Cleaning Screen Changer Fitted with required capacity Geared Motor
		Screen changer should have one blade rotating on the screen
		Rotating blade should lift the contamination from the screen
		Contamination should be transported to the discharge valve by blades
		The discharge valve should opens for a pre-set timeframe, depending
13	DIE FACE CUTTER	
a)	Type	Water ring type (closed circuit)
b)	Construction	Water contact Packages should be made from non-rusting stainless steel
c)	BASE FRAME	Robust frame work, stand for no vibration and duly give mounting and locking base for easy installation Epoxy powder coating for all metal Packages.

Package D		
Multi-daylight Compression Moulding Machine 200T		
S. no.	Items	Specification
1	Type of press	up-stroking, Vertical press
2	Type of frame	Pillar type
3	Pressing capacity	200T
4	Ram Stroke	400mm
5	Multi daylight	Suitable for mounting 3 nos.
6	Total Daylight	Minimum 600 mm (Distance between top bolster plate and bottom bolster plate when ram is at top end)
7	Top Bolster plate	200mmheight
8	Mounting platen area	Suitable to mount moulds of size 450 x 450 mm
9	No. of Hydraulic cylinder	1
10	Speed of Ram	1. Approach speed min. 20mm/sec up-to 350 + 10 mm stroke 2. Pressing speed: 6mm/sec from 350 + 10mm to 400mm stroke 3. Return speed: 40mm/sec for full stroke
11	Enclosure	1. MS sheet of minimum 10mm thickness shall be used for making enclosure. 2. Enclosure dimension: 1200mm(length from left to right)x 820mm(width from front to back)x 800mm(height) 3. Two sliding type windows with handle of 700mmx500mm each on left and right hand side for operation checks. 4. Front sliding door of 1150mm length x 10mm width or thickness and 850mm height made of MS sheet.
12	Electrical System	a) Power Supply 3 Phase/415V $\pm 10\%$ 50Hz $\pm 3\%$ b) Control Voltage 24V D.C
13	Main Pump Motor	Three phase induction motor
14	Operation Modes	Manual and Auto-Single cycle
15	Pillar guides	Four nos. each one located on left, right, front and back of the piston of hydraulic cylinder.
16	Lubrication System	Centralized grease lubrication system
17	Oil Cooling	Plate type water cooled heat exchanger
18	Moulds	3 pairs of Pever Block, Brick & Tiles etc.

Package E

10 KLD Packaged Effluent Treatment Plant (ETP)

Brief Description:

Effluent Treatment Plant with suitable treatment process is desired for proposed Plastic Waste Management Centre of CIPET being established at Ahmedabad (Gujarat), Patna (Bihar), Bengaluru (Karnataka) and Varanasi (U.P.) having a tentative plastic recycling capacity of 2 Tons/day. The plastic waste shall be collected from the municipal solid waste or industrial waste and expected to consist of PP / PE / MLP etc. The effluent coming out from washing and cleaning of these waste need to be treated as per the norms / guidelines of respective State Pollution Control Boards before its reuse or discharge.

Requirements:

1. The ETP shall be compact in nature and may consist of following equipment / Packages with complete accessories required for their operation based on the treatment process being offered:
 - Raw effluent collection pump
 - Oil / Grease trap or separator
 - Screen Chamber
 - Collection / Equalization tank
 - Chemical Reaction tank
 - Settlers
 - Disinfection tank
 - Final treatment unit
 - Drying and Sludge disposal unit
 - Air blowers / diffusers
 - Sand / carbon filter
 - Air release valves, Pressure gauges, pH monitor, level controller etc.
2. Shall be capable of treating various type of effluents generated by washing and cleaning of solid mixed plastic waste of municipal solid waste / industrial waste
3. Construction should be robust and compact in design having rust proof Mild steel / FRP construction
4. Shall be compliant with the statutory norms of State Pollution Control Boards
5. Preferably Skid mounted
6. Raw & Treated water quality:

Sl.	Parameters	Unit	Raw Effluent	Treated Water
1	pH	-	7-8	As per the requirements of PCB
2	Total Suspended Solids (TSS)	ppm	300 - 350	
3	BOD	ppm	1	
4	COD	ppm	30 – 40	
5	Odor and Smell	--	As per source	
6	Oil & Grease	ppm	May be small trace	

