

Pre-Feasibility Study

Sub-contract Workshop



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

This particular pre-feasibility involves setting up a 'Subcontract Workshop' in any industrial city of Pakistan. The workshop is assumed to cater to the automobile, vehicle repairing, car engine rebuilding and other small workshop practices. The machinery is proposed to be purchased in two phases of the project and the workers are hired accordingly.

The lack of sub-contracting and specialization is one of the major structural weaknesses of the country's engineering industries. There are very few domestic supporting industries. The supporting industries are responsible for producing and repairing parts and components of machinery and equipment and for providing industrial service. These industries contribute to reducing the import dependency, create employment, link large and medium sized companies through sub-contracting arrangements etc. Mostly, expatriate engineers returning from the Gulf and Middle East demand such feasibility, because they have some savings to invest and want to carry out business in a field in which they have knowledge and previous work experience. A person with engineering background can easily manage a Subcontract Workshop business

Sub-contracting workshop comes in the segment of light engineering industry. The development in light engineering industry is a continuous process. Most of the subcontracting workshops are part of small and medium scale industry. Subcontracting workshops work in support of various industries for repairing and manufacturing of machinery and machinery parts. Most of the workshops are in cities like Lahore, Gujranwala, Faisalabad, Karachi etc.

The workshop is proposed to operate 8 hours every day. The maximum jobs for the project are assumed to be 2,880 per year. During the first year 30% capacity is assumed and for the second year 40% capacity is assumed. Second year onwards there is a 10% annual increase in the number of jobs carried out. The number of jobs completed depends on the total number of machinery and employees hired.

The total project cost for setting up this workshop is estimated at Rs. 3.66 million with fixed investment Rs. 3.02 million and working capital Rs. 0.64 million .The project is financed through 50% debt and 50% equity. The project NPV is around Rs. 1.95 million, with an IRR of 28% and payback period of 4.53 years. The legal business status of this project is proposed as 'Sole Proprietorship'.

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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 Subcontract Workshop 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

This particular pre-feasibility is about setting up a Subcontract Workshop facility, which will cater to the automobile sector, providing services such as automobile, vehicle repairing, car engine rebuilding and other small workshop practices. This pre-feasibility is suitable for a person who has a Mechanical Engineering background. These engineers are recommended to have previous experience in a workshop environment. This project can be started by having at least the machines mentioned in the first module . Later on, as the business builds up, four more machines, as given in module-2, can be added in 4th year of operations. This means, capital investment will be carried out keeping in view the job orders coming in. Marketing efforts, mainly including personal visits, are required to obtain job orders.

Subcontract workshops can act as a subcontracting/service oriented facility to organizations working in any of the following sectors:

- Textile Sector
- Auto repair shops
- Auto part makers
- Cement Sector
- Cooking Oil Unit
- Food Industry
- Sugar Industry
- Soft Drink Industry
- Flour Mills
- Rice Mills

5.1 Suitable Location

The land should ideally be located outside municipal and cantonment limits, preferably in a small industrial estate. Other options could be a small town off major highway, or a low-income residential area. In Lahore most subcontract workshops are located in Daroghawala, Sheikhpura Road, Ravi Bridge.

5.2 Proposed Product Mix

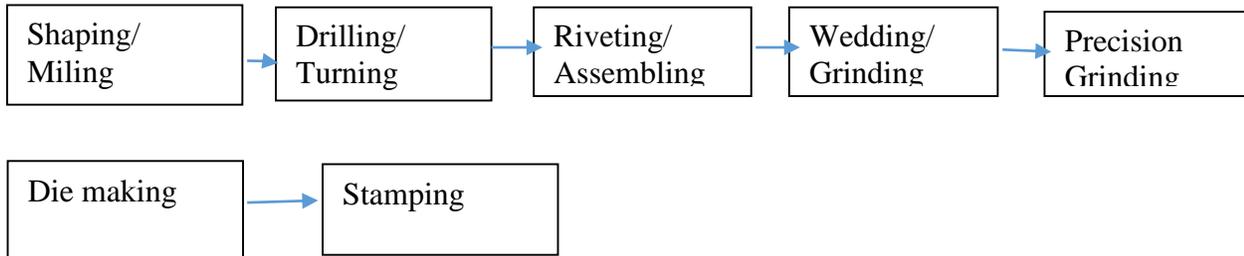
The workshop is proposed to be carrying out three types of jobs, categorized by the type of raw material used for the job. The profit margin calculated on each job also varies depending on the raw material required for the job. The following table gives the percentage of jobs and profit margin assumed while preparing this pre-feasibility.

