

# MINI PLASTIC WASTE MANAGEMENT FACILITY ESTABLISHMENT PROPOSAL (Collection and Shredding of Waste Plastic)

PREPARED FOR  
**All ENVIS Centres**

PREPARED BY  
**TCE ENVIS RP**  
(Plastic Waste Management)



सत्यमेव जयते  
Ministry of Environment, Forest  
& Climate Change



<b>PROJECT TITLE</b>	Establishment of Mini Plastic Waste Management Facility		
<b>SUBMITTED BY</b>	TCE ENVIS, Madurai	<b>PROJECT TYPE</b>	New PWM Facility
<b>PHONE / EMAIL</b>	<a href="mailto:deaneca@tce.edu">deaneca@tce.edu</a> , <a href="mailto:pwm@tceenvis.in">pwm@tceenvis.in</a>	<b>TOTAL ESTIMATED BUDGET</b>	<b>INR. 5,19,372.00</b> (Excluding Building Cost )
<b>DATE OF PROPOSAL</b>	27.02.2019	<b>TYPE.</b>	Commercial Plant
<b>PROJECTED START DATE</b>	--	<b>PROJECTED COMPLETION DATE</b>	--

## I. PROJECT OVERVIEW

To collect and convert plastic waste to shredded plastic waste as value added product.

- Plastic rejections are considered to be the major contributor towards the irreparable damage caused to the environment due to pollution, world over. Plastic found in different forms are harmful to nature. Inordinate dumping of plastic near water bodies and Indiscriminate burning of plastics are the root cause of exponential increase in the pollution index of many a city in the world.
- The project aims to ensure comprehensive management of all harmful rejections in the state, thereby ensuring that the hygiene of the state is never compromised.
- Segregation and collection on plastic waste is the need of the hour.

## II. SALIENT FEATURES OF THE PROJECT

Installation of Plastic Shredding Machine and Baling Machine

- Commission one number shredding machine of processing capacity 100Kg/hr and upto 1 TPD and baling machine based on a supply contract entered into with the Local Self Government Institutions.
- L.S.Gs to ensure that clean and dry plastics rejects are being brought in to the facility through the prevalent collection network of the local body.
- The cost of the machinery, installation, erection and commissioning charges to be borne by Local Institutions. Local Institutions to provide a built up space (Shed) of 1000 square feet and provide all the required infrastructure, like electricity ((3 phase connection and starter switches for machineries), water supply etc.
- The L.S.G to employ self help group, NGO and other plastic waste collectors to process the waste at the facility and convert the waste plastic material, brought into the facility, into shredded plastic suitable for recycling and prepare it for forwarding for further recycling and Tar Road Laying.
- The shredded plastics can be used to P.W.D/L.S.G.D for the construction of polymerized roads.

### III. TECHNICAL SPECIFICATIONS SHREDDING MACHINE

#### Plastic Shredding Machine Specification – Mandatory

Capacity	1 TONNE/DAY (100KG/HR)
Size (Dimension)	1500x750x1500 mm
Power	15 H.P/15KW
RPM	1440
Thickness of Blade	16mm
Number of Blades	6 nos (Rotary - 4, Stationary - 2)
Size of Mouth	18 Inches
Height	5Feet
Blade Grinding Machine - * ( Optional)	
Size (Dimension)	1000x300x1000 mm
Length of sharpening	28 inch
Motor Power	2 HP
RPM	1440
Store Type	Cylindrical Model
Accessories	
Weighing machinery	Stainless steel pan 300 kg capacity (Least count – 50 g) Pan size – 450 x 550 mm
Tools	Necessary tool kit.

### IV. Financial Details

MACHINERY FOR PROCESSING 1 TONNE PLASTIC REJECTS/DAY		Cost
A.	Shredding Machine 15 HP * Mandatory	
	add CGST 9%	Rs. 3, 84,552.38
	add SGST 9%	Rs. 34,609.71
	Round Off - (-) 0.20	Rs. 34,609.71
	<b>Total</b>	<b>Rs. 4, 53,772.00</b>
C.	Installation Charges	Rs. 24,600.00
D.	Supervision Charges (one year)	Rs. 41,000.00
<b>Basic Machine Total Cost</b>		<b>Rs. 5,19,372.00</b>
<b>In Words: (Rupees Five Lakhs Nineteen Thousand Three Hundred and Seventy Two Only)</b>		

Note:

- Includes of cost of shredding machine 15 H.P & tools
- Installation and supervision charges are inclusive of GST 18%

## V. TECHNICAL REQUIREMENTS

OVERVIEW

Electrical requirements for installation of machineries –  
3 phase power connection required  
(With Transformer, if necessary, as advised by Local EB)

### Plastic Shredding Machine-15 HP Motor

Starter	Star Delta
Isolator	63A
Capacitor	5KVR, Cable - 6mm

### Blade Sharpener Machine-2HP Motor

Starter	DOL
Isolator	32A
Capacitor	1KVR, Cable - 2.5mm

### Water Requirement – 1/2 KLD

#### Quantity of Waste Input/Output:

Maximum input quantity of waste which can be processed in the plant – 1 tonne per day and  
Maximum output quantity of plastic per day – 800 Kg

Manpower cost: according to the labor department notification , minimum rates for the wages Rs. 470 per day (26 days)

## VII. Material Recovery Facility

ELEVATION

Minimum Required Space: 10 Ft x 20 Ft

Estimated cost for the Material Recovery Facility – Changes as per ENVIS Centre PWM Installation Area

## VII. Contact Details

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### Declaration

AUTHORIZED  
SIGNATURE

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