
Pre-Feasibility Study

PLASTIC MOLDED FURNITURE MANUFACTURING UNIT



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

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Table of Contents

1	DISCLAIMER.....	3
2	EXECUTIVE SUMMARY	4
3	INTRODUCTION TO SMEDA.....	5
4	PURPOSE OF THE DOCUMENT.....	5
5	BRIEF DESCRIPTION OF PROJECT & PRODUCT.....	6
5.1	PRODUCTION PROCESS FLOW	6
5.2	INSTALLED AND OPERATIONAL CAPACITIES.....	6
6	CRITICAL FACTORS	7
7	GEOGRAPHICAL POTENTIAL FOR INVESTMENT	7
8	POTENTIAL TARGET CUSTOMERS / MARKETS.....	8
9	PROJECT COST SUMMARY.....	8
9.1	PROJECT ECONOMICS.....	8
9.2	PROJECT FINANCING	9
9.3	PROJECT COST	9
9.4	SPACE REQUIREMENT	10
9.5	MACHINERY & EQUIPMENT REQUIREMENT.....	10
9.6	FURNITURE & FIXTURES REQUIREMENT.....	11
9.7	OFFICE EQUIPMENT REQUIREMENT	12
9.8	HUMAN RESOURCE REQUIREMENT	12
9.9	UTILITIES AND OTHER COSTS	13
9.10	REVENUE GENERATION.....	14
10	CONTACT DETAILS.....	15
10.1	MACHINERY SUPPLIERS & CONSULTANTS.....	15
10.2	RAW MATERIAL SUPPLIERS	15
11	USEFUL WEB LINKS.....	16
12	ANNEXURES	17
12.1	INCOME STATEMENT	17
12.2	BALANCE SHEET	18
12.3	CASH FLOW STATEMENT	19
13	KEY ASSUMPTIONS.....	20
13.1	OPERATING ASSUMPTIONS	20
13.2	PRODUCTION ASSUMPTIONS	20
13.3	FINANCIAL ASSUMPTIONS	20

1 DISCLAIMER

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2 EXECUTIVE SUMMARY

This pre-feasibility study is for setting up a Plastic Molded Furniture Manufacturing Unit.

The growth in business of Plastic Molded Furniture has marked its place in the country during the last 16 years.

Molded Furniture is basically produced in developed countries to be used as lawn furniture and at outdoor restaurants. Following the trends of developed countries, plastic molded furniture was introduced in Pakistan around 1984-1985 by a Karachi based firm. Afterwards a factory was installed in Gujranwala and then with the passage of time now there are approximately 25 units producing plastic chairs, tables, baby products, etc.

Due to low purchasing power people in Pakistan found this product cheap as in low priced and associated with warranty, covering the risk of consumers. Customer bank for plastic molded furniture is increasing day by day with the penetration of companies due to introduction of new and economical models, variety of colors and export opportunities in Afghanistan, etc.

The capacity to produce is also a very important edge associated to boost the business in order to meet immediate demands, maintain high inventory levels along with variety of various models and colors, etc.

Plastic furniture is gaining more preference over the wooden and iron furniture due to cheaper price, various designs and color range. Most of the plastic furniture manufacturers are facing late supplies problems as demands are high in the market. Sales & sales return policies of top brands are not likely healthy for their business and industry as well. Thus a new brand with competitive rates and customer friendly policies may get healthy share in the market in short period of time.

The prime focus of the proposed business venture would be to produce a product range of various models of plastic chairs, tables, baby chair, shell products and stools.

The total capacity of the unit will be to produce 87,000 units / month on single shift basis and initial capacity utilization will be 40% in 1st year of production.

Total Project cost is estimated as Rs. 272.523 million with capital investment of Rs. 240.387 million and working capital of Rs. 32.136 million. Given the cost assumptions IRR, Payback Period and NPV are 34%, 4.16 years and Rs. 231.096 million, respectively.

The project will provide employment opportunity to 84 people including owner manager. The legal status of this venture is proposed as “sole proprietorship”.

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **Plastic Molded Furniture Manufacturing Unit** by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any investment decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

This unit will provide details of setting up a Plastic Molded Furniture Manufacturing Unit. The Unit will have the capacity to produce approximately 87,000 units per month on single shift basis. For achieving quality and consistency in the production, injection molding machines, hopper, chillers plant, mixer etc machines will be used.