Job Type	Percentage of jobs	Profit Margin
Job A	10%	50%
Job B	30%	30%
Job C	60%	20%

6. PRODUCTION PROCESS FLOW

Following figure shows the possible type of operations and processes that can be carried out with the machinery considered for this subcontract workshop:

Figure shows Flow Chart for Different Processes



Following Table shows the processes that are involved in this subcontract workshop:

Table 2: Processes Involved

MODULE I	MODULE II
a) Shaping	d) Surface Grinding (Precision)
Milling	e) Die making
Turning	f) Stamping
Drilling	g) Cylindrical Grinding (Precision)
Riveting	
b) Welding	
Rough Grinding	
c) painting	
Drying	

7. CRITICAL FACTORS

7.1 Key Success Factors

1. The commercial viability of this venture depends upon the availability of skilled labour having knowledge about engineering.
2. The entrepreneur should have a good knowledge of the field.
3. The required standards have to be followed strictly.
4. Ensuring quality check at different stages of production.
5. Cost cutting methods and correct raw material has to be employed.
6. To establish a brand name, aggressive marketing efforts such as regular sale calls, are required. High volume orders will be the key to survival.

8. SWOT ANALYSIS

8.1 Strengths

1. Availability of low cost human resource
2. Easy availability of machinery
3. Large number of contacts in the industry.
4. High growth and demand in the market
5. Entrepreneurs previous workshop experience and engineering background

8.2 Weaknesses

1. Time required to build up a reputation in the market
2. Longer payback period
3. Delays in delivery time of orders
4. Lack of skilled manpower for modern machinery
5. High cost of utilities
6. Use of traditional manufacturing practices & absence of automation
7. Non-availability of quality raw materials
8. Non-availability of technical consultants & skilled workforce
9. No quality control systems
10. Safety issues for workers

8.3 Opportunities

1. Potential for high market growth
2. Expansion into a number of different industries
3. Long term relationship and contracts with firms
4. Increase in capacity by purchase of additional machinery and hiring additional staff.

8.4 Threats

1. Increasing cost of raw material
2. Increase in duty on raw material import.
3. Entrepreneur with non-engineering background, due to which engineering quality standards are not adhered to.
4. Not many orders, once production has started.
5. Delays in getting utility connections
6. Delays in receiving tools and dies
7. Untrained labour left unsupervised and not trained by the entrepreneur.
8. Undue interventions from the Government agencies

9. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The land should ideally be located outside municipal and cantonment limits, preferably in a small industrial estate. Other options could be a small town off major highway, or a low-income residential area. In Lahore most subcontract workshops are located in Darogawala, Sheikhpura Road, Ravi Bridge.

10. POTENTIAL TARGET CUSTOMERS / MARKETS

The subcontracting business is operating as a small scale, informal sector in Pakistan. Most small workshop clusters are found near industrial areas of the country, such as Lahore, Faisalabad, Karachi and Gujranwala. No proper data or statistics are available on the industry structure or market of these workshops.

11. PROJECT COST SUMMARY

11.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 4.28 million in the year one. The capacity utilization during year one is worked out at with 30 % increase in subsequent years up to the maximum capacity utilization of 100%.

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

Table 3: Project Economics

Description	Details
Internal Rate of Return (IRR)	28%
Payback Period (yrs.)	4.53
Net Present Value (Rs.)	1,952,846

11.2 Project Financing

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

Table 4: Project Financing

Description	Details
Total Equity (50%)	1,830,066
Bank Loan (50%)	1,830,066
Markup to the Borrower (%age / annum)	14%
Tenure of the Loan (Years)	5

11.3 Project Cost

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

Table 5: Project Cost

Description	Amount Rs.
Capital Cost	
Plant and Machinery	2,290,000
Furniture & fixtures	153,000
Office vehicles	67,600
Office equipment	54,500
Pre-operating costs	403,381
Training costs	50,000
Total Capital Cost	3,018,481
Working Capital	
Equipment spare part inventory	5,725
Raw material inventory	33,772
Upfront building rent	240,000
Upfront insurance payment	117,880
Cash	244,274
Total Working Capital	641,651
Total project cost	3,660,133

11.4 Space Requirement

The space requirement for the proposed Sub-contract workshop 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 6: Space Requirement

