

UP MSME **1**-Connect

PROJECT REPORT

PROJECT:

TEXTILE RECYCLING

PROJECT REPORT

Of

TEXTILE RECYCLING

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Textile (Fabric) Recycling.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx
Pin: xxxxxxxx
Mobile : xxxxxxxx

State: xxxxxxxxxxxx
- 5 Product and By Product : COTTON FROM FABRIC WASTE
- 6 Name of the project / business activity proposed : TEXTILE(FABRIC) RECYCLING UNIT
- 7 Cost of Project : Rs.28.67 Lakhs
- Means of Finance
Term Loan
Own Capital
Working Capital

Rs.19.8 Lakhs
Rs.2.87 Lakhs
Rs.6 Lakhs
- 9 Debt Service Coverage Ratio : 2.79
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 26%
- 13 Employment : 11 Persons
- 14 Power Requirement : 100.00 HP
- 15 Major Raw materials : Fabric Waste
- 16 Estimated Annual Sales Turnover (Max Capacity) : 194.40 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Land (3500-4000 sqft.)	Own/Rented
Plant & Machinery	20.50
Furniture & Fixtures	1.50
Working Capital	6.67
Total	28.67

MEANS OF FINANCE

Particulars	Amount
Own Contribution	2.87
Working Capital(Finance)	6.00
Term Loan	19.80
Total	28.67

TEXTILE (FABRIC) RECYCLING UNIT

Introduction: Textile recycling is the process by which old clothing and other textiles are recovered for reuse or material recovery. The average lifetime of a garment is estimated to be for a period of three years. After the time period, they are thrown away as old clothes. Even useful garments are discarded as they are no longer fashionable, or desirable. A report states that more than one million tons of textiles are condemned every year. Huge quantities of old clothing end up in the landfill instead of being recycled and reused. Of the house hold garbage, textiles make about 3 percent by weight. Textile wastes also arise during the process of yarn and fabric manufacture, garment making, etc. They are called as post industrial wastes. All this thrown clothing has a potential for recycling and reuse. 80 percent of the textiles that are thrown away can be recycled and used again, whereas, currently only 25 percent is being recycled. Less than 5 percent of all the garments that is thrown in the bin actually end up as waste.



Product Benefits: Textile recycling offers the following environmental benefits:

- Decreases landfill space requirements, bearing in mind that synthetic fiber products do not decompose and that natural fibers may release greenhouse gases.
- Avoided use of virgin fibers
- Waste water reduces as it does not have to be thoroughly washed with large volumes of water as it is done for, say, raw wool.
- Pressure on fresh resources too is reduced.
- Reduced consumption of energy and water
- Pollution avoidance

Market Potential: The basis for the growing textile recycling industry is, of course, the textile industry itself. The textile industry has evolved into a \$1 trillion industry globally, comprising clothing, as well as furniture and mattress material, linens, draperies, cleaning materials, leisure equipment, and many other items. The global textile recycling market grew at a CAGR of around 19% during 2014-2019 & expected to grow at a very higher rate during 2020-2025. Indian textile industry accounts for almost 24% of the world's spindle capacity and 8% of global rotor capacity. Abundant availability of raw materials such as cotton, wool, silk and jute as well as skilled workforce have made the country a sourcing hub for textile.

Raw material sources: Textiles for recycling are generated from two primary sources. These sources include:

- Post-consumer, including garments, vehicle upholstery, household items and others.
- Pre-consumer, including scrap created as a by-product from yarn and fabric manufacture, as well as the post-industrial scrap textiles from other industries.

Machinery Requirements: Major machinery & equipments are as follows:

S No.	Name	Amount
1	Cotton Carding Machine Opener & Cleaner 650 MM Opener 250 MM Cleaner	1080000
2	Siemens Motor 30HP Motor: 2*53500=107000 7.5 HP Motor: 5*17200=86000 5HP Motor: 2*12900=25800 3HP Motor: 2*9800=19600 Control Panel: 170000 Remote Box:15000	423400
3	Spare part of Carding machine- Cyclone	75000
4	Hydraulic Bale press-50 Tonne Pressure	215000
5	Fabric waste cutting machine 6 moving blade & 2 Fix Blade	245000
	Total Amount	2038400
	Net Amount (Round off)	2050000

Manufacturing Process: Fabric Recycling Process:

All waste fabrics are procured from vendor and stored in raw material warehouse as per production requirement. The raw material are brought to plant and fed to the respective cutting machine. After this machine will cut the fabric into desired pieces. Then put the fabric into fiber opener, in this process fiber opener will open the fabric layer by layer & then it will go to the fabric cleaner which will clean the fabric. After Cleaning process with the help of bale press fabric is pressed to get the final product. Checking of final product, packaging & sent for sale.

