Pre-feasibility Study

HIGH-DENSITY POLYETHYLENE (HDPE) PIPES PRODUCTION UNIT

December 2022

"The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, andrevenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA's website and consult financial experts to stay current with market conditions."

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

Table of Contents

1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision; including taking professional advice from a qualified consultant/technical expert before taking any decision to act upon the information.

For more information on services offered by SMEDA, please contact our website: ***www.smeda.org.pk***

Document Control

Document No.	PREF-NO
Revision	No.1
Prepared by	SMEDA-Balochistan
Revision Date	December,2022
For information	shakoor@smeda.org

2 EXECUTIVE SUMMARY

HDPE (High Density Polyethylene) pipe is ideal for many different applications including municipal, industrial, energy, geothermal, landfill and more. HDPE pipes are strong, durable, flexible and light weight. When fused together, HDPE pipe has a zero leak rate because the fusion process creates a monolithic, HDPE system. HDPE pipe are more environmentally sustainable option as it is non-toxic, corrosion and chemical resistant, has a long design life, and is ideal for trenchless installation methods because of its flexibility. These pipes are tough, flexible, light weight and offer many cost saving advantages in both above ground and below ground installations. Whilst they are robust and resistant to site damage normal care and sensible handling practices are necessary to ensure trouble free operations.

The concept of production of HDPE pipes is rather not new in Pakistan; however production in accordance with international standards 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 HDPE pipes production and one of them is to produce HDPE pipes locally in accordance with international standards and lower the cost of production.

High-Density Polyethylene (HDPE) pipes 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 cities like Quetta, Karachi, Lahore, Peshawar and Multan.

The finished Product would include **High-Density Polyethylene (HDPE) pipes** in different sizes likewise 25mm (OD), 32mm (OD), 40mm (OD), 50mm (OD), 63mm (OD), 75mm (OD), 90mm (OD) and 110mm (OD).

The installed unit would have the Capacity to produce **594,000kgs** of the product and will initially operate at **75%** capacity utilization.

Total Cost Estimates is **Rs. 41,052,194** with fixed investment **Rs. 27,936,100** and working capital **Rs. 13,116,094.**

Given the cost assumptions IRR and payback are **57%** and **3.00 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 henceforth well trained staff would 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 or improved in accordance with 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 'sectorial 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 **High-Density Polyethylene (HDPE) Pipes 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 it's 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 conical twin screw extruder, molds, printer machine, crusher and cooling water tank. 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, Lahore, Peshawar and at location where population density is high and more of construction work is going on.
- **Product:** The unit would produce HDPE pipes used for different purposes likewise sanitary and drainage purposes.
- **Target Market:** In addition to local markets in Karachi, Lahore, Quetta and Islamabad an enormous export market for the Pakistani products exists in Afghanistan and other neighbouring countries.
- **Employment Generation:** The proposed project will provide employment opportunity to 15 people. Financial analysis shows the unit would be profitable from the very first year of operation.

5.1 Production Process Flow

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

1. Formation of the resin compound
2. Extrusion of UPVC profiles
3. Packaging and distribution

1. Formation of the resin compound

This is the very first step in the HDPE pipes manufacturing process. There are certain raw likewise Resin, stabilizers and fillers and color materials which are used in the preparation of the resin mix. The raw materials chosen are the of the most premium level. For a healthier and environmentally friendly approach, lead-free substances are used in the resin.

2. Extrusion of HDPE Pipes

The extrusion procedure is the main stage of the HDPE pipes manufacturing process. Extrusion is the process of how HDPE pipes are made. The extruded pipes require the desired temperature of **~190°C to 200°C** 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 pipes, it is cast into a die. The die is used to give the extruded pipes its shape as it is being pulled and stretched.

3. Packaging and distribution

After the extruded Pipes take its designated shape, the final stage of HDPE pipes manufacturing processes is put into the picture. The HDPE pipes are now given a water bath and are cooled. After cooling they take the shape of sturdy pipes. After being sufficiently cooled, the extruded pipes are now cut into standardized lengths, and then packaging labels and protective tapes are used..

5.2 Installed And Operational Capacities

The proposed production unit is set to operate at 75% at capacity utilization initially and shall increase its production by 5% yearly.

