

Pre-Feasibility Study

(UPS and Stabilizer Assembling Unit)



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Note: All SMEDA Services / information related to PM's Youth Business Loan are Free of Cost

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1. DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said subject. 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 exercised 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.

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The logo for SMEDA, featuring the letters S, M, E, D, and A in a large, white, serif font, each contained within a separate light blue rectangular box. The boxes are arranged in a horizontal row. Above the logo, there is a decorative graphic consisting of a light blue curved line and a grid of small blue squares.

2. 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, production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **UPS and Stabilizer Assembling 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 decisions.

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, institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a 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. INTRODUCTION TO SCHEME

'Prime Minister's 'Youth Business Loan' Programme, for young entrepreneurs, with an allocated budget of Rs. 5.0 Billion for the year 2013-14, is designed to provide subsidised financing at 8% mark-up per annum for one hundred thousand (100,000) beneficiaries, through designated financial institutions, initially by the National Bank of Pakistan (NBP) and the First Women Bank Ltd. (FWBL).

Loans from Rs.0.1 million to 2.0 million with tenure upto 8 years inclusive of 1 year grace period, and a debt : equity of 90 : 10 will be disbursed to SME beneficiaries across Pakistan, covering; Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, Gilgit Baltistan, Azad Jammu & Kashmir and Federally Administered Tribal Areas (FATA).

5. EXECUTIVE SUMMARY

UPS & Stabilizer Assembling Unit business is proposed in all major cities particularly Lahore, Faisalabad, Multan Gujranwala, Karachi, Hyderabad, Sukkur Peshawar and Quetta etc.

Products include UPS and Stabilizers of different capacities.

Installed capacity of assembling unit is 12 units of UPS per day and 08 units of stabilizers per day. Initial capacity utilization will be 50%.

The total cost of project is Rs. 1.77 million with fixed investment of Rs. 0.71 million and working capital of Rs. 1.05 million.

Given the cost assumptions, IRR and payback are 59% and 2 years and 2 months, respectively.

S M E D A

6. BRIEF DESCRIPTION OF PROJECT & PRODUCT

UPS is the abbreviation of Un-interrupted Power Supply and mainly consists of a transformer, printed circuit board, switches and casing / housing, whereas, stabilizer is a simple support machine used to regulate the voltage. There are many ways to commence a full production unit which needs comparatively much higher fixed investment. The best and the simplest way is purchasing parts / accessories, assembly and distribution. This would likely decrease chances of loss in case of business closure and provide a safe exit. In addition, it may help the entrepreneur to manage the stock and fulfill orders timely. There are many brands available in the market including local and multinational companies such as Phillips, Digi-tech, Sys-tech and Soft-tech for UPS. Whereas Universal, Stabimatic and National are some of the well-known brands in stabilizers.

UPS & Stabilizer assembling unit business means setting up a workshop where assembling takes place and setting up an office for carrying out general administrative and marketing work. The business facility will maintain inventory consisting of accessories including transformers, transfer switches, printed circuit boards and housing used to assemble UPS & Stabilizer to meet market requirement and orders effectively. The company will divide the store into two parts: one side will be used to store accessories and the other for finished products.

The power crisis has compelled a significant number of consumers to fulfill their basic electricity need through some alternative source of power. In Pakistan, public and private power generation units do not have the capacity to meet the increasing electricity requirements of the population. This clearly indicates a strong demand for UPS and stabilizer products in coming years.

- **Technology:** The proposed unit would require tools and equipment for assembling and quality assurance / testing departments. List of tools and equipment is given in machinery and equipment section.
- **Location:** Lahore, Faisalabad, Multan Gujranwala, Karachi, Hyderabad, Sukkur, Peshawar and Quetta etc. In these cities, parts of UPS and stabilizers can be easily procured and there is huge demand of UPS and stabilizers.
- **Product:** The unit would assemble UPS of 1,000, 1,200 and 1,500 watts and Stabilizers of 1,000 VA and 2,000 VA.

- **Target Market:** There is a large market in all urban centres and semi urban areas of Pakistan. However, it is recommended to sell the products in the same city where the assembling unit is being established.
- **Employment Generation:** The proposed project will provide direct employment to 5 people. Financial analysis shows that the unit will be profitable from the very first year of operation.

7. CRITICAL FACTORS

Following are the key success factors for the proposed assembling units:

1. Owner or key employees must have technical expertise & experience.
2. Quality and after sales service of the products.
3. Seasonality of demand.
4. Availability of raw material.
5. Credit recovery.

