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# Pre-Feasibility Study

## Un-plasticized Polyvinyl Chloride (UPVC) Window Profiles Production Unit



### Small and Medium Enterprises Development Authority

#### Ministry of Industries & Production

#### Government of Pakistan

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## 1 DISCLAIMER

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## 2 EXECUTIVE SUMMARY

Polyvinyl Chloride (PVC) is one of the most widely used polymers in the world. Due to its versatile nature, PVC is used extensively across a broad range of industrial, technical and everyday applications including widespread use in building, transport, packaging, electrical/electronic and healthcare applications.

PVC is a very durable and long lasting material which can be used in a variety of applications, rigid or flexible, white or black and a wide range of colors in between.

Presently wood has become difficult to get access of and aluminum is not good enough, there is no denying to the fact that UPVC profiles are the next big thing. Although the concept of production of UPVC profiles is rather not new in Pakistan, Unique Profiles seems very keen to make it popular in the market, which surely will be a huge success. There are few challenges in the path of Unique Profiles and one of them is to produce UPVC profile locally and lower the cost of production. Currently UPVC profiles are imported from countries like China and Turkey and are used widely as a substitute to wood and aluminum.

**UPVC Window Profiles production Unit** is proposed to be located at any industrial zone throughout Pakistan adjacent to metro-Politian cities with higher population density and higher concentration of construction work going on in the area for instance the same production plant may developed in Lasbela Industrial Estate Development Authority (LIEDA), Hub Chowki, Balochistan, which is adjacent to Karachi. The entrepreneur will have market access to both cities e.g. Karachi and Quetta.

The finished Product would include **UPVC Sliding Profile Frame 2.5mm in thickness and 1.45kg/M.**

The installed unit would have the Capacity to produce **1,201,200Ft** of the product and will initially operate at **60%** capacity utilization.

Total Cost Estimates is **Rs.76, 344,516** with fixed investment **Rs.59, 605,300** and working capital **Rs. 16,739,216.**

Given the cost assumptions IRR and payback are **60%** and **2.90 years** respectively

The most critical considerations or factors for success of the project are:

- The product should be produced in accordance with International standards and quality
- Location of the unit would play vital role in this projects success.
- Distribution channels would play vital role in the project's success.

- Marketing through proper channels could attract more customers moreover awareness about the product should be taken into consideration while marketing the product.
- Procurement of raw material from trusted suppliers and below market rates.
- Forward integration may be practiced e.g. developing shops in the market.
- Human resource would play vital role in manufacturing therefore well trained staff will be required to run the project successfully.
- Market research should be done to identify market gaps moreover most recent trends may be identified and product may be reshaped in accordance to demand.

### **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 **UPVC Window Profiles Production 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

Following key parameters must be addressed as per pre-feasibility study under preparation

- **Technology:** The proposed manufacturing unit is likely to be equipped with modern processing machines including feeding machine, conical twin screw extruder, molds, vacuum system platform, cutting machine and stack frame. However constant efforts may be done for up gradation of the machinery.
- **Location:** The production unit is proposed to be located adjacent to metro-Politian cities like Karachi and location where population density is high and more of construction work is going on. An ideal location would be LIEDA Hub Chowki which is adjacent to Karachi and more likely to give competitive edge to the entrepreneur.
- **Product:** The unit would produce sliding UPVC window profile frames however the product may be modified further by adding some mould to the production unit.
- **Target Market:** In addition to local markets in Karachi, Lahore, Quetta and Islamabad an enormous export market for the Pakistani products exists in Afghanistan, Europe, USA, Middle East, Hong Kong, Taiwan, etc.
- **Employment Generation:** The proposed project will provide employment opportunity to 20 people. Financial analysis shows the unit would be profitable from the very first year of operation.

### 5.1 Production Process Flow

The UPVC manufacturing process compromises of four stages. The three distinct stages of the UPVC manufacturing process are as following.