Some units that produce high quality products have taken good share of the market, but still there is a need for more industrial units to come into the field and produce high quality products in order to fulfil the local market demand as well as to increase the exports.

The proposed project will provide direct employment to 84 people. Financial analysis shows the unit shall be profitable from the very first year of operation.

5.1 Production Process Flow

Molding resin fed to the injection molding machine must be reasonably free of moisture.

Pre-molding preparation also requires addition of colorants, lubricants, other resins and scrap material. These materials are generally blended into the fresh resin.

After necessary preparation the molded material is transferred into a hopper which feed the material to the heating cylinder of the injection molding machine. Temperature in the cylinder is controlled by wrap around electrical resistance heater. Mixing action is provided by use of rotating screw mechanism within the cylinder.

Melted plastic is forced through a nozzle into the mold. Nozzle temperature is controlled to allow continued complete shot of plastic into the mold without hardening and breaking. The mold accepts the amount of melted plastic material and cools it quickly and uniformly.

When the molding compound has set, the mold is opened and the molded part is forced out of the mold cavity. Some molded articles required some form of machining or finishing.

5.2 Installed And Operational Capacities

Considering the market trends and area coverage, the project would be able to attract and sell at-least 87,000 units monthly at 100 % capacity.

Following tables summarizes the product mix of the project at the desired production level of plastic furniture.

Table 1: Product Mix Chart of Plastic Molded Furniture

Plastic Furniture	Quantity Produced per Month	Product Mix
All Model Chairs	56,000	64%
All Model Tables	8,000	9%
Baby Chairs	15,000	17%
Shell Products	3,000	3%
Stools	5,000	6%
Total Production	87,000	100%

The starting capacity utilization is 40%. The maximum capacity level that can be achieved is 85%.

6 CRITICAL FACTORS

The most critical considerations / factors for the success of this project are as follows:-

- ⇒ Selection of appropriate plant, machinery / mould.
- ⇒ Relevant management experience.
- ⇒ Availability of electricity.
- ⇒ Induction of skilled labor for getting quality production.
- ⇒ Efficient marketing.
- ⇒ Strong linkages with wholesaler / retailers for selling of product.
- ⇒ Product warranty to the customer

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The proposed locations for the Molded Furniture is Gujranwala (preferably) and Lahore. The said project may be established in industrial estate area or any other area of the above mentioned cities. Other than these, any of the cities, where raw material and labor is easily accessible would be suitable for setting up a plastic molded furniture manufacturing unit.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

Middle and lower income groups in Pakistan are the major buyers of plastic furniture and these groups are about 65% of the total population.

The armed forces, educational institutions, private and public sector firms now form considerable sales share in annual turnover of the companies.

Due to the increasing prices of wood / iron furniture, the trend of molded furniture has been on a rise. However, there exist a large number of people who were reluctant to buy plastic furniture. Penetration in the markets, availability in small towns and cheaper models by all brands has led to enhancing the confidence in the minds of the general public and now more people are inclined towards purchasing plastic molded furniture.

9 PROJECT COST SUMMARY

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 214.80 million in the first year. The capacity utilization during first year is worked out at 40% with 5 % increase in subsequent years up to the maximum capacity utilization of 85%.

Following table shows internal rate of return, payback period and net present value of the proposed venture.

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	34%
Payback Period (yrs.)	4.16
Net Present Value (Rs.)	231,096,253

9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan;

Table 3: Project Financing

Description	Details
Total Equity (50%)	Rs.136,261,931
Bank Loan (50%)	Rs.136,261,931
Markup to the Borrower (%age / annum)	14%
Tenure of the Loan (Years)	5

9.3 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

Table 4: Project Cost

Description	Amount Rs.
Capital Cost	
Land	48,000,000
Building / Infrastructure	44,930,000
Plant and Machinery	131,100,000
Furniture & Fixture	1,153,500
Office Equipment	1,535,000
Office Vehicles	1,040,000
Pre-operating Cost	12,428,456
Training Cost	200,000
Total Capital Cost	240,386,956
Working Capital	
Raw Material Inventory	27,404,790
Up-front Insurance Payment	72,800
Cash	4,659,317