Package F

PYROLYSIS UNIT

Sr. No.	Parts/components/parameters of the unit	Specifications
1	Make	To be specified by bidder
2	Model	To be specified by bidder
3	Waste plastics pyrolysis unit with set of accessories for recovery of pyrolysis oil, produced gases and solid materials	<p>Pyrolysis with environmental friendly closed loop thermal breaking reaction of the high molecular weight plastics in an oxygen free environment producing small molecular weight molecules.</p> <p>(a) Quantity: 01 (b) Pyrolysis capacity of 1000 kg per batch (c) Catalytic pyrolysis</p>
4	Applications	<p>(a) Production of quality pyrolysis oil (b) Pyrolysis unit should capable of pyrolyzing carry bags, mixed plastic scrap, laminates, packing material waste, multilayered plastic etc. (c) Recover produced pyrolysis gases and solid residue i.e., charcoal of high quality</p>
5	Pyrolysis reactor	<p>(a) MOC: SS 316 with wall thickness of minimum 8 mm. (b) Pressure gauge(s), safety valve(s) and automatic pressure release valve (c) Rector capacity 1000 kg or better (d) Jacketed reactor with thermal insulating materials (e) Thermocouple(s) for temperature measurement at reactor door and furnace (f) Should be capable of feeding Nitrogen / CO2 Purging for safety purpose (g) Appropriate plastic waste feeding system to reactor (h) Gas purging and pressure dial gauge should be fitted to top of the reactor along with outlet gaseous fume (i) Bach time should be specified by bidder.</p>
6	Pyrolysis heating system	<p>(a) Gas heaters and electric heaters. Both the heaters should be operated simultaneously as well as independently as per the requirement.</p> <p>(b) Dual: Electrically fired and gas fired system, having provision for feeding produced pyrolysis gas for heating purpose with close loop (produced gas & pyrolysis oil /LDO burners with pumping unit and appropriate capacity oil tank)</p>

		<p>(c) The reactor should be fitted with required number of gas heaters and electric heaters. These heaters should be used in various combination depending on the availability of gas and electricity.</p> <p>(d) Temperature: Room temperature to 400 °C or (working temperature: 375 °C)</p> <p>(e) Temperature should be uniform throughout the reactor and Temperature accuracy: ± 10 °C for uniform product. The reactor should be fitted with external heaters and pocket heater should be installed to provide uniform heating.</p> <p>(f) Standard thermocouples should be installed for temperature monitoring. The thermocouples should be installed inside the reactors.</p>
7	Gas purging and plastics waste feeding system	<p>(a) 02 Screw feeders with dual heating i.e., direct gas fired and electrical heating system.</p> <p>(b) Feed capacity is 300 kgs per hour or better</p>
8	Pyrolysis oil receiver(s)	01 settlement tank of 5000 liters and 01 main storage tank 12000 liters should be provided with Mild steel.
9	Condenser System	<p>(a) 1 line of condensers of 2 condensers in each line, i.e., 6 condensers (shell and tube type or any other better) equipped with piping (seamless) for gas/vapor line and water from cooling tower</p> <p>(b) Cooling tower for circulation of water required for condensers. Condenser MOC: SS316</p> <p>(c) 100 TPA cooling tower with closed loop.</p>
10	Pyrolysis gas scrubbing system	High efficiency for removal of particulate and odour. Entire Gas storage and scrubbing system.
11	Coke/carbon removal	Provision to be provided
12	Solid carbon recovery system	Pyrolysis unit should provide high quality fine carbon materials
13	Efficiency of pyrolysis unit	<p>(a) 70% (Plastics waste into pyrolysis oil) or better</p> <p>(b) Pyrolysis unit should produce less than 15%, wax, and Pyrolysis unit components should be easily cleaned which is clogged by wax.</p>
14	Gas recovery system with water distillation unit	Produced gas directed for utilization for heating