1. Formation of the resin compound
2. Extrusion of UPVC profiles
3. Packaging and distribution
4. After the UPVC profiles are manufactured, a separate process of strengthening the profiles begins which can be termed as the making of reinforced profiles.

## **1. Formation of the resin compound**

This is the very first step in the UPVC manufacturing process of profiles. There are certain raw materials which are used in the preparation of the resin mix. The raw materials chosen are the of the most premium level. When the mix is prepared supplemental levels of Titanium dioxide (TiO<sub>2</sub>) is used to make the extruded profiles more durable and resistant to UV rays. For a healthier and environmentally friendly approach, lead-free substances are used in the resin.

## **2. Extrusion of UPVC profiles**

The extrusion procedure is the main stage of the UPVC manufacturing process. Extrusion is the process of how UPVC profiles are made. The extruded profiles require the desired temperature of 200-275 degree Celsius to be designed. A large scale automatic mixing equipment which will ensure that the mix is churned accurately. Once the molten mix is ready for the extruded profile, it is cast into a die. The die is used to give the extruded profiles its shape as it is being pulled and stretched.

## **3. Packaging and distribution**

After the extruded profile takes its designated shape, the final stage of UPVC manufacturing processes is put into the picture. The UPVC profiles are now given a water bath and are cooled. After cooling they take the shape of sturdy profiles. After being sufficiently cooled, the extruded profiles are now cut into standardized shapes, and then packaging labels and protective tapes are used. In case, there is a requirement of laminated profiles, then the white profiles are customized accordingly.

## **4. Making of reinforced profiles**

Reinforced profiles involve the use of galvanized steel reinforcements. They are the most suitable form of reinforcement elements for the extruded profiles. Reinforcement is necessary to make the UPVC profiles more strong and robust. It is distinguished as a separate procedure to strengthen the UPVC profiles further. This meticulous UPVC manufacturing process gives rise to the making of better UPVC profiles.

## **5.2 Installed And Operational Capacities**

The proposed production unit is set to operate at 60% at capacity utilization initially and shall increase its production by 5% yearly.

The proposed manufacturing plant has the ability to produce 455Ft of window profile per hour. The proposed plant is set to operate for 8 hours per day however production can be increased if needed.

## 6 CRITICAL FACTORS

- Trained and specialized human resource should be hired which would play vital role in project's success.
- Continuous efforts should be made to upgrade technology.
- Price may be adjusted in accordance to the segment targeted moreover price would play vital role in success of the project.
- The product may be produced in different colors based on market demand and developments of new trends.
- Product should be manufactured in accordance with international standards.
- Purchase of raw material from trusted suppliers and below market prices would play a vital role in projects success and may provide competitive advantage over competitors
- Location of the unit would play a vital role in projects success.
- In future the products may enhanced or modified in accordance to market demand therefore special attention should be paid to market developments.
- The product can be reshaped considering market demand; simply by adding some molds therefore molds may be researched and bought.

## 7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Big cities with growing middle income group such as Karachi, Islamabad, Quetta, Lahore, Sukkur and Hyderabad are some of the prospective cities for setting up this business. Cities like Lahore and Karachi with high population and construction work going on are more favorable for this project.

## 8 POTENTIAL TARGET CUSTOMERS / MARKETS

In Pakistan main UPVC products used are pipes which are commonly used for drainage, water supply and tube wells. However concept of UPVC profile is not new to all and people these days are looking for new alternatives. UPVC profiles are not only cheaper than wood or aluminum but more durable and soundproof when compared with wood and aluminum. There's good market for the product and is generally accepted. The potential customer could be builders and developers who are always looking for cheap alternatives moreover people constructing homes for their shelter. Therefore it can be stated that market for UPVC window profiles exists in almost every corner of the country and additionally internationally.



## 9 PROJECT COST SUMMARY

### 9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 414.414 million in the year one. The capacity utilization during year one is worked out at 65% with 5% increase in subsequent years up to the maximum capacity utilization of 95%.