Area: The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area required for complete industrial setup is 3500 to 4000Sqft.

Power Requirement: The power consumption required to run all the machinery could be approximated as 100 Hp

Manpower Requirement: There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 11 including 1 Supervisor, 2 Machine Operator, 2 unskilled worker, 2 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

Bank Term Loan: Rate of Interest is assumed to be at 11%

Depreciation: Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

Approvals & Registration Requirement:

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require.
- NOC from State Pollution Control Board

Implementation Schedule:

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

FINANCIALS

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
<u>Capital Account</u>					
Opening Balance	-	5.33	8.42	12.11	16.37
Add: Additions	2.87	-	-	-	-
Add: Net Profit	7.46	8.59	10.20	13.26	14.91
Less: Drawings	5.00	5.50	6.50	9.00	10.00
Closing Balance	5.33	8.42	12.11	16.37	21.28
CC Limit	6.00	6.00	6.00	6.00	6.00
Term Loan	17.60	13.20	8.80	4.40	-
Sundry Creditors	3.42	4.04	4.60	5.17	5.77
TOTAL :	32.35	31.66	31.51	31.94	33.05
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	22.00	22.00	22.00	22.00	22.00
Gross Dep.	3.23	5.97	8.32	10.31	12.02
Net Fixed Assets	18.78	16.03	13.68	11.69	9.98
Current Assets					
Sundry Debtors	3.37	4.02	4.60	5.20	5.83
Stock in Hand	6.71	7.86	8.96	10.10	11.29
Cash and Bank	3.48	3.75	4.27	4.95	5.94
TOTAL :	32.35	31.66	31.51	31.94	33.05

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
<u>A) SALES</u>					
Gross Sale	112.40	134.16	153.39	173.47	194.40
Total (A)	112.40	134.16	153.39	173.47	194.40
<u>B) COST OF SALES</u>					
Raw Material Consumed	68.40	80.80	91.91	103.46	115.43
Electricity Expenses	5.59	6.28	6.98	7.68	8.38
Repair & Maintenance	4.50	4.70	5.37	6.07	6.80
Labour & Wages	12.85	13.49	14.17	14.88	15.55
Depreciation	3.23	2.75	2.34	2.00	1.70
Cost of Production	94.56	108.02	120.78	134.08	147.86
Add: Opening Stock /WIP	-	3.29	3.82	4.36	4.93
Less: Closing Stock /WIP	3.29	3.82	4.36	4.93	5.52
Cost of Sales (B)	91.27	107.50	120.23	133.51	147.27
C) GROSS PROFIT (A-B)	21.14	26.66	33.16	39.95	47.13
	18.81%	19.87%	21.62%	23.03%	24.25%
D) Bank Interest (Term Loan)	2.15	1.75	1.27	0.79	0.30
ii) Interest On Working Capital	0.66	0.66	0.66	0.66	0.66
E) Salary to Staff	7.31	8.77	10.52	12.63	15.15
F) Selling & Adm Expenses Exp.	2.25	4.02	6.14	6.94	9.72
TOTAL (D+E)	12.36	15.21	18.59	21.01	25.84
H) NET PROFIT	8.78	11.45	14.57	18.94	21.30
I) Taxation	1.32	2.86	4.37	5.68	6.39
J) PROFIT (After Tax)	7.46	8.59	10.20	13.26	14.91