15	Pyrolysis Technology	Should comply with local pollution control board with all necessary licenses.
16	Other accessories	Should provide: (a) Specify gas storage tank capacity/gas storage balloons (b) Storage container for charcoal (c) Agitator motor - 15 HP or as per requirement (d) Feeder motor - 5 HP × 2 Feeders = 10 hp (operated 12 hours during the batch) or as per requirement (e) Cooling tower motor - 3 HP (operated throughout the batch) or as per requirement (f) Grinding machine motor - 10 HP (operated as per requirement) or as per requirement (g) Agglomeration machine motor
17	Consumables	(a) After successful installation, commissioning and demonstration of pyrolysis plant, bidder should provide about 60 kg of Catalyst having shelf life of 3 years. (b) Bidder should provide catalyst at same price at least for one year after consumption of 60 kg of catalyst (c) Catalyst should be supplied by bidder. Specify the catalyst requirement for one Ton of plastic waste. (d) The price of catalyst should be fixed for 3 years (e) All consumables like gaskets, bearings, heaters etc. should be provided
18	Safety Provision	(a) To mitigate build-up of pressure inside the reactor due to choke-up in condenser, there should be a bypass line and in case of extreme emergency, there is an emergency release line. Other standard safety fire-fighting equipment as per the oil and gas safety norms should be provided. (b) There are various pressure gauges installed for safe monitoring. 2 pressure gauges are fitted on the reactor. 1 pressure gauge is installed at the condensers line and 1 pressure gauge is installed at the exit of condensers. (c) The safety requirements plant should be as per standard safety norms of oil and gas industry
19	Control Panel	The control panels should be electrical based. The control panels should be provided from a reputed panel manufacturer having CPRI approval.
20	Pre installation requirements	(a) Bidder should provide all technical drawing related to plant and prefabricated shed design required for plant installation. (b) Installation requirements for the plants (electricity, water, and construction structure etc.) should be provided accurately.

Package G

Organic Based Fully Automatic Composting Machine

Sl. No	Items	Specification
1	Per Day Waste Processing Capacity	200Kgs
2	Composting System	MicroorganismBased24HrsComposting
3	Operation & Processing	FullyAutomatic&Within24Hrs
4	Input	Segregated Organic Waste
5	Output	Dry Organic Compost
6	Power rating of Machine	Please specify
7	Composting Tank Material, Waste Input Door, Compost Removal Door	SS(Stainless Steel),outside body can be either SS
8	Control Panel System	PLC based with touch screen HMI
9	Composting Method	Micro organism based natural composting in high temperature
10	Volume Reduction	Please specify
11	Compost Generated Per Day	Please specify
12	Machine Dimension	Please Specify

Format of Vendor Evaluation Report & Mark sheet
Vendor Evaluation Report to be submitted by evaluation committee

PART A			
1		Name Of Vendor	
	1.1	Registered Office Address	
		Telephone No	
		Fax No	
		Email Address	
		Website	
	1.2	Manufacturing Site Address	
		Telephone No	
		Fax No	
		Email Address	
		Website	
	1.3	Nature Of The Company	
	1.5	NAME & DESIGNATION OF HEAD OF ORGANISATION With Contact No.	
Part B			
1		Survey Advice Ref	
2	2.1	Item For Which Survey To Be Carried	
	2.2	Date Of Survey	
3		Office Works Visited	
4		Persons Contacted	
5		Design Facilities:	
	5.1	Engineers	
	5.2	Specialists	
	5.3	No Of Working Level Personal	
	5.4	Drafting Facility	
	5.5	Experiences In Design	
	5.6	Familiarity & Availability Of Codes/	
		Specs.	
	5.7	R&D Facilities	
	5.8	Technical Collaboration If any	
6		Quality Control Facilities	
	6.1	Qc Setup Engineers / Inspectors	
		Adequacy Of Experience	
	6.2	Qc Manual/ Written Procedures	
	6.3	Extent of application Of Qc	
		Procedures At Shop Floor	

	6.4	Availability Of Gauges/Fixtures	
	6.5	Periodical Calibration Of	
		Equipments/ Instruments	
	6.6	Qc Records/ Documents	
	6.7	ISO Accreditation For Quality	
		Systems	
7		Testing Facilities	
	7.1	In House	
	7.2	Testing Facilities Dependent On	
		External Agencies	
	7.3	Adequacy Of Testing	
8		Performance Reliability	
	8.1	Satisfactory Execution Of Similar	
		Orders	
	8.2	After Sales Services	