8. INSTALLED AND OPERATIONAL CAPACITIES

The daily assembling capacity of the proposed UPS and stabilizer unit would be around 12 and 08 units per day respectively. Initially operational capacity would be 50% of installed capacity and would be increased 10% annually. The proposed assembling unit will be located in any commercial area where basic infrastructure and facilities necessary for a UPS and Stabilizer assembling unit are available.

9. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Due to scheduled and unscheduled power outages, the demand of UPS, stabilizers and batteries increased manifolds during last few years. Both the urban and rural areas are facing load shedding problems round the year. In Pakistan, since last few years the demand and supply gap of electricity has remained an unsolvable problem and people are now seeking alternate power sources more than ever. This unit can be set up in all major cities across the country including Karachi, Lahore, Faisalabad, Rawalpindi, Multan, Peshawar, Quetta etc.

Generators available with different specification and usage criteria are commonly used in industries where load is comparatively much higher than households. UPS (stand-by) is the preferred option in industries like healthcare where power break down in production / operations cannot be afforded. UPS is not only gaining popularity in urban areas, but developed suburbs are also using this new power backup. There are many households and offices, all over Pakistan where UPS is being increasingly used as an alternate source of electricity. The demand

of UPS in urban areas is consistent throughout the year except for during summer season which shows a remarkable increase in the urban areas of Pakistan.

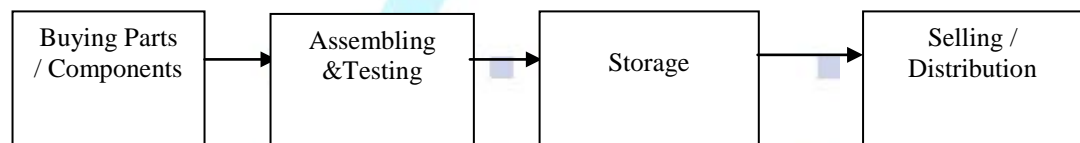
10. POTENTIAL TARGET MARKETS/CITIES

UPS and stabilizers market is divided into three main segments in urban and semi-urban areas particularly in all major cities across the country including Karachi, Lahore, Faisalabad, Rawalpindi, Multan, Peshawar, Quetta etc.:

- Industry / Small & Medium Enterprises
- Offices
- Households

11. PRODUCTION PROCESS FLOW

The proposed business is an assembling unit that will purchase parts and accessories from market vendors, assemble it and sell with its own brand name. The process flow of the unit can be divided into following steps:



12. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of this project under the 'Prime Minister's Youth Business Loan' scheme. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are attached as appendices.

12.1 Project Economics

The following table shows internal rate of return and payback period for UPS & stabilizer assembling unit.

Table 1: Project Economics

Description	Details
IRR	59%

NPV (Rs.)	8,073,668
Payback Period (Years)	2 Years & 2 Months

Returns on the scheme and its profitability are highly dependent on the efficiency of the production team, interest of the owner and quality of the products and fulfilling the seasonal market demands. If there is increase load shedding, then tough competition will be faced in this business.

12.2 Project Financing

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

Table 2: Project Financing

Description	Amount(Rs.)
Total Equity (10%)	176,546
Bank Loan (90 %.)	1,588,914
Markup to the Borrower (%age/annum)	8%
Tenure of the Loan (Years)	8
Grace period (year)	1

12.3 Project Cost

Total project cost of the UPS & Stabilizer Assembling business would be Rs. 1.77 million. Out of this, fixed capital cost of the project is Rs. 0.71 million and remaining will be the working capital.

Table 3: Total Project Cost

Capital Investment	Amount (Rs.)
Tools and Equipment	179,900
Renovation Cost	200,000
Workshop/office furniture	221,000
Motorcycle for local business activities	63,000
Preliminary Expenses	50,000
Total Capital Investment	713,900
Total Working Capital	1,051,560
Total Project Cost	1,765,460

12.4 Space Requirement

UPS and Stabilizer assembling is a sophisticated activity that requires fairly good arrangements and system. This is because; tools and accessories that are needed to be stored and used in the assembling unit are very sensitive. Therefore, during site development, proper concealed electrical wiring with extra arrangement like electric points and switch boards for technical department must kept in mind.

The area has been calculated on the basis of space requirement for production area, management section, scrap yard and stores. Although, the units operating in the industry do not follow any set pattern, it is recommended that the space in assembly unit is allocated according to the aforementioned categories. Following table shows calculations for project space requirement.