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

**Table 1: Project Economics**

Description	Details
Internal Rate of Return (IRR)	60%
Payback Period (yrs.)	2.90
Net Present Value (Rs.)	428,846,383

### 9.2 Project Financing

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

**Table 2: Project Financing**

Description	Details
Total Equity (50%)	Rs.38,172,258
Bank Loan (50%)	Rs.38,172,258
Markup to the Borrower (% age / annum)	14%
Tenure of the Loan (Years)	10

### 9.3 Project Cost

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

**Table 3: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Land	13,920,000
Building/Infrastructure	29,233,900
Plant and Machinery	14,549,400
Furniture & Fixture	746,000
Office Equipment	396,000
Pre-operating Cost	760,000
<b>Total Capital Cost</b>	<b>59,605,300</b>
<b>Working Capital</b>	
Raw Material Inventory	14,936,171
Equipment spare part inventory	575,575
Upfront insurance payment	727,470
Cash	500,000
<b>Total Working Capital</b>	<b>16,739,216</b>
<b>Total Project Cost</b>	<b>76,344,516</b>

### 9.4 Space Requirement

The space requirement for the proposed **UPVC Window Profiles production Unit** is estimated 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 4: Space Requirement**

Description	Estimated Area	Unit Cost (Rs.)	Total Cost
-------------	----------------	-----------------	------------

	(Sq.ft)		(Rs.)
Management Office	2,000	2,000	4,000,000
Cafeteria	1,000	1,800	1,800,000
Factory	7,000	1,800	12,600,000
Pavement/driveway	1,500	600	900,000
warehouse	3,000	1,700	5,100,000
labor rooms	1,800	1,800	3,240,000
bathrooms/washrooms	800	1,500	1,200,000
guard room	300	1,300	390,000
<b>Total</b>	<b>17,400</b>		<b>29,233,900</b>

## 9.5 Machinery & Equipment Requirement

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

**Table 5: Machinery & Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
SJZ65/132 PVC WINDOW PROFILEEXTRUSIOIN LINE(CAPACITY 220KG/H)	1	14,549,400	14,549,400
<b>Total</b>			<b>14,549,400</b>

## 9.6 Furniture & Fixtures Requirement

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

**Table 6: Furniture & Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Furniture(lump sum)	1	1	300,000
Carpeting	2000	33	66,000

Electric wiring & lighting(lump sum)	1	1	250,000
Air conditioners.(1 ton)	2	65000	130,000
<b>Total</b>			<b>746,000</b>

### 9.7 Office Equipment Requirement

Following office equipment will be required for **UPVC Window Profiles production Unit**;

**Table 7: Office Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computer with LCD	3	40,000	120,000
Printer with scanner	3	40,000	120,000
Telephone set	2	3000	6,000
UPS	1	150,000	150,000
<b>Total</b>			<b>396,000</b>

### 9.8 Human Resource Requirement

In order to run operations of **UPVC Window Profiles production Unit** smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

**Table 8: Human Resource Requirement**

Description	No. of Employees	Monthly Salary per person (Rs.)
Operations manager	1	50,000
Extruder operator	1	35,000
Mixer operator	1	35,000
Accountant	1	40,000
Marketing Manager	1	40,000
Purchaser	1	35,000

Store keeper	1	28,000
Helpers	8	25,000
Color Operator	1	30,000
Electrician	1	24,000
Sweeper	1	24,000
Guards	1	24,000
<b>Total</b>	<b>20</b>	

### 9.9 other costs

The promotional expense being essential for marketing of UPVC window profile is estimated as 1% of revenue expenses which is estimated to be Rs.4, 489,485 in first year of operations.