The proposed manufacturing plant has the ability to produce 1800Kg of HDPE pipe per day. 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.

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 HDPE pipes are commonly used for drainage, water supply and tube wells. Moreover there's good market for the product and is generally accepted. The potential customer could be builders, developers, government contractors, miners and farmers who are always looking for cheap alternatives for drainage and water supply purposes moreover people constructing homes for their shelter. Therefore it can be stated that market for HDPE pipes 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. 175.601 million in the year one. The capacity utilization during year one is worked out at 75% 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)	57%

Payback Period (yrs.)	3.00
Net Present Value (Rs.)	169,309,045

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 (70%)	Rs. 28,736,536
Bank Loan (30%)	Rs. 12,315,658
Markup to the Borrower (%age / annum)	20%
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.
Capital Cost	
Land	2,795,600
Building/Infrastructure	13,185,000
Plant and Machinery	10,700,000
Furniture & Fixture	719,500
Office Equipment	146,000
Pre-operating Cost	390,000
Total Capital Cost	**27,936,100**
Working Capital	

Raw Material Inventory	12,081,094
Upfront insurance payment	535,000
Cash	500,000
Total Working Capital	**13,116,094**
Total Project Cost	**41,052,194**

9.4 Space Requirement

The space requirement for the proposed **High-Density Polyethylene (HDPE) Pipes 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 Requirment

Description	Estimated Area (Sq.ft)	Unit Cost (Rs.)	Total Cost (Rs.)
Management Office	15,00	2,000	3,000,000
Cafeteria	4,00	1,800	720,000
Factory	4,000	1,200	48,00,000
Pavement/driveway	3,000	400	1,350,000
warehouse	1500	1,000	15,00,000
labor rooms	500	1,400	700,000
bathrooms/washrooms	800	1,000	800,000
guard room	200	900	180,000
Total	**12,050**		**13,185,000**

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.)
Extruder (Plastic Resin)	1	22,00,000	22,00,000
Extruder (pipes)	2	3,150,000	6,300,000
Pipe (pipe)	1	600,000	600,000
Crusher	1	600,000	600,000
Cooling water tank	1	500,000	500,000
Total			**10,700,000**

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	300,000	300,000
Carpeting	1500	33	49,500
Electric wiring & lighting(lump sum)	1	250,000	250,000
Air conditioners.(1 ton)	1	120,000	120,000
Total			**719,500**

9.7 Office Equipment Requirement

Following office equipment will be required for **High-Density Polyethylene (HDPE) Pipes Production Unit**;

Table 7: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computer with LCD	2	50,000	100,000
Printer with scanner	1	40,000	40,000
Telephone set	1	6,000	6,000
Total			**146,000**

9.8 Human Resource Requirement

In order to run operations of **High-Density Polyethylene (HDPE) Pipes Production Unit** smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

Table 8: Human Resource Requirment

Description	No. of Employees	Monthly Salary per person (Rs.)
Operations manager	1	50,000
Extruder operator (resin)	1	30,000
Extruder operator (pipes)	2	30,000
Printer machine operator	1	27,000
Crusher machine operator	1	27,000
Labor	4	25,000
Store keeper	1	25,000
Sweeper	2	24,000
Guards	2	24,000
Total	**15**	

9.9 other costs

The promotional expense being essential for marketing of HDPE pipes is estimated as 1% of revenue expenses which is estimated to be Rs. 1,756,013 in first year of operations.

9.10 Revenue Generation

Based on the capacity utilization of 75%, 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.)

HDPE pipes	445,500	37,125	408,375	430	175,601,250
Total					**175,601,250**

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
Zhangjiagang Ruite You Plastic Machinery co.Ltd.	Leyu town, zhangjiagang city,Jiangsu Provice.	+8613701561438	djxmachine@163.com	-
Faygo Union Machinery co.,Ltd	Feixiang Road,Fenghuang town,Zhangjiagang city,Jiangsu Province	+8618862663082	Plast301@faygoplast.com	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

Engroplymer & Chemicals	First Floor, 38 Z Block, Commercial Area, Phase III, DHA, Lahore, Pakistan.	042 - 35743690-3	042-35743689	www.engropolymer.com