Table 4: Space Requirement

S. No.	Details	Area %	Size / Area (sq. ft.)
1	Assembling Area	45%	1,000
2	Storage Facility	30%	600
3	General Administrative Area	20%	400
4	Guard & Waiting Room	5%	200
	Total Area		2,200
	Total Renovation Cost (Rs.)		200,000

Land and Building for setting up the proposed UPS & Stabilizer Assembling unit would be on rental basis which will cost around Rs. 25,000/- per month for a single storey with an area of 200 sq. yards.

It has been assumed that the premises would be a developed site with basic infrastructure available. However, for necessary construction, renovation and customization of the facility Rs. 200,000/- will be required, which has been assumed to depreciate at 10% per annum using diminishing balance method.

12.5 Machinery and Equipment

Following table provides details of machinery and equipment:

Table 5: Machinery and Equipment

S. No.	Tools Detail	Required No. of Units	Unit Price (Rs.)	Total Cost (Rs.)
For Assembling Department				
1	Screw Drivers	5	1,700	8,500
2	Nut Drivers	5	700	3,500
3	Nose Pliers	5	650	3,250
4	Side Cutter	5	750	3,750
	Total			19,000
For Wiring Department				
1	Soldering iron – Automatic	2	1,800	3,600
2	Hot Air gun	2	1,600	3,200
3	D-Soldering Sucker	4	800	3,200
4	Soldering Wire	10	600	6,000
5	Soldering Flux	4	300	1,200
6	Squeezer	4	300	1,200
7	Nose Pliers	4	650	2,600
8	Cutter	4	700	2,800
9	Wire Stripper	5	1,800	9,000
	Total			32,800
For Quality Assurance Department – Testing				
1	Multi Meter	1	6,000	6,000
2	Clamp Meter	1	6,500	6,500
3	Cutter	2	800	1,600
4	Nose Pliers	2	700	1,400
5	Screw Drivers	2	1,800	3,600
6	Oscilloscope	1	56,000	56,000
7	Alligator Clips	6	2,000	12,000
8	Dummy Load	1	16,000	16,000
				103,100
Fire Fighting Equipment				
1	Fire Fighting Equipment	1	25,000	25,000
	Total			25,000
Total Tools & Equipment Cost				179,900

12.6 Office Equipment

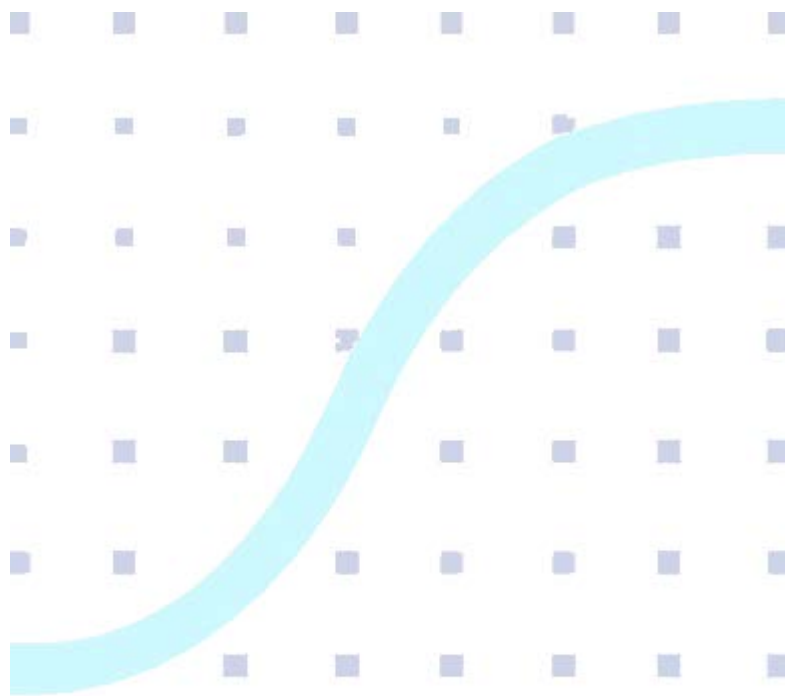
A lump sum provision of Rs. 221,000/- for procurement of office / factory furniture is assumed. The breakup of Factory Office Furniture & Fixtures is as follows:

Table 6: Office Furniture Cost

S. No.	Item	Quantity in Nos.	Cost	Total Cost
Office Furniture				
1	Tables for Management Staff	3	10,000	30,000
2	Chairs for Management Staff	3	6,000	18,000
3	Chairs for Technical Staff	4	4,000	16,000
4	Chairs for General Staff	6	2,000	12,000
5	Chairs/ Sofa Set for Waiting Room	1	25,000	25,000
6	Carpets	1	10,000	10,000
Total				111,000
Electrical Work				
8	Electrical Fittings & Lights	1	30,000	30,000
9	Electric Wiring for Technical Departments	3	10,000	30,000
Total				60,000
Wooden Work				
10	Fixed Wooden Wall Board for Technical Staff	2	25,000	50,000
Total				50,000
Grand Total				221,000