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	2.87	-			
Reserve & Surplus	8.78	11.45	14.57	18.94	21.30
Depriciation & Exp. W/off	3.23	2.75	2.34	2.00	1.70
Increase In Cash Credit	6.00				
Increase In Term Loan	19.80	-	-	-	-
Increase in Creditors	3.42	0.62	0.56	0.58	0.60
TOTAL :	44.09	14.82	17.46	21.51	23.60
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	22.00	-	-	-	-
Increase in Stock	6.71	1.14	1.10	1.15	1.19
Increase in Debtors	3.37	0.65	0.58	0.60	0.63
Repayment of Term Loan	2.20	4.40	4.40	4.40	4.40
Taxation	1.32	2.86	4.37	5.68	6.39
Drawings	5.00	5.50	6.50	9.00	10.00
TOTAL :	40.60	14.56	16.95	20.83	22.61
Opening Cash & Bank Balance	-	3.48	3.75	4.27	4.95
Add : Surplus	3.48	0.27	0.52	0.68	0.99
Closing Cash & Bank Balance	3.48	3.75	4.27	4.95	5.94

COMPUTATION OF PRODUCTION OF COTTON FROM FABRIC WASTE			
Item to be Manufactured Cotton from fabric waste			
Manufacturing Capacity per day		3000	Kg
No. of Working Hour		8	
No. of Shifts per day		2	
Total number of working hours		16	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		9,00,000	Kg
Watage		5%	
Total Production per Annum(After Wastage)		8,55,000	Kg
Year		Capacity	COTTON FROM FABRIC WASTE
		Utilisation	
I		40%	3,42,000.00
II		45%	3,84,750.00
III		50%	4,27,500.00
IV		55%	4,70,250.00
V		60%	5,13,000.00

Raw Material Cost (Fabric Waste)	Capacity	Rate per Kg	Amount (Rs.)
	Utilisation		
I	40%	20.00	68.40
II	45%	21.00	80.80
III	50%	21.50	91.91
IV	55%	22.00	103.46
V	60%	22.50	115.43

<u>COMPUTATION OF SALE</u>					
Particulars	I	II	III	IV	V
Op Stock	-	11,400.00	12,825.00	14,250.00	15,675.00
Production	3,42,000.00	3,84,750.00	4,27,500.00	4,70,250.00	5,13,000.00
	3,42,000.00	3,96,150.00	4,40,325.00	4,84,500.00	5,28,675.00
Less : Closing Stock(10 Days)	11,400.00	12,825.00	14,250.00	15,675.00	17,100.00
Net Sale	3,30,600.00	3,83,325.00	4,26,075.00	4,68,825.00	5,11,575.00
Sale Price per Kg	34.00	35.00	36.00	37.00	38.00
Sale (in Lacs)	112.40	134.16	153.39	173.47	194.40

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
<u>Finished Goods</u>					
(10 Days requirement)	3.29	3.82	4.36	4.93	5.52
<u>Raw Material</u>					
(15 Days requirement)	3.42	4.04	4.60	5.17	5.77
Closing Stock	6.71	7.86	8.96	10.10	11.29

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	6.71		
Less:			
Sundry Creditors	3.42		
Paid Stock	3.29	0.33	2.97
Sundry Debtors	3.37	0.34	3.03
Working Capital Requirement			6.00
Margin			0.67
MPBF			6.00
Working Capital Demand			6.00

<u>BREAK UP OF LABOUR</u>				
Particulars		Wages	No of	Total
		Per Month	Employees	Salary
Supervisor		20,000.00	1	20,000.00
Machine Operator		16,000.00	2	32,000.00
Unskilled Worker		12,000.00	2	24,000.00
Helper		10,000.00	2	20,000.00
Security Guard		6,000.00	1	6,000.00
				1,02,000.00
Add: 5% Fringe Benefit				5,100.00
Total Labour Cost Per Month				1,07,100.00
Total Labour Cost for the year (In Rs. Lakhs)			8	12.85

<u>BREAK UP OF SALARY</u>				
Particulars		Salary	No of	Total
		Per Month	Employees	Salary
Manager		22,000.00	1	22,000.00
Accountant cum store keeper		20,000.00	1	20,000.00
Sales		16,000.00	1	16,000.00
Total Salary Per Month				58,000.00
Add: 5% Fringe Benefit				2,900.00
Total Salary for the month				60,900.00
Total Salary for the year (In Rs. Lakhs)			3	7.31