Description	Quantity / Area
Management office	400
Production Area	900
Open Area /Ground	950
Total Covered Area	2250

11.5 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project required during the first year are stated below:

Table 7: Machinery & Equipment Requirement during 1st Year

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Shaper	1	200,000	200,000
Tools	1	350,000	350,000
Metal works table	1	30,000	30,000
Tool racks	1	20,000	20,000
Lathe	1	150,000	150,000
Pedestal grinder	1	8,000	8,000
Drill machine	1	60,000	60,000
Welding unit	1	80,000	80,000
Disc grinder	1	7,000	7,000
Paint spray gun	1	40,000	40,000
Paint drying oven	1	120,000	120,000
Total			1,065,000

Plant, machinery and equipment for the proposed project required during the fourth year are stated below:

Table 8: Machinery & Equipment Requirement during 4th Year

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Surface grinder	1	200,000	200,000
Vertical milling machine	1	340,000	340,000
Power press	1	110,000	110,000
Cylindrical grinder	1	200,000	200,000
Total			850,000

11.6 Office Equipment Requirement

Following office equipment will be required for Sub-Contract Workshop;

Table 9: Office Equipment requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers	1	25,000	25,000
Computer printer	1	15,000	15,000
UPS	1	12,500	12,500
Telephones	2	1,000	2,000
Total			54,500

11.7 Furniture & Fixture requirement

Furniture & Fixture required for Sub-Contract Workshop is as follows;

Table 10: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Tables	2	15,000	30,000
Chairs	5	3,500	17,500
Shelves	4	15,000	60,000
Stools	7	1,500	10,500
Work tables	2	10,000	20,000
Misc			15,000
Total			153,000

11.8 Human Resource Requirement

In order to run operations of Sub-Contract Workshop smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

Table 11: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
Owner	1	35,000
Accountant	1	25,000
Welder	2	20,000

Lathe operator	1	18,000
Workers	1	16,000
Helper	1	15,000
Total		1,788,000

11.9 Utilities and Other Costs

An essential cost to be borne by the project is the cost of electricity and diesel cost for generator. The electricity expenses are estimated to be around Rs. 345,271 during first year, whereas, generator's expenses are estimated to be Rs. 166,320 in first year.

11.10 Revenue Generation

Based on the product mix of Job type A, Job type B, and Job type C 10%, 30% and 60 % as respectively, sales revenue during the first year of operations is estimated as under;

Table 12: Revenue Generation – Year 1

	Year 1
Maximum Production capacity (no. of jobs)	2,880
Starting capacity utilization	30%
Capacity utilization growth rate	10%
No. of jobs in first year	1,145
Revenue (Rs.)	4,276,916

12 CONTACT DETAILS

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

Table 13: Machinery Suppliers

Company Name:	Zubair Engineering.
Address:	P.O.Box 515, G.T. Road, Climaxabad, Lohynawala
City:	Gujranwala
Tel:	055-3894792, 3021141
Fax:	055-3894793
Email:	zubair.engineering@yahoo.com
Company Name:	International Machinery
Address:	8 Libya Colony Road, Salamatpura stop, GT Road, Daroghawala
City:	Lahore
Tel:	042-36554499
Company Name:	Friends Machinery Store.
Address:	Near Telephone Exchange, Bahata Machine wala, GT Road, Daroghawala,
City:	Lahore.
Tel:	042-36531029, 36540929
Company Name:	Universal Machinery Store.
Address:	313-D 4, Pakistan Last Mint. GT Road
City:	Lahore.
Tel:	042-36541811
Company Name:	Shahid Machinery Store.
Address:	Salamatpura, GT Road, Daroghawala
City:	Lahore.
Tel:	042-36166715
Company Name:	Noman Engineering Works.
Address:	Galla Naz Cinema, Gondhlanwala Road, Gujranwala
City:	Gujranwala.
Tel:	0300-6458324 +95554231232
Company Name:	Seven Star Engineering Works.
Address:	Kacha Shakhu Pura Road, Gujranwala
City:	Gujranwala .
Tel:	0321-6448179
Company Name:	New Noman Engineering Works.
Address:	Nomania Road, Gujranwala
City:	Gujranwala.
Tel:	055-4231314