### 9.10 Revenue Generation

Based on the capacity utilization of 60%, respectively, sales revenue during the first year of operations is estimated as under;

**Table 9: Revenue Generation – Year 1**

Description	No. of Units Produced (No.)	Finished Goods Inventory (No.)	Units available for Sale (No.)	Sale Price / unit (Rs.)	Sales Revenue (Rs.)
UPVC Sliding Profile Frame 2.5mm	720,780	30,030	690,690	600	414,414,000
<b>Total</b>					<b>414,414,000</b>

## 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

Name of Supplier	Address	Phone	E-mail	Website
Zhangjiagan g Ruite You Plastic Machinery co.Ltd.	Leyu town, zhangjiagan city,Jiangsu Provice.	+8613701561438	<a href="mailto:djxmachine@163.com">djxmachine@163.com</a>	-
Faygo Union Machinery co.,Ltd	Feixiang Road,Fenghuang town,Zhangjiagan city,Jiangsu Province	+8618862663082	<a href="mailto:Plast301@faygoplast.com">Plast301@faygoplast.com</a>	www.faygoplast.com
Qingdao trusty plastic machinery Co.,Ltd	E12 Distric,Jiaozhou steel Market, Qingdao,Shandong Province, China	+8615906392533	aries@trustymachine.com	www.trustymachine.com
Ron Extrusion Engineering	Unity# 766, AL-Hllal street,Baradari Road ,shahdara Lohore-54400 Pakistan.	+924237910766	info@ronextrusions.com	www.ronextrusion.com

## 10.2 Raw Material Suppliers

Name of Supplier	Address	Phone	Fax	Website
Engropolymer & Chemicals	First Floor, 38 Z Block, Commercial Area, Phase III, DHA, Lahore, Pakistan.	042 - 042-35743690-3	042-35743689	www.engropolymer.com

## 11 USEFUL WEB LINKS

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

## 12 ANNEXURES

### 12.1 Income Statement

Statement Summaries										SMEDA
Income Statement										Rs. in actuals
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	414,414,000	513,663,150	608,633,025	717,460,244	841,966,575	984,199,571	1,146,459,501	1,331,329,420	1,467,680,961	1,614,449,057
Cost of goods sold	368,825,010	436,232,077	493,259,518	554,907,905	621,497,637	693,369,682	770,886,844	854,435,098	899,455,346	944,786,642
Gross Profit	45,588,990	77,431,073	115,373,507	162,552,339	220,468,939	290,829,889	375,572,657	476,894,322	568,225,615	669,662,415
<i>General administration &amp; selling expenses</i>										
Administration expense	3,572,040	3,919,819	4,301,458	4,720,254	5,179,825	5,684,140	6,237,556	6,844,853	7,511,277	8,242,586
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	-	-	-	-	-	-	-	-	-	-
Travelling & Comm. expense (phone, fax, etc.)	69,360	76,113	83,523	91,655	100,579	110,372	121,118	132,910	145,850	160,050