Total Working Capital	32,136,907
Total Project Cost	272,523,862

9.4 Space Requirement

The space requirement for the proposed Plastic Molded Furniture Manufacturing Unit is estimated as 6 kanal land at the rate of Rs. 8,000,000 / Kanal. Considering various facilities including management office, production hall, storage, open space, etc. Details of space requirement and cost related to land & building is given below;

Table 5: Space Requirement

Description	Estimated Area (Sq. Ft)	Unit Cost (Rs.)	Total Cost (Rs.)
Management Office	3,200	2,500	8,000,000
Shed on Production Hall	11,600	1,800	20,880,000
Store	6,500	1,500	9,750,000
Mosque + Guest Room	1,500	2,200	3,300,000
Kitchen + Cafeteria	1,000	2,000	2,000,000
Land Development Work			1,000,000
Total	23,800		44,930,000

9.5 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

Table 6: Machinery & Equipment Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Injection Molding 1,000 tons	1	12,000,000	12,000,000
Injection Molding 850 tons	2	9,000,000	18,000,000
Injection Molding 650 tons	1	7,000,000	7,000,000
Injection molding 450 tons	1	5,500,000	5,500,000
Injection molding 250 tons	1	3,200,000	3,200,000
Crane 10 tons	1	2,000,000	2,000,000
Cutter & Crusher 18 Inches	1	750,000	750,000
Mixer 6 bags	1	500,000	500,000

Mixer 4 bags	1	400,000	400,000
Hoper 10 bags	1	650,000	650,000
Chiller plant	1	3,500,000	3,500,000
Pumps	1	1,000,000	1,000,000
Electric Panel	1	1,000,000	1,000,000
Shrink Warp	1	1,000,000	1,000,000
Transformer 1,000 KVA	1	12,000,000	12,000,000
Invertor	1	2,500,000	2,500,000
Generator 650 KVA	1	12,500,000	12,500,000
Molds			
Chair (4arm+1w/o arm + 2 baby chair)	6		30,000,000
Table (2x3 inch rect+ 32 inch + 39 in square)	3		4,500,000
Chair Insert	6	150,000	900,000
Stool	2	750,000	1,500,000
Shell Chairs	3		7,500,000
Die Shop			
Mould Lifter	1	100,000	1,000,000
Lathe Machine 8 ft	1	750,000	750,000
Lathe Machine 5 ft	1	650,000	650,000
Grinder	1	25,000	25,000
Welding Plant	1	100,000	100,000
Trolleys	3	25,000	75,000
Loose Tools (Different Tools, Instruments)	1	600,000	600,000
Total			131,100,000

9.6 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below;

Table 7: Furniture & Fixtures Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table & Chair for CEO	1	100,000	100,000
Table & Chair for Managers	4	50,000	200,000
Table & Chair for Officers & Supervisors	13	25,000	325,000

Visitors Chairs	23	7,500	172,500
File Racks	4	20,000	80,000
Small Cabinets	7	15,000	105,000
Stools	12	3,000	36,000
Benches	12	5,000	60,000
Miscellaneous	1	75,000	75,000
Total			1,153,500

9.7 Office Equipment Requirement

Following office equipment will be required for Plastic Molded Furniture Manufacturing Unit:

Table 8: Office Equipment Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	4	75,000	300,000
Desktop Computers with UPS	8	45,000	360,000
Air-conditioner	5	55,000	275,000
Printer	4	20,000	80,000
Scanner	1	15,000	15,000
Fax Machine	1	15,000	15,000
Security Cameras	1	300,000	300,000
Telephone Sets	20	2,000	40,000
Photocopy Machine	1	150,000	150,000
Total			1,535,000

9.8 Human Resource Requirement

In order to run operations of Plastic Molded Furniture Manufacturing Unit smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

Table 9: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
Manager Production	1	125,000
Shift Incharge	1	40,000
Color Master	1	50,000