Table 14: Technical Experts / Consultants

Name of Expert / Organization	Address	Phone	Fax	E-mail	Website
TUSDEC	State Cement Corporation Building, Kot Lakhpat, Lahore	042-111-000-143, 042-35145793-5	042-35121658	muhammad.sarfraz@tusdec.org.pk	www.tusdec.org.pk
GTDMC	GTDMC Sialkot Bypass Chowk, Sialkot Road, Gujranwala, 52250	055-3827321-23	055-3824324		www.gtdmc.org.pk
PITAC	234-Ferozpur Road near Metro Canal Station Lahore 54600 Pakistan	042-99230699, 042-99230701, 042-99230702	042-99230589		www.pitac.org.pk

13 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
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk
TUSDEC	info@tusdec.org.pk
GTDMC	info@gtmc.org.pk
PITAC	info@pitac.org.pk

14 ANNEXURES

14.1 Income Statement

Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	4,276,916	4,682,083	5,271,534	6,660,204	7,783,096	8,755,145	9,919,655	11,260,796	12,265,134	13,369,097
<i>Cost of sales</i>										
Cost of goods sold 1 (RM usage)	135,086	142,733	187,337	236,044	289,154	346,985	409,876	478,189	502,098	527,203
Operation costs 1 (direct labor)	1,068,000	1,171,982	1,286,088	1,918,738	2,105,549	2,310,548	2,535,506	2,782,367	3,053,262	3,350,532
Operating costs 2 (machinery maintenance)	22,900	25,190	27,709	30,480	33,528	36,881	40,569	44,626	49,088	53,997
Operating costs 3 (direct electricity)	345,271	506,397	696,296	919,110	1,179,525	1,482,831	1,835,004	2,242,782	2,467,061	2,713,767
Generator diesel expense	166,320	243,936	335,412	442,744	568,188	714,293	883,938	1,080,369	1,188,406	1,307,246
Total cost of sales	1,737,577	2,090,238	2,532,841	3,547,116	4,175,944	4,891,539	5,704,893	6,628,333	7,259,915	7,952,745
Gross Profit	2,539,339	2,591,846	2,738,693	3,113,087	3,607,152	3,863,606	4,214,761	4,632,463	5,005,219	5,416,352
<i>General administration & selling expenses</i>										
Administration expense	720,000	790,100	867,025	951,440	1,044,074	1,145,726	1,257,276	1,379,686	1,514,014	1,661,421
Building rental expense	240,000	264,000	290,400	319,440	351,384	386,522	425,175	467,692	514,461	565,907
Communications expense (phone, fax, mail, internet, etc.)	36,000	39,505	43,351	47,572	52,204	57,286	62,864	68,984	75,701	83,071
Office expenses (stationary, entertainment, janitorial services, etc)	108,000	118,515	130,054	142,716	156,611	171,859	188,591	206,953	227,102	249,213
Sales call expense	85,538	93,642	26,358	33,301	38,915	43,776	29,759	33,782	36,795	40,107
Insurance expense	117,880	106,092	94,304	82,516	122,387	110,877	93,378	75,880	58,382	40,884
Professional fees (legal, audit, consultants, etc.)	-	-	-	-	-	-	-	-	-	-
Depreciation expense	256,510	256,510	256,510	256,510	359,828	370,715	370,715	370,715	370,715	370,715
Amortization of pre-operating costs	80,676	80,676	80,676	80,676	80,676	-	-	-	-	-
Amortization of legal, licensing, and training costs	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Bad debt expense	21,385	23,410	26,358	33,301	38,915	43,776	49,598	56,304	61,326	66,845
Subtotal	1,670,989	1,777,451	1,820,036	1,952,473	2,249,995	2,335,537	2,482,356	2,664,997	2,863,496	3,083,164
Operating Income	868,349	814,395	918,656	1,160,614	1,357,157	1,528,069	1,732,405	1,967,466	2,141,723	2,333,188
Other income (interest on cash)	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	27,040	-	-	-	-	-
Earnings Before Interest & Taxes	868,349	814,395	918,656	1,160,614	1,384,197	1,528,069	1,732,405	1,967,466	2,141,723	2,333,188
Interest expense on long term debt (Project Loan)	197,273	163,800	125,328	81,111	30,290	-	-	-	-	-
Interest expense on long term debt (Working Capital Loan)	26,661	-	-	-	-	-	-	-	-	-
Subtotal	223,934	163,800	125,328	81,111	30,290	-	-	-	-	-
Earnings Before Tax	644,416	650,595	793,328	1,079,503	1,353,907	1,528,069	1,732,405	1,967,466	2,141,723	2,333,188
Tax	24,442	25,059	41,499	84,425	125,586	153,114	193,981	240,993	275,844	314,137
NET PROFIT/(LOSS) AFTER TAX	619,974	625,535	751,829	995,078	1,228,321	1,374,956	1,538,424	1,726,473	1,865,878	2,019,051