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, etc.)	34,680	38,056	41,762	45,828	50,290	55,186	60,559	66,455	72,925	80,025
Promotional expense	4,144,140	5,136,632	6,086,330	7,174,602	8,419,666	9,841,996	11,464,595	13,313,294	14,676,810	16,144,491
Insurance expense	727,470	654,723	581,976	509,229	436,482	363,735	290,988	218,241	145,494	72,747
Professional fees (legal, audit, etc.)	2,072,070	2,568,316	3,043,165	3,587,301	4,209,833	4,920,998	5,732,298	6,656,647	7,338,405	8,072,245
Depreciation expense	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835
Amortization expense	152,000	152,000	152,000	152,000	152,000	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	12,432,420	15,409,895	18,258,991	21,523,807	25,258,997	29,525,987	34,393,785	39,939,883	44,030,429	48,433,472
Subtotal	26,235,015	30,986,388	35,580,040	40,835,512	46,838,506	53,533,248	61,331,732	70,203,117	76,952,025	84,236,451
Operating Income	19,353,975	46,444,685	79,793,467	121,716,827	173,630,432	237,296,641	314,240,924	406,691,205	491,273,591	585,425,964
Other income	198,085	665,345	1,466,240	2,667,284	4,337,025	6,454,666	9,072,597	12,435,631	16,314,651	23,671,428
Gain / (loss) on sale of assets	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	19,552,060	47,110,030	81,259,707	124,384,110	177,967,457	243,751,307	323,313,522	419,126,836	507,588,241	609,097,392
Interest expense	5,422,305	5,206,537	4,960,562	4,680,149	4,360,479	3,996,056	3,580,613	3,107,008	2,567,098	1,951,601
Earnings Before Tax	14,129,755	41,903,493	76,299,145	119,703,961	173,606,978	239,755,252	319,732,909	416,019,828	505,021,143	607,145,791
Tax	5,793,199	17,180,432	31,282,650	49,078,624	71,178,861	98,299,653	131,090,493	170,568,130	207,058,669	248,929,774
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>8,336,555</b>	<b>24,723,061</b>	<b>45,016,496</b>	<b>70,625,337</b>	<b>102,428,117</b>	<b>141,455,599</b>	<b>188,642,416</b>	<b>245,451,699</b>	<b>297,962,474</b>	<b>358,216,017</b>
Balance brought forward		8,336,555	16,529,808	30,773,152	50,699,244	76,563,681	109,009,640	148,826,028	197,138,863	247,550,669
Total profit available for appropriation	8,336,555	33,059,616	61,546,304	101,398,489	153,127,361	218,019,279	297,652,056	394,277,727	495,101,338	605,766,686
Dividend	-	16,529,808	30,773,152	50,699,244	76,563,681	109,009,640	148,826,028	197,138,863	247,550,669	302,883,343
Balance carried forward	8,336,555	16,529,808	30,773,152	50,699,244	76,563,681	109,009,640	148,826,028	197,138,863	247,550,669	302,883,343