Crush man	1	18,000
Machine Operators	12	20,000
Helpers	24	15,000
Dispatcher	1	25,000
Loaders	5	15,000
Die Shop Incharge	1	50,000
Die Shop Helpers	2	15,000
Maintenance Supervisor	1	50,000
Fitter	3	20,000
Electricians	2	25,000
Technical Store Keeper	1	20,000
Raw Material Store keeper	1	20,000
Admin Staff		
CEO	1	200,000
Manager Finance & Admin	1	125,000
Chief Accountant	1	75,000
Assistant Accountant	2	30,000
Cashier	1	30,000
Admin Officer	1	35,000
Manager Sales & Mkt.	1	125,000
Assistant Manager Sales	1	75,000
Sales Coordinator	1	35,000
Sales Executives	5	30,000
Security Supervisor	1	18,000
Guards	4	15,000
Receptionist	1	25,000
Cook	1	20,000
Office Boys	2	15,000
Driver	1	18,000
Sweepers	2	15,000
Total	84	

9.9 Utilities and Other Costs

An essential cost to be borne by the project is the cost of electricity. The electricity expenses are estimated to be around Rs. 480,000 per month in first year at 40 % capacity utilization including direct and indirect electricity expense. Furthermore, generator expense is estimated around Rs. 315,000 per month.

9.10 Revenue Generation

Revenue generation based on the 40% capacity utilization during the first year of operations is estimated as under;

Table 10: Revenue Generation – Year 1

Description	No. of Units Produced (No.)	Sale Price / unit (Rs.)	Sales Revenue (Rs.)
All Model Chairs	268,800	550	147,840,000
All Model Tables	38,400	1,000	38,400,000
Baby Chair	72,000	225	16,200,000
Shell Products	14,400	400	5,760,000
Stools	24,000	275	6,600,000
Total	417,600		214,800,000

Table 11: Raw Material Cost Calculation

Raw Material Used Per Chair	Rate (Kg)	All Model Chairs	All Model Tables	Baby Chair	Shell Products	Stools
Battery	120.0	45	81	18	176	19
Natural Teeka	120.0	75	135	30	0	32
Re-pp	100.0	145	261	58	0	61
Titanium	250.0	6	11	3	4	3
Master Batch	500.0	13	23	5	8	5
Total		284	511	114	188	120

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

10.1 Machinery Suppliers & Consultants

Name of Supplier	Address	Phone	E-mail	Website
Universal Resources	4 th floor, office no. 16, Trade Center, Gujranwala	055-4443223 0320-7601111	aleem.shahid@kent-plastic.com	
Sunny Co.	Canal View, Harbanspura, Lahore	0322-9897654	sales@sunnyco.com.pk	www.sunnyco.com.pk

10.2 Raw Material Suppliers

Name of Supplier	Address	Phone	E-mail	Website
Masoom Corporation	SA-14, Techno city Mall, 2 nd floor, Hasrat Mohani Road, Karachi	021-32270601 - 3	bilal@masoomgroup.com	www.masoomgroup.com
Afzal Plastic	Band Road, Lahore	0312-4388524		
Pearl Plastic	Thokar Niaz Beig, Near Unifoam, Lahore	0321-4508763		

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Ministry of Education, Training & Standards in Higher Education	http://moptt.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Pakistan Horticulture Development and Export Company (PHDEC)	www.phdec.org.pk
Punjab Vocational Training Council (PVTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Pakistan Readymade Garment Technical Training Institute	www.prgmea.org/prgtti/
Livestock & Dairy Development Department, Government of Punjab.	www.livestockpunjab.gov.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk

12 ANNEXURES

12.1 Income Statement

Projected Income Statement															
Capacity Utilization	40%		45%	50%		55%	60%		65%	70%		75%	80%		85%
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10					
Revenue	214,800,000	265,815,000	324,885,000	393,110,850	471,733,020	562,148,516	665,929,780	784,845,812	920,885,753	1,076,285,224					
<i>Cost of sales</i>															
Raw Material Cost	109,619,160	135,653,711	165,798,980	200,616,765	240,740,118	286,881,974	339,844,800	400,531,372	469,956,809	549,262,021					
Direct Labor (Production Staff)	14,556,000	16,011,600	17,612,760	19,374,036	21,311,440	23,442,584	25,786,842	28,365,526	31,202,079	34,322,287					
Direct Electricity	5,760,000	7,128,000	8,712,000	10,541,520	12,649,824	15,074,374	17,857,335	21,046,145	24,694,143	28,861,280					
Electricity from the Generator	3,780,000	4,677,750	5,717,250	6,917,873	8,301,447	9,892,558	11,718,876	13,811,532	16,205,531	18,940,215					
Machinery Repair & Maintenance	2,622,000	2,753,100	2,890,755	3,035,293	3,187,057	3,346,410	3,513,731	3,689,417	3,873,888	4,067,583					
Total cost of sales	136,337,160	166,224,161	200,731,745	240,485,486	286,189,886	338,637,899	398,721,584	467,443,992	545,932,451	635,453,385					
Gross Profit	78,462,840	99,590,840	124,153,256	152,625,364	185,543,134	223,510,616	267,208,196	317,401,820	374,953,302	440,831,839					
<i>General administration & selling expenses</i>															
Administration expense	13,332,000	14,665,200	16,131,720	17,744,892	19,519,381	21,471,319	23,618,451	25,980,296	28,578,326	31,436,159					
Administrative benefits	1,333,200	1,466,520	1,613,172	1,774,489	1,951,938	2,147,132	2,361,845	2,598,030	2,857,833	3,143,616					
Electricity expense	420,000	462,000	508,200	559,020	614,922	676,414	744,056	818,461	900,307	990,338					
Communications expense (phone, fax, mail, internet, etc.)	1,999,800	2,199,780	2,419,758	2,661,734	2,927,907	3,220,698	3,542,768	3,897,044	4,286,749	4,715,424					
Transportation cost	3,000,000	3,300,000	3,630,000	3,993,000	4,392,300	4,831,530	5,314,683	5,846,151	6,430,766	7,073,843					
Office expenses (stationary, entertainment, janitorial services, etc.)	2,040,000	2,244,000	2,468,400	2,715,240	2,986,764	3,285,440	3,613,984	3,975,383	4,372,921	4,810,213					
Marketing expense	4,296,000	3,866,400	3,479,760	3,131,784	2,818,606	2,536,745	2,283,071	2,054,763	1,849,287	1,664,358					
Insurance expense	72,800	65,520	58,240	50,960	43,680	36,400	29,120	21,840	14,560	7,280					
Professional fees (legal, audit, consultants, etc.)	300,000	330,000	363,000	399,300	439,230	483,153	531,468	584,615	643,077	707,384					
Repair & Maintenance Exp.	1,200,000	1,320,000	1,452,000	1,597,200	1,756,920	1,932,612	2,125,873	2,338,461	2,572,307	2,829,537					
Depreciation expense	16,087,517	16,087,517	16,087,517	16,168,168	16,168,168	16,168,168	16,261,532	16,261,532	16,261,532	16,369,613					
Amortization of pre-operating costs	2,485,691	2,485,691	2,485,691	2,485,691	2,485,691	-	-	-	-	-					
Amortization of legal, licensing, and training costs	40,000	40,000	40,000	40,000	40,000	-	-	-	-	-					
Misc. Exp.	1,200,000	1,320,000	1,452,000	1,597,200	1,756,920	1,932,612	2,125,873	2,338,461	2,572,307	2,829,537					
Subtotal	47,807,008	49,852,628	52,189,458	54,918,678	57,902,427	58,722,224	62,552,725	66,715,038	71,339,972	76,577,303					
Operating Income	30,655,832	49,738,212	71,963,798	97,706,685	127,640,706	164,788,392	204,655,471	250,686,782	303,613,330	364,254,536					
Other income (interest on cash)															
Earnings Before Interest & Taxes	30,655,832	49,738,212	72,884,798	97,706,685	127,640,706	166,315,065	204,655,471	250,686,782	305,610,895	364,254,536					
Interest expense on long term debt (Debt facility : Bank 1)	20,349,633	17,368,011	13,448,004	8,759,572	3,347,631	288,299	251,615	182,445	333,743	291,276					
Subtotal	20,349,633	17,368,011	13,448,004	8,759,572	3,347,631	288,299	251,615	182,445	333,743	291,276					
Earnings Before Tax	10,306,199	32,370,201	59,436,793	88,947,113	124,293,076	166,026,766	204,403,856	250,504,337	305,277,152	363,963,260					
Taxable earnings for the year	10,306,199	32,370,201	59,436,793	88,947,113	124,293,076	166,026,766	204,403,856	250,504,337	305,277,152	363,963,260					
Tax	2,829,669	10,552,070	20,025,377	30,353,989	42,725,076	57,331,867	70,763,849	86,899,017	106,069,503	126,609,640					
NET PROFIT/(LOSS) AFTER TAX	7,476,530	21,818,131	39,411,416	58,593,124	81,568,000	108,694,898	133,640,007	163,605,320	199,207,650	237,353,620					