14.2 Balance Sheet

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	464,274	576,201	1,257,061	1,855,826	1,497,055	2,476,404	3,849,073	5,369,206	7,062,821	8,887,737	11,142,044
Accounts receivable		351,527	368,178	409,053	490,345	593,560	679,654	767,458	870,429	966,819	1,053,462
Equipment spare part inventory	5,725	6,612	7,637	8,821	10,188	11,768	13,592	15,698	18,131	20,942	-
Raw material inventory	33,772	37,467	51,635	68,313	87,867	110,713	137,318	168,215	185,457	204,466	-
Pre-paid building rent	20,000	22,000	24,200	26,620	29,282	32,210	35,431	38,974	42,872	47,159	-
Pre-paid insurance	117,880	106,092	94,304	82,516	122,387	110,877	93,378	75,880	58,382	40,884	-
Total Current Assets	641,651	1,099,900	1,803,015	2,451,149	2,237,125	3,335,532	4,808,446	6,435,431	8,238,093	10,168,007	12,195,506
<i>Fixed assets</i>											
Machinery & equipment	2,290,000	2,061,000	1,832,000	1,603,000	2,407,180	2,074,862	1,742,544	1,410,226	1,077,908	745,590	413,272
Furniture & fixtures	153,000	137,700	122,400	107,100	91,800	76,500	61,200	45,900	30,600	15,300	-
Office vehicles	67,600	60,840	54,080	47,320	40,560	142,670	125,023	107,376	89,729	72,082	54,435
Office equipment	54,500	49,050	43,600	38,150	32,700	27,250	21,800	16,350	10,900	5,450	-
Total Fixed Assets	2,565,100	2,308,590	2,052,080	1,795,570	2,572,240	2,321,283	1,950,568	1,579,853	1,209,138	838,422	467,707
<i>Intangible assets</i>											
Pre-operation costs	403,381	322,705	242,029	161,353	80,676	-	-	-	-	-	-
Legal, licensing, & training costs	50,000	45,000	40,000	35,000	30,000	25,000	20,000	15,000	10,000	5,000	-
Total Intangible Assets	453,381	367,705	282,029	196,353	110,676	25,000	20,000	15,000	10,000	5,000	-
TOTAL ASSETS	3,660,133	3,776,195	4,137,124	4,443,071	4,920,042	5,681,814	6,779,014	8,030,284	9,457,230	11,011,429	12,663,213
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		16,608	18,674	24,015	29,965	36,589	43,954	52,139	59,704	63,830	47,770
Other liabilities											
Total Current Liabilities	-	16,608	18,674	24,015	29,965	36,589	43,954	52,139	59,704	63,830	47,770
<i>Other liabilities</i>											
Deferred tax		24,442	15,378	(139,765)	(323,525)	(405,578)	(690,700)	(986,039)	(1,293,131)	(1,608,935)	(1,960,143)
Long term debt (Project Loan)	1,509,241	1,285,105	1,027,496	731,416	391,118	-	-	-	-	-	-
Long term debt (Working Capital Loan)	320,826	-	-	-	-	-	-	-	-	-	-
Total Long Term Liabilities	1,830,066	1,309,547	1,042,875	591,651	67,593	(405,578)	(690,700)	(986,039)	(1,293,131)	(1,608,935)	(1,960,143)
<i>Shareholders' equity</i>											
Paid-up capital	1,830,066	1,830,066	1,830,066	1,830,066	1,830,066	1,830,066	1,830,066	1,830,066	1,830,066	1,830,066	1,830,066
Retained earnings		619,974	1,245,510	1,997,339	2,992,417	4,220,738	5,595,693	7,134,118	8,860,590	10,726,469	12,745,519
Total Equity	1,830,066	2,450,041	3,075,576	3,827,405	4,822,483	6,050,804	7,425,760	8,964,184	10,690,657	12,556,535	14,575,586
TOTAL CAPITAL AND LIABILITIES	3,660,133	3,776,195	4,137,124	4,443,071	4,920,042	5,681,814	6,779,014	8,030,284	9,457,230	11,011,429	12,663,213