Statement Summaries											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Rs. in actuals										
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	500,000	3,461,698	9,845,203	19,479,597	33,866,075	52,874,426	76,218,903	105,233,044	143,479,585	182,813,427	290,615,137
Accounts receivable	-	11,353,808	12,713,386	15,373,920	18,165,661	21,362,011	25,015,975	29,187,111	33,942,314	38,342,608	42,220,959
Finished goods inventory	-	16,035,870	18,234,781	20,613,831	23,185,567	25,963,348	28,961,387	32,194,810	35,679,707	37,477,306	39,366,110
Equipment spare part inventory	575,575	715,042	849,170	1,003,282	1,180,065	1,382,548	1,614,142	1,878,687	2,075,805	2,288,575	-
Raw material inventory	14,936,171	18,555,352	22,035,972	26,035,172	30,622,692	35,877,122	41,886,981	48,751,927	53,867,129	59,388,510	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	727,470	654,723	581,976	509,229	436,482	363,735	290,988	218,241	145,494	72,747	-
<b>Total Current Assets</b>	<b>16,739,216</b>	<b>50,776,493</b>	<b>64,260,488</b>	<b>83,015,030</b>	<b>107,456,543</b>	<b>137,823,191</b>	<b>173,988,375</b>	<b>217,463,819</b>	<b>269,190,034</b>	<b>320,383,173</b>	<b>372,202,206</b>
<i>Fixed assets</i>											
Land	13,920,000	13,920,000	13,920,000	13,920,000	13,920,000	13,920,000	13,920,000	13,920,000	13,920,000	13,920,000	13,920,000
Building/Infrastructure	29,233,900	27,772,205	26,310,510	24,848,815	23,387,120	21,925,425	20,463,730	19,002,035	17,540,340	16,078,645	14,616,950
Machinery & equipment	14,549,400	13,094,460	11,639,520	10,184,580	8,729,640	7,274,700	5,819,760	4,364,820	2,909,880	1,454,940	-
Furniture & fixtures	746,000	671,400	596,800	522,200	447,600	373,000	298,400	223,800	149,200	74,600	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	396,000	356,400	316,800	277,200	237,600	198,000	158,400	118,800	79,200	39,600	-
<b>Total Fixed Assets</b>	<b>58,845,300</b>	<b>55,814,465</b>	<b>52,783,630</b>	<b>49,752,795</b>	<b>46,721,960</b>	<b>43,691,125</b>	<b>40,660,290</b>	<b>37,629,455</b>	<b>34,598,620</b>	<b>31,567,785</b>	<b>28,536,950</b>
<i>Intangible assets</i>											
Pre-operation costs	760,000	608,000	456,000	304,000	152,000	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>760,000</b>	<b>608,000</b>	<b>456,000</b>	<b>304,000</b>	<b>152,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>76,344,516</b>	<b>107,198,958</b>	<b>117,500,118</b>	<b>133,071,825</b>	<b>154,330,503</b>	<b>181,514,316</b>	<b>214,648,665</b>	<b>255,093,274</b>	<b>303,788,654</b>	<b>351,950,958</b>	<b>400,739,156</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable	-	21,076,460	24,941,336	28,272,644	31,888,585	35,810,988	40,063,354	44,670,993	49,506,561	52,249,992	51,313,947
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>-</b>	<b>21,076,460</b>	<b>24,941,336</b>	<b>28,272,644</b>	<b>31,888,585</b>	<b>35,810,988</b>	<b>40,063,354</b>	<b>44,670,993</b>	<b>49,506,561</b>	<b>52,249,992</b>	<b>51,313,947</b>
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	2,982,627	2,982,627	2,982,627	2,982,627	2,982,627	2,386,102	1,789,576	1,193,051	596,525	(0)
Long term debt	38,172,258	36,631,058	34,874,089	32,871,145	30,587,788	27,984,762	25,017,312	21,634,419	17,777,921	13,381,513	8,369,608
<b>Total Long Term Liabilities</b>	<b>38,172,258</b>	<b>39,613,685</b>	<b>37,856,716</b>	<b>35,853,772</b>	<b>33,570,415</b>	<b>30,967,389</b>	<b>27,403,413</b>	<b>23,423,995</b>	<b>18,970,972</b>	<b>13,978,038</b>	<b>8,369,608</b>
<i>Shareholders' equity</i>											
Paid-up capital	38,172,258	38,172,258	38,172,258	38,172,258	38,172,258	38,172,258	38,172,258	38,172,258	38,172,258	38,172,258	38,172,258
Retained earnings	-	8,336,555	16,529,808	30,773,152	50,699,244	76,563,681	109,009,640	148,826,028	197,138,863	247,550,669	302,883,343
<b>Total Equity</b>	<b>38,172,258</b>	<b>46,508,813</b>	<b>54,702,066</b>	<b>68,945,410</b>	<b>88,871,502</b>	<b>114,735,939</b>	<b>147,181,898</b>	<b>186,998,286</b>	<b>235,311,121</b>	<b>285,722,927</b>	<b>341,055,601</b>
<b>TOTAL CAPITAL AND LIABILITY</b>	<b>76,344,516</b>	<b>107,198,958</b>	<b>117,500,118</b>	<b>133,071,825</b>	<b>154,330,503</b>	<b>181,514,316</b>	<b>214,648,665</b>	<b>255,093,274</b>	<b>303,788,654</b>	<b>351,950,958</b>	<b>400,739,156</b>