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.**livestock**punjab.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

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	175,601,250	223,598,925	261,411,728	304,551,101	353,704,232	390,788,641	429,867,505	472,854,256	520,139,681	572,153,649
Cost of goods sold	147,657,125	179,266,631	199,855,161	222,054,261	245,973,531	259,409,971	272,380,469	285,999,493	300,299,467	315,314,441
Gross Profit	27,944,125	44,332,294	61,556,567	82,496,840	107,730,701	131,378,670	157,487,036	186,854,763	219,840,214	256,839,208
General administration & selling expenses										
Administration expense	2,113,560	2,219,238	2,330,200	2,446,710	2,569,045	2,697,498	2,832,373	2,973,991	3,122,691	3,278,825
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	-	-	-	-	-	-	-	-	-	-
Travelling & Comm. expense (phone, fax, etc.)	41,040	43,092	45,247	47,509	49,884	52,379	54,998	57,747	60,635	63,667
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, etc.)	20,520	21,546	22,623	23,754	24,942	26,189	27,499	28,874	30,317	31,833
Promotional expense	1,756,013	2,235,989	2,614,117	3,045,511	3,537,042	3,907,886	4,298,675	4,728,543	5,201,397	5,721,536
Insurance expense	535,000	481,500	428,000	374,500	321,000	267,500	214,000	160,500	107,000	53,500
Professional fees (legal, audit, etc.)	878,006	1,117,995	1,307,059	1,522,756	1,768,521	1,953,943	2,149,338	2,364,271	2,600,698	2,860,768
Depreciation expense	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800
Amortization expense	78,000	78,000	78,000	78,000	78,000	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	5,268,038	6,707,968	7,842,352	9,136,533	10,611,127	11,723,659	12,896,025	14,185,628	15,604,190	17,164,609
Subtotal	12,505,976	14,721,128	16,483,398	18,491,073	20,775,362	22,444,854	24,288,707	26,315,354	28,542,729	30,990,539
Operating Income	15,438,149	29,611,166	45,073,169	64,005,768	86,955,339	108,933,816	133,198,329	160,539,409	191,297,485	225,848,669
Other income	25,000	683,878	2,524,383	5,463,712	9,857,760	15,888,388	23,659,946	33,432,106	45,502,955	62,347,674
Gain / (loss) on sale of assets	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	15,463,149	30,295,044	47,597,553	69,469,480	96,813,099	124,822,204	156,858,275	193,971,515	236,800,440	288,196,343
Interest expense	2,583,946	2,489,161	2,241,846	2,103,938	1,937,577	1,736,881	1,494,752	1,202,616	850,128	424,793
Earnings Before Tax	12,879,203	27,805,883	45,355,707	67,365,542	94,875,522	123,085,322	155,363,523	192,768,899	235,950,312	287,771,551
Tax	5,280,473	11,400,412	18,595,840	27,619,872	38,898,964	50,464,982	63,699,045	79,035,249	96,739,628	117,986,336
NET PROFIT/(LOSS) AFTER TAX	7,598,730	16,405,471	26,759,867	39,745,670	55,976,558	72,620,340	91,664,479	113,733,650	139,210,684	169,785,215
Balance brought forward		7,598,730	24,004,201	50,764,067	90,509,737	146,486,295	219,106,635	310,771,114	424,504,765	563,715,449
Total profit available for appropriation	7,598,730	24,004,201	50,764,067	90,509,737	146,486,295	219,106,635	310,771,114	424,504,765	563,715,449	733,500,664
Dividend	-	-	-	-	-	-	-	-	-	-
Balance carried forward	7,598,730	24,004,201	50,764,067	90,509,737	146,486,295	219,106,635	310,771,114	424,504,765	563,715,449	733,500,664