14.3 Cash Flow Statement

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		619,974	625,535	751,829	995,078	1,228,321	1,374,956	1,538,424	1,726,473	1,865,878	2,019,051
Add: depreciation expense		256,510	256,510	256,510	256,510	359,828	370,715	370,715	370,715	370,715	370,715
amortization of pre-operating costs		80,676	80,676	80,676	80,676	80,676	-	-	-	-	-
amortization of training costs		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Deferred income tax		24,442	(9,063)	(155,143)	(183,760)	(82,053)	(285,122)	(295,339)	(307,092)	(315,805)	(351,207)
Accounts receivable		(351,527)	(16,651)	(40,875)	(81,293)	(103,215)	(86,093)	(87,804)	(102,972)	(96,390)	(86,643)
Finished goods inventory		-	-	-	-	-	-	-	-	-	-
Equipment inventory	(5,725)	(887)	(1,025)	(1,184)	(1,367)	(1,579)	(1,824)	(2,107)	(2,433)	(2,810)	20,942
Raw material inventory	(33,772)	(3,696)	(14,167)	(16,678)	(19,555)	(22,845)	(26,606)	(30,897)	(17,242)	(19,009)	204,466
Pre-paid building rent	(20,000)	(2,000)	(2,200)	(2,420)	(2,662)	(2,928)	(3,221)	(3,543)	(3,897)	(4,287)	47,159
Advance insurance premium	(117,880)	11,788	11,788	11,788	(39,871)	11,510	17,498	17,498	17,498	17,498	40,884
Accounts payable		16,608	2,065	5,341	5,951	6,623	7,365	8,185	7,565	4,125	(16,060)
Cash provided by operations	(177,377)	656,888	938,469	894,845	1,014,707	1,479,338	1,372,668	1,520,133	1,693,615	1,824,916	2,254,307
<i>Financing activities</i>											
Project Loan - principal repayment		(224,136)	(257,609)	(296,080)	(340,298)	(391,118)	-	-	-	-	-
Working Capital Loan - principal repayment		(320,826)	-	-	-	-	-	-	-	-	-
Additions to Project Loan	1,509,241	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	320,826	-	-	-	-	-	-	-	-	-	-
Issuance of shares	1,830,066	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares		-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	3,660,133	(544,961)	(257,609)	(296,080)	(340,298)	(391,118)	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(3,018,481)	-	-	-	(1,033,180)	(108,870)	-	-	-	-	-
Acquisitions		-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by investing activities	(3,018,481)	-	-	-	(1,033,180)	(108,870)	-	-	-	-	-
NET CASH	464,274	111,927	680,860	598,765	(358,771)	979,349	1,372,668	1,520,133	1,693,615	1,824,916	2,254,307

15 KEY ASSUMPTIONS

Table 15: Operational Assumptions

Maximum number of job orders (Annually)	2,880
Number of job orders – Year 1 (Annually)	1,145
Hours operational per day	8
Days operational per year	300

Table 16: Economy-Related Assumptions

Electricity price growth rate	10%
Diesel price growth rate	10%
Wage growth rate	10%

Table 17: Cash Flow Assumptions

Accounts Receivable cycle (in days)	30
Accounts payable cycle (in days)	30
Raw material inventory (in days)	90
Equipment spare part inventory (in days)	90

Table 18: Revenue Assumptions

Job Type	Profit Margin	
	Year 1	Year 2
Job A	25%	50%
Job B	25%	30%
Job C	15%	20%

Table 19: Expense Assumptions

Job type	Raw Material Cost Rs.
Job Type A	400
Job Type B	100
Job Type C	80
Raw material cost growth rate	5%
Electricity utilization in hours/day	5
Generator diesel utilization in hours/day	3
Machinery maintenance (% of machinery cost)	1%
Machinery maintenance growth rate	10%
Office expenses (% of administration expense)	15%
Promotional sales call expense (% of revenue)	
Year 1 – 2	2%
Year 3 – 6	0.5%

Year 7 – 10	0.3%
Communication expense (% of administration expense)	5%
Equipment and machinery insurance	5%
Office vehicles insurance rate	5%
Bad debt expense	0.5%

Table 20: Financial Assumptions

Project life (Years)	10
Debt	50%
Equity	50%
Interest rate on long-term debt	14%
Interest rate on short-term debt	15%
Debt tenure (Years)	5
Debt payments per year	12

Table 21: Depreciation Rate Assumptions

Machinery and Equipment	10%
Office Equipment	10%
Furniture & Fixtures	10%
Vehicles	20%