12.2 Balance Sheet

Projected Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	4,659,317	15,795,049	20,460,900	50,538,116	102,215,320	179,727,539	333,264,474	519,772,648	745,640,420	1,018,953,968	1,342,036,499
Accounts receivable		10,740,000	24,030,750	29,535,000	35,899,793	43,242,194	51,694,077	61,403,915	72,538,780	85,286,578	99,858,549
Finished goods inventory		5,680,715	6,926,007	8,363,823	10,020,229	11,924,579	14,109,912	16,613,399	19,476,833	22,747,185	26,477,224
Equipment spare part inventory	-	-	-	-	-	-	-	-	-	-	-
Raw material inventory	27,404,790	28,775,030	37,389,554	47,983,261	60,962,733	76,813,044	96,112,321	119,548,941	147,941,814	182,264,315	223,672,489
Total Current Assets	32,136,907	61,056,313	88,865,450	136,471,159	209,141,754	311,743,754	495,209,904	717,360,743	985,612,407	1,309,259,326	1,692,044,761
<i>Fixed assets</i>											
Land	48,000,000	48,000,000	48,000,000	48,000,000	48,000,000	48,000,000	48,000,000	48,000,000	48,000,000	48,000,000	48,000,000
Building/Infrastructure	44,930,000	42,683,500	40,437,000	38,190,500	35,944,000	33,697,500	31,451,000	29,204,500	26,958,000	24,711,500	22,465,000
Machinery & equipment	131,100,000	117,990,000	104,880,000	91,770,000	78,660,000	65,550,000	52,440,000	39,330,000	26,220,000	13,110,000	-
Furniture & fixtures	1,153,500	1,038,150	922,800	807,450	692,100	576,750	461,400	346,050	230,700	115,350	-
Office vehicles	1,040,000	936,000	832,000	728,000	624,000	520,000	416,000	312,000	208,000	104,000	-
Office equipment	1,535,000	1,023,333	511,667	1,776,954	1,184,636	592,318	2,057,047	1,371,365	685,682	2,381,289	1,587,526
Total Fixed Assets	227,758,500	211,670,983	195,583,467	181,272,904	165,104,736	148,936,568	134,825,447	118,563,915	102,302,382	88,422,139	72,052,526
<i>Intangible assets</i>											
Pre-operation costs	12,428,456	9,942,764	7,457,073	4,971,382	2,485,691	-	-	-	-	-	-
Training costs	200,000	160,000	120,000	80,000	40,000	-	-	-	-	-	-
Total Intangible Assets	12,628,456	10,102,764	7,577,073	5,051,382	2,525,691	-	-	-	-	-	-
TOTAL ASSETS	272,523,862	282,830,061	292,025,990	322,795,446	376,772,181	460,680,322	630,035,351	835,924,657	1,087,914,789	1,397,681,465	1,764,097,287
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable			4,140,419	5,090,048	6,202,024	7,501,777	9,018,633	10,786,407	12,844,099	15,236,692	18,016,080
Total Current Liabilities	-	-	4,140,419	5,090,048	6,202,024	7,501,777	9,018,633	10,786,407	12,844,099	15,236,692	18,016,080
<i>Other liabilities</i>											
Deferred tax		2,829,669	13,381,738	33,407,115	63,761,104	106,486,180	163,818,047	234,581,896	321,480,914	427,550,416	554,160,056
Long term debt (Debt facility : Bank 1)	136,261,931	136,261,931	108,947,241	78,619,492	42,537,138	852,451	1,841,039	1,558,715	986,818	2,131,233	1,804,407
Total Long Term Liabilities	136,261,931	139,091,600	122,328,979	112,026,607	106,298,242	107,338,631	165,659,086	236,140,611	322,467,732	429,681,649	555,964,464
<i>Shareholders' equity</i>											
Paid-up capital	136,261,931	136,261,931	136,261,931	136,972,713	136,972,713	136,972,713	137,795,532	137,795,532	137,795,532	138,748,047	138,748,047
Retained earnings		7,476,530	29,294,661	68,706,078	127,299,202	208,867,202	317,562,100	451,202,107	614,807,427	814,015,076	1,051,368,696
Total Equity	136,261,931	143,738,461	165,556,592	205,678,790	264,271,915	345,839,914	455,357,631	588,997,639	752,602,958	952,763,124	1,190,116,743
TOTAL CAPITAL AND LIABILITIES	272,523,862	282,830,061	292,025,990	322,795,446	376,772,181	460,680,322	630,035,351	835,924,657	1,087,914,789	1,397,681,465	1,764,097,287