COMPUTATION OF DEPRECIATION				
Description	Land	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		15.00%	10.00%	
Opening Balance	Leased	-	-	-
Addition	-	20.50	1.50	22.00
	-	20.50	1.50	22.00
		-	-	
TOTAL		20.50	1.50	22.00
Less : Depreciation	-	3.08	0.15	3.23
WDV at end of Ist year	-	17.43	1.35	18.78
Additions During The Year	-	-	-	-
	-	17.43	1.35	18.78
Less : Depreciation	-	2.61	0.14	2.75
WDV at end of IInd Year	-	14.81	1.22	16.03
Additions During The Year	-	-	-	-
	-	14.81	1.22	16.03
Less : Depreciation	-	2.22	0.12	2.34
WDV at end of IIIrd year	-	12.59	1.09	13.68
Additions During The Year	-	-	-	-
	-	12.59	1.09	13.68
Less : Depreciation	-	1.89	0.11	2.00
WDV at end of IV year	-	10.70	0.98	11.69
Additions During The Year	-	-	-	-
	-	10.70	0.98	11.69
Less : Depreciation	-	1.61	0.10	1.70
WDV at end of Vth year	-	9.10	0.89	9.98

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	19.80	19.80	0.54	-	19.80
	Iind Quarter	19.80	-	19.80	0.54	-	19.80
	IIIrd Quarter	19.80	-	19.80	0.54	1.10	18.70
	Ivth Quarter	18.70	-	18.70	0.51	1.10	17.60
					2.15	2.20	
II	Opening Balance						
	Ist Quarter	17.60	-	17.60	0.48	1.10	16.50
	Iind Quarter	16.50	-	16.50	0.45	1.10	15.40
	IIIrd Quarter	15.40	-	15.40	0.42	1.10	14.30
	Ivth Quarter	14.30		14.30	0.39	1.10	13.20
					1.75	4.40	
III	Opening Balance						
	Ist Quarter	13.20	-	13.20	0.36	1.10	12.10
	Iind Quarter	12.10	-	12.10	0.33	1.10	11.00
	IIIrd Quarter	11.00	-	11.00	0.30	1.10	9.90
	Ivth Quarter	9.90		9.90	0.27	1.10	8.80
					1.27	4.40	
IV	Opening Balance						
	Ist Quarter	8.80	-	8.80	0.24	1.10	7.70
	Iind Quarter	7.70	-	7.70	0.21	1.10	6.60
	IIIrd Quarter	6.60	-	6.60	0.18	1.10	5.50
	Ivth Quarter	5.50		5.50	0.15	1.10	4.40
					0.79	4.40	
V	Opening Balance						
	Ist Quarter	4.40	-	4.40	0.12	1.10	3.30
	Iind Quarter	3.30	-	3.30	0.09	1.10	2.20
	IIIrd Quarter	2.20	-	2.20	0.06	1.10	1.10
	Ivth Quarter	1.10		1.10	0.03	1.10	-
					0.30	4.40	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

<u>CALCULATION OF D.S.C.R</u>					
PARTICULARS	I	II	III	IV	V
<u>CASH ACCRUALS</u>	10.68	11.34	12.54	15.25	16.61
Interest on Term Loan	2.15	1.75	1.27	0.79	0.30
Total	12.83	13.09	13.81	16.04	16.91
<u>REPAYMENT</u>					
Repayment of Term Loan	2.20	4.40	4.40	4.40	4.40
Interest on Term Loan	2.15	1.75	1.27	0.79	0.30
Total	4.35	6.15	5.67	5.19	4.70
DEBT SERVICE COVERAGE RATIO	2.95	2.13	2.44	3.09	3.60
AVERAGE D.S.C.R.			2.79		

<u>COMPUTATION OF ELECTRICITY</u>				
<u>(A) POWER CONNECTION</u>				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	100	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				13,42,800.00
Add : Minimim Charges (@ 10%)				
<u>(B) DG set</u>				
No. of Working Days			300	days
No of Working Hours			0.3	Hour per day
Total no of Hour			90	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			720	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.47	
Add : Lube Cost @15%			0.07	
Total			0.54	
Total cost of Power & Fuel at 100%				13.97
Year		Capacity		Amount
				(in Lacs)
I		40%		5.59
II		45%		6.28
III		50%		6.98
IV		55%		7.68
V		60%		8.38

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