12.2 Balance Sheet

Statement Summaries **SMEDA**

Balance Sheet

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
Assets											
Current assets											
Cash & Bank	500,000	-	13,677,550	36,810,114	72,464,126	124,691,080	193,076,676	280,122,238	388,519,889	521,539,206	725,414,276
Accounts receivable	-	7,216,490	8,202,743	9,965,972	11,629,373	13,525,795	15,297,799	16,862,798	18,549,077	20,403,985	22,444,384
Finished goods inventory	-	13,423,375	15,017,100	16,736,639	18,590,589	20,588,093	21,617,498	22,698,372	23,833,291	25,024,956	26,276,203
Equipment spare part inventory	-	-	-	-	-	-	-	-	-	-	-
Raw material inventory	12,081,094	15,418,221	18,066,563	21,095,827	24,556,279	27,192,563	29,979,801	33,052,731	36,440,636	40,175,801	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	535,000	481,500	428,000	374,500	321,000	267,500	214,000	160,500	107,000	53,500	-
Total Current Assets	13,116,094	36,539,586	55,391,957	84,983,053	127,561,367	186,265,030	260,185,773	352,896,638	467,449,893	607,197,447	774,134,863
Fixed assets											
Land	2,795,600	2,795,600	2,795,600	2,795,600	2,795,600	2,795,600	2,795,600	2,795,600	2,795,600	2,795,600	2,795,600
Building/Infrastructure	13,185,000	12,525,750	11,866,500	11,207,250	10,548,000	9,888,750	9,229,500	8,570,250	7,911,000	7,251,750	6,592,500
Machinery & equipment	10,700,000	9,630,000	8,560,000	7,490,000	6,420,000	5,350,000	4,280,000	3,210,000	2,140,000	1,070,000	-
Furniture & fixtures	719,500	647,550	575,600	503,650	431,700	359,750	287,800	215,850	143,900	71,950	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	146,000	131,400	116,800	102,200	87,600	73,000	58,400	43,800	29,200	14,600	-
Total Fixed Assets	27,546,100	25,730,300	23,914,500	22,098,700	20,282,900	18,467,100	16,651,300	14,835,500	13,019,700	11,203,900	9,388,100
Intangible assets											
Pre-operation costs	390,000	312,000	234,000	156,000	78,000	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
Total Intangible Assets	390,000	312,000	234,000	156,000	78,000	-	-	-	-	-	-
TOTAL ASSETS	41,052,194	62,581,886	79,540,457	107,237,753	147,922,267	204,732,130	276,837,073	367,732,138	480,469,593	618,401,347	783,522,963
Liabilities & Shareholders' Equity											
Current liabilities											
Accounts payable	-	10,985,709	13,306,494	14,913,609	16,660,048	18,467,308	19,565,262	20,651,329	21,802,749	23,023,923	21,285,764
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	1,212,327	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	12,198,036	13,306,494	14,913,609	16,660,048	18,467,308	19,565,262	20,651,329	21,802,749	23,023,923	21,285,764
Other liabilities											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	2,193,500	2,193,500	2,193,500	2,193,500	2,193,500	1,754,800	1,316,100	877,400	438,700	0
Long term debt	12,315,658	11,855,085	11,299,727	10,630,041	9,822,446	8,848,491	7,673,840	6,257,060	4,548,144	2,486,739	-
Total Long Term Liabilities	12,315,658	14,048,585	13,493,227	12,823,541	12,015,946	11,041,991	9,428,640	7,573,160	5,425,544	2,925,439	0
Shareholders' equity											
Paid-up capital	28,736,536	28,736,536	28,736,536	28,736,536	28,736,536	28,736,536	28,736,536	28,736,536	28,736,536	28,736,536	28,736,536
Retained earnings	-	7,598,730	24,004,201	50,764,067	90,509,737	146,486,295	219,106,635	310,771,114	424,504,765	563,715,449	733,500,664
Total Equity	28,736,536	36,335,265	52,740,736	79,500,603	119,246,273	175,222,831	247,843,171	339,507,650	453,241,300	592,451,984	762,237,199
TOTAL CAPITAL AND LIABILITI	41,052,194	62,581,886	79,540,457	107,237,753	147,922,267	204,732,130	276,837,073	367,732,138	480,469,593	618,401,347	783,522,963