## 12.3 Cash Flow Statement

Statement Summaries											SMEDA
Cash Flow Statement											Rs. in actuals
	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	-	8,336,555	24,723,061	45,016,496	70,625,337	102,428,117	141,455,599	188,642,416	245,451,699	297,962,474	358,216,017
Add: depreciation expense	-	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835	3,030,835
amortization expense	-	152,000	152,000	152,000	152,000	152,000	-	-	-	-	-
Deferred income tax	-	2,982,627	-	-	-	-	(596,525)	(596,525)	(596,525)	(596,525)	(596,525)
Accounts receivable	-	(11,353,808)	(1,359,577)	(2,660,535)	(2,791,741)	(3,196,350)	(3,653,963)	(4,171,136)	(4,755,203)	(4,400,294)	(3,878,351)
Finished good inventory	-	(16,035,870)	(2,198,911)	(2,379,049)	(2,571,736)	(2,777,781)	(2,998,039)	(3,233,423)	(3,484,897)	(1,797,599)	(1,888,804)
Equipment inventory	(575,575)	(139,467)	(134,128)	(154,112)	(176,783)	(202,483)	(231,594)	(264,545)	(197,118)	(212,770)	2,288,575
Raw material inventory	(14,936,171)	(3,619,180)	(3,480,620)	(3,999,200)	(4,587,521)	(5,254,430)	(6,009,859)	(6,864,946)	(5,115,202)	(5,521,381)	59,388,510
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(727,470)	72,747	72,747	72,747	72,747	72,747	72,747	72,747	72,747	72,747	72,747
Accounts payable	-	21,076,460	3,864,875	3,331,308	3,615,941	3,922,403	4,252,366	4,607,639	4,835,567	2,743,432	(936,045)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(16,239,216)	4,502,899	24,670,282	42,410,490	67,369,079	98,175,058	135,321,566	181,223,062	239,241,902	291,280,919	415,696,958
<i>Financing activities</i>											
Change in long term debt	38,172,258	(1,541,201)	(1,756,969)	(2,002,944)	(2,283,356)	(2,603,026)	(2,967,450)	(3,382,893)	(3,856,498)	(4,396,408)	(5,011,905)
Change in short term debt	-	-	-	-	-	-	-	-	-	-	-
Change in export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Add: land lease expense	-	-	-	-	-	-	-	-	-	-	-
Land lease payment	-	-	-	-	-	-	-	-	-	-	-
Change in lease financing	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	38,172,258	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financ	76,344,516	(1,541,201)	(1,756,969)	(2,002,944)	(2,283,356)	(2,603,026)	(2,967,450)	(3,382,893)	(3,856,498)	(4,396,408)	(5,011,905)
<i>Investing activities</i>											
Capital expenditure	(59,605,300)	-	-	-	-	-	-	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by invest	(59,605,300)	-	-	-	-	-	-	-	-	-	-
<b>NET CASH</b>	<b>500,000</b>	<b>2,961,698</b>	<b>22,913,313</b>	<b>40,407,546</b>	<b>65,085,723</b>	<b>95,572,032</b>	<b>132,354,116</b>	<b>177,840,169</b>	<b>235,385,404</b>	<b>286,884,512</b>	<b>410,685,053</b>
Cash balance brought forward	-	500,000	3,461,698	9,845,203	19,479,597	33,866,075	52,874,426	76,218,903	105,233,044	143,479,585	182,813,427
Cash available for appropriation	500,000	3,461,698	26,375,011	50,252,749	84,565,319	129,438,107	185,228,542	254,059,072	340,618,448	430,364,096	593,498,480
Dividend	-	-	16,529,808	30,773,152	50,699,244	76,563,681	109,009,640	148,826,028	197,138,863	247,550,669	302,883,343
Cash carried forward	500,000	3,461,698	9,845,203	19,479,597	33,866,075	52,874,426	76,218,903	105,233,044	143,479,585	182,813,427	290,615,137

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

Description	Details
Operational days per year	330
Operational hours per day	8
Shifts per day	1

### 13.2 Production Cost Assumptions

Description	Details
Production capacity utilization in year 1	60%
Production capacity growth rate	5%
Maximum capacity utilization	95%

### 13.3 Revenue Assumptions

Description	Details
Production Units	1,201,200
Sale price per unit	600
COGs	519

### 13.4 Financial Assumptions

Description	Details
Interest rate	14%
Debt : Equity Ratio	50:50
Project Life (Years)	10