12.3 Cash Flow Statement

Projected Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		7,476,530	21,818,131	39,411,416	58,593,124	81,568,000	108,694,898	133,640,007	163,605,320	199,207,650	237,353,620
Add: depreciation expense		16,087,517	16,087,517	16,087,517	16,168,168	16,168,168	16,168,168	16,261,532	16,261,532	16,261,532	16,369,613
amortization of pre-operating costs		2,485,691	2,485,691	2,485,691	2,485,691	2,485,691	-	-	-	-	-
Deferred income tax		2,829,669	10,552,070	20,025,377	30,353,989	42,725,076	57,331,867	70,763,849	86,899,017	106,069,503	126,609,640
Accounts receivable		(10,740,000)	(13,290,750)	(5,504,250)	(6,364,793)	(7,342,401)	(8,451,883)	(9,709,838)	(11,134,865)	(12,747,799)	(14,571,971)
Finished goods inventory		(5,680,715)	(1,245,292)	(1,437,816)	(1,656,406)	(1,904,350)	(2,185,334)	(2,503,487)	(2,863,434)	(3,270,352)	(3,730,039)
Equipment inventory		-	-	-	-	-	-	-	-	-	-
Raw material inventory	(27,404,790)	(1,370,240)	(8,614,524)	(10,593,707)	(12,979,472)	(15,850,311)	(19,299,277)	(23,436,620)	(28,392,873)	(34,322,501)	(41,408,174)
Accounts payable		-	4,140,419	949,629	1,111,976	1,299,753	1,516,856	1,767,774	2,057,692	2,392,593	2,779,388
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(27,477,590)	11,135,732	31,980,541	61,471,138	87,759,557	119,196,907	153,782,575	186,790,498	226,439,669	273,597,906	323,409,357
<i>Financing activities</i>											
Debt facility : Bank 1 - principal repayment		-	(27,314,690)	(31,393,922)	(36,082,354)	(41,684,688)	(245,640)	(282,324)	(571,897)	(284,359)	(326,825)
Additions to Debt facility : Bank 1	136,261,931	-	-	1,066,173	-	-	1,234,228	-	-	1,428,773	-
Issuance of shares	136,261,931	-	-	710,782	-	-	822,819	-	-	952,516	-
Cash provided by / (used for) financing activities	272,523,862	-	(27,314,690)	(29,616,967)	(36,082,354)	(41,684,688)	1,811,407	(282,324)	(571,897)	2,096,930	(326,825)
<i>Investing activities</i>											
Capital expenditure	(240,386,956)	-	-	(1,776,954)	-	-	(2,057,047)	-	-	(2,381,289)	-
Acquisitions											
Cash (used for) / provided by investing activities	(240,386,956)	-	-	(1,776,954)	-	-	(2,057,047)	-	-	(2,381,289)	-
NET CASH	4,659,317	11,135,732	4,665,851	30,077,216	51,677,204	77,512,219	153,536,935	186,508,174	225,867,772	273,313,547	323,082,532

13 KEY ASSUMPTIONS

13.1 Operating Assumptions

Description	Details
Hours operational per day	12
Days operational per month	25
Days operational per year	300
Operating costs growth rate	5%
Administrative benefits	10% of Admin expense
Office expenses (stationary, entertainment, janitorial services, etc.)	Rs. 170,000 per month

13.2 Production Assumptions

Description	Details
Annual Production Capacity	1,044,000 Units
Capacity Utilization 1 st Year	40%
Capacity Utilization growth rate (yearly)	5%
Maximum Capacity Utilization	85%

13.3 Financial Assumptions

Description	Details
Project Life (yrs)	10
Debt : Equity	50:50
Interest rate on long term debt	14%
Discount rate for calculation of NPV	20%