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
Operating activities											
Net profit	-	7,598,730	16,405,471	26,759,867	39,745,670	55,976,558	72,620,340	91,664,479	113,733,650	139,210,684	169,785,215
Add: depreciation expense	-	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800	1,815,800
amortization expense	-	78,000	78,000	78,000	78,000	78,000	-	-	-	-	-
Deferred income tax	-	2,193,500	-	-	-	-	(438,700)	(438,700)	(438,700)	(438,700)	(438,700)
Accounts receivable	-	(7,216,490)	(986,254)	(1,763,229)	(1,663,401)	(1,896,421)	(1,772,004)	(1,564,999)	(1,686,280)	(1,854,908)	(2,040,399)
Finished good inventory	-	(13,423,375)	(1,593,725)	(1,719,539)	(1,853,950)	(1,997,504)	(1,029,405)	(1,080,875)	(1,134,919)	(1,191,665)	(1,251,248)
Equipment inventory	-	-	-	-	-	-	-	-	-	-	-
Raw material inventory	(12,081,094)	(3,337,128)	(2,648,342)	(3,029,264)	(3,460,452)	(2,636,284)	(2,787,238)	(3,072,930)	(3,387,905)	(3,735,165)	40,175,801
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(535,000)	53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500
Accounts payable	-	10,985,709	2,320,785	1,607,115	1,746,439	1,807,260	1,097,953	1,086,067	1,151,420	1,221,174	(1,738,159)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(12,616,094)	(1,251,754)	15,445,235	23,802,250	36,461,606	53,200,909	69,560,247	88,462,343	110,106,568	135,080,721	206,361,810
Financing activities											
Change in long term debt	12,315,658	(460,573)	(555,358)	(669,686)	(807,594)	(973,955)	(1,174,651)	(1,416,781)	(1,708,916)	(2,061,404)	(2,486,739)
Change in short term debt	-	1,212,327	(1,212,327)	-	-	-	-	-	-	-	-
Change in export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Add: land lease expense	-	-	-	-	-	-	-	-	-	-	-
Land lease payment	-	-	-	-	-	-	-	-	-	-	-
Change in lease financing	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	28,736,536	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financ	41,052,194	751,754	(1,767,685)	(669,686)	(807,594)	(973,955)	(1,174,651)	(1,416,781)	(1,708,916)	(2,061,404)	(2,486,739)
Investing activities											
Capital expenditure	(27,936,100)	-	-	-	-	-	-	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by invest	(27,936,100)	-	-	-	-	-	-	-	-	-	-
NET CASH	500,000	(500,000)	13,677,550	23,132,564	35,654,012	52,226,954	68,385,596	87,045,562	108,397,652	133,019,316	203,875,070
Cash balance brought forward		500,000	-	13,677,550	36,810,114	72,464,126	124,691,080	193,076,676	280,122,238	388,519,889	521,539,206
Cash available for appropriation	500,000	(0)	13,677,550	36,810,114	72,464,126	124,691,080	193,076,676	280,122,238	388,519,889	521,539,206	725,414,276
Dividend	-	-	-	-	-	-	-	-	-	-	-
Cash carried forward	500,000	-	13,677,550	36,810,114	72,464,126	124,691,080	193,076,676	280,122,238	388,519,889	521,539,206	725,414,276

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	75%
Production capacity growth rate	5%
Maximum capacity utilization	95%

13.3 Revenue Assumptions

Description	Details
Production Units Year 1	445,500
Sale price per unit	430
COGs	355

13.4 Financial Assumptions

Description	Details
Interest rate	20%
Debt : Equity Ratio	70:30
Project Life (Years)	10

Small and Medium Enterprises Development Authority

HEAD OFFICE

4th Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel: (92 42) 111 111 456, Fax: (92 42) 36304926-7

www.smeda.org.pk, **helpdesk@smeda.org.pk**

REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KPK	REGIONAL OFFICE BALOCHISTAN
3rd Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road Lahore, Tel: (042) 111-111-456 Fax: (042) 36304926-7 helpdesk.punjab@smeda.org.pk	5TH Floor, Bahria Complex II, M.T. Khan Road, Karachi. Tel: (021) 111-111-456 Fax: (021) 5610572 helpdesk-khi@smeda.org.pk	Ground Floor State Life Building The Mall, Peshawar. Tel: (091) 9213046-47 Fax: (091) 286908 helpdesk-pew@smeda.org.pk	Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta. Tel: (081) 831623, 831702 Fax: (081) 831922 helpdesk-qta@smeda.org.pk