PART C			
1		<u>SURVEY CONCLUSION-</u>	
2		<u>RECOMENDATION-</u>	
		Signature	Signature
		Name of committee member:	Name of committee member:
		Designation:	Designation:
		Signature	Signature
		Name of committee member:	Name of committee member:
		Designation	Designation
		Signature	Signature
		Name of committee member:	Name of committee member:
		Designation	Designation

VENDOR EVALUATION REPORT

VENDOR'S NAME:

LOCATION/ADDRESS:

PRODUCT NAMES:

Sr. No	TITLE	POINTS ALLOTTED Maximum	SURVEYOR'S RATING
1	Over all facilities		
1.1	Registration as Micro, Small, Medium or Large Enterprise with in India.	2	
1.2	ISO 9001:2008 certificate Quality management system	2	
1.3	Income tax filing details.	1	
1.4	Import & Export license.	2	
1.5	National level quality awards, research & development award or outstanding entrepreneurship award from government.	2	
1.6	R&D facilities.	1	
1.7	Technical collaboration with international reputed firm.	1	
1.8	GEM registration	1	
		12	
2	Manufacturing facilities		
2.1	Open space within factory premises with respect to manufacturing items.	2	
2.2	Buildup space within factory premises with respect to manufacturing items.	2	
2.3	Shop layout and defined areas/sheds for separate production activities with respect to Manufacturing items.	2	
2.4	Storage area/shed for raw material	1	
2.5	Storage area/shed for finished product.	1	
2.6	Production planning/application	2	
2.7	Raw material/component procurement	2	
		25	

2.8	Production staff like engineers, supervisors, skilled workers, other workers.	3				
2.9	Plant & machinery necessary for production of the listed items.	4				
2.1	Machinery & equipments for material handling	2				
2.11	Automation and process controls.	2				
2.12	Packing, marking, dispatching facilities.	2				
3	Testing facility			10		
3.1	Tests carried out on raw material.	1				
3.2	In-house testing facilities, testing equipments available as per relevant BIS code.	2				
3.3	Available gauges, measuring device, testing equipment, meters, inspection aids, instrument of Standard makes with NABL accredited laboratory calibration report.	2				
3.4	In process checks.	1				
3.5	Laboratory facilities.	2				
3.6	Finished product tests/checks.	1				
3.7	Special / type test	1				
4	Quality control & quality assurance plan		7			
4.1	QC manual, written procedures, quality assurance plan etc.	1				
4.2	Quality control staff like engineers, supervisors, skilled workers.	1				
4.3	Documentation/procedures	1				
4.4	Traceability	1				
4.5	Calibration records	2				
4.6	Extent of supervision	1				
5	Design facility		12			
5.1	Design staff like engineers, specialists, technologists, draft mans.	5				
5.2	Designing facility available.	5				
5.3	Availability of codes/specification/ R&D	2				

6	Experience for particular item, equipment, machinery, product etc.				
6.1	3 to 5 years	2	14		
6.2	5 to 7 years	3			
6.3	7 to10 years	4			
6.4	Above10 years	5			
7	Turn over				
7.1	0.5 to 1 crore	2	10		
7.2	1 to 5 crore	3			
7.3	Above 05 crore	5			
8	After sales services				
8.1	Satisfactory execution of similar supply orders to government department.	2	10		
8.2	Satisfactory execution of similar supply orders to reputed non-Governmental organization.	2			
8.3	State level network of service after sales in State where equipment to be supplied.	4			
8.4	Customer complaints, resolution, promptness.	2			
		Total	100		
Note:	1. The minimum rating required for Manufacturing Facility is19 out of 25.				
	2. The minimum rating required for testing facility is 7 out of 10.				
	3. The minimum rating required for after sales services is 6 out of 10.				
	4. The minimum rating required for design facility is 8 out of 12.				

Vendor should provide relative supporting documents to support all claims/information provided in format. Authorized Dealers should submit their OEM documents/information for the above.