Table 7: Office Vehicle Cost

S. No.	Vehicle Type	Required No. of Units	Unit Cost	Total Cost (in Rupees)
1	Motor Cycle	1	63,000	63,000
Total				63,000



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12.7 Raw Material Requirements

There are two major end products of the proposed assembly unit i.e. UPS of 1000, 1200 and 1500 watts and stabilizers of 1000 VA and 2000 VA. Following table shows raw material requirement to assemble one unit of each of the products.

Table 8: UPS Cost

			1000 watts	1200 watts	1500 watts
S. No	Parts Detail	Specification	Price/piece (Rs)	Price/piece (Rs)	Price/piece (Rs)
1	Casing/Housing	Local	800	800	800
2	Transformer	Local/Imported	2,600	3,600	4,600
3	Printed Circuit Board with components (Power M.O.S.F.E.T, inventor and charger)	Local/Imported	900	900	900
4	Transfer Switches	Local/Imported	40	40	40
5	Light Emission Diode (L.E.D)	Local	80	80	80
6	Battery leads	Local	200	200	200
7	Battery Terminals	Local	60	60	60
8	Screws	Local	40	40	40
9	Power Cord	Local	90	90	90
10	Fuse Holder with Fuse	Local	50	50	50
11	Power Socket	Local	50	50	50
12	Meter-Ampere	Local	50	50	50
13	Meter- Volt	Local	30	30	30
14	Cable Ties	Local	250	250	250
15	Heat Shrink Sleeves	Imported	80	80	80
Total			5,320	6,320	7,320

Table 9: Stabilizer Cost

			1,000 watts	2,000 watts
S. No.	Parts Detail		Price / Piece (Rs.)	Price / Piece (Rs.)
1	Servo Motor		130	130
2	Servo Transformer		1,100	2,100
3	Casing & Screws		300	300
4	Power Cord		50	50
5	On/off Switches (Circuit Breaker)		90	90
6	Fuse with holder		20	20
7	Power Socket		36	36
8	Volt Meter		40	40
9	PCB with components		180	180
Total			1,946	2,946

**Table 10: Battery Cost
For External Use**

Sr. No.	Parts Detail	Specifications	Price / Piece
1	Battery - 145 Ampere	EXIDE / AGS	11,000
2	Battery - 195 Ampere	EXIDE / AGS	14,000
3	Battery - 200 Ampere	EXIDE / AGS	15,500
4	Battery Casing	Unbranded	600
5	Screws for Casing	Unbranded	50

12.8 Human Resource Requirement

Table 11: Human Resource Requirement

Title/Designation	No of Employees	Salary Per Month (Rs.)
Strategic Business Unit Manager / Owner	1	25,000
Supervisor	1	17,000
Technical Staff	2	24,000
Loader	1	10,000
Total Staff	5	76,000

12.9 Revenue Generation

Table 12: Revenue Generation

Product Name	Quantity Assembled	Unit Price (Rs)	Total Sales Price (Rs)
UPS Products Revenue	6		49,600
UPS - 1000 watts	2	6,800	13,600
UPS - 1200 watts	2	8,500	17,000
UPS - 1500 watts	2	9,500	19,000
Stabilizer Products	4		11,000
1000 VA	2	2,500	5,000
2000 VA	2	3,000	6,000
Daily Sales Value	10		60,600
Monthly Sales Value (25 days)			1,515,000
Gross Annual Value			18,180,000

12.10 Other Costs

- Considering the industry norms, it has been assumed that 80% of the total sale will be on cash while remaining 20% sales will be on credit to local distributors. A collection period of 30 days has been assumed.
- A provision for bad debts has been assumed equivalent to 2% of the annual credit sales.
- The cost of the utilities including electricity, fuel for motor cycle, telephone, and water is estimated to be around Rs. 41,000/- per month.
- For the purpose of this pre-feasibility, it has been assumed that the UPS & Stabilizer assembling unit will be engaged in local sales for which demand can be created through retailers and directly selling to distributor. As print advertising would be difficult for a new setup as advertising draws substantial funds. Therefore, it has been assumed that relationship building will be followed by the business in order to create consistent demand for the product. For this purpose, an amount equivalent to 6% of the annual sales has been assumed. This amount will be utilized for schemes for distributors, whole sellers and retailers.
- It has been assumed that long-term financing for 8 years will be obtained in order to finance the project investment cost. The installments are assumed to be paid at the end of every month.
- Miscellaneous expenses of running the business are assumed to be Rs. 10,000 per month. These expenses include various items like office stationery, daily consumables etc. and are assumed to increase at a nominal rate of 10% per annum.
- The business is assumed to be run as a sole proprietorship; therefore, tax rates applicable on the income of a non salaried individual taxpayer are used for income tax calculation of the business.
- The cost of capital is explained in the following table:

Table 13: Cost of Capital

Particulars	Rate
Required return on equity	20%
Cost of finance	8%
Weighted Average Cost of Capital	9.2%

The weighted average cost of capital is based on the debt / equity ratio of 90:10.

13. CONTACT DETAILS OF SUPPLIERS, EXPERTS / CONSULTANTS

There are many local suppliers of UPS and Stabilizes (finished goods as well as parts) in Karachi and other cities of Pakistan; during the course of study following machinery manufacturer was identified in Karachi:

Green Energy Associates

Office No.302

3rd Floor Crystal Court

Block-5, Clifton Karachi

Phone: +92 - 21-35293187



14. ANNEXURES

14.1 Income Statement

UPS AND STABILIZER ASSEMBLING UNIT										
Projected Income Statement (Rs.)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	18,180,000	20,997,900	24,252,575	28,011,724	32,353,541	37,368,340	43,160,432	49,850,299	57,577,095	66,501,545
Beginning Inventory	-	297,780	343,936	397,246	458,819	529,936	612,076	706,948	816,525	943,086
Ending Inventory	297,780	343,936	397,246	458,819	529,936	612,076	706,948	816,525	943,086	1,089,265
Gross Revenue	17,882,220	20,951,744	24,199,264	27,950,150	32,282,424	37,286,199	43,065,560	49,740,722	57,450,534	66,355,367
Sales on Credit	3,576,444	4,190,349	4,839,853	5,590,030	6,456,485	7,457,240	8,613,112	9,948,144	11,490,107	13,271,073
Sales on Cash	14,305,776	16,761,395	19,359,412	22,360,120	25,825,939	29,828,960	34,452,448	39,792,578	45,960,427	53,084,294
Bad Debt Expenses	71,529	83,807	96,797	111,801	129,130	149,145	172,262	198,963	229,802	265,421
Net (Adjusted Sales)	17,810,691	20,867,937	24,102,467	27,838,350	32,153,294	37,137,055	42,893,298	49,541,759	57,220,732	66,089,945
Cost of Sales	15,595,200	17,991,036	20,758,299	23,955,009	27,648,315	31,915,937	36,847,845	42,548,201	49,137,618	56,755,772
Raw Material Cost	14,311,200	16,529,436	19,091,499	22,050,681	25,468,536	29,416,160	33,975,664	39,241,892	45,324,386	52,349,665
Labor (Production Staff)	792,000	871,200	958,320	1,054,152	1,159,567	1,275,524	1,403,076	1,543,384	1,697,722	1,867,495
Other Utilities	492,000	590,400	708,480	850,176	1,020,211	1,224,253	1,469,104	1,762,925	2,115,510	2,538,612
Gross Profit	2,215,491	2,876,901	3,344,169	3,883,341	4,504,979	5,221,118	6,045,453	6,993,558	8,083,114	9,334,174
Gross Profit Margin	12%	14%	14%	14%	14%	14%	14%	14%	14%	14%
General Administrative & Selling Expenses										
Rent Expenses	300,000	330,000	363,000	399,300	439,230	483,153	531,468	584,615	643,077	707,384
Salaries	120,000	132,000	145,200	159,720	175,692	193,261	212,587	233,846	257,231	282,954
Factory/Office Miscellaneous Expenses	120,000	132,000	145,200	159,720	175,692	193,261	212,587	233,846	257,231	282,954
Amortization of Preliminary Expenses	10,000	10,000	10,000	10,000	10,000	-	-	-	-	-
Depreciation Expense	66,390	59,751	53,776	48,398	43,558	40,203	36,182	32,564	29,308	26,377
Maintenance Expense	5,397	5,397	5,397	5,397	5,397	5,397	5,397	5,397	5,397	5,397
Selling & Distribution	1,068,641	1,252,076	1,446,148	1,670,301	1,929,198	2,228,223	2,573,598	2,972,506	3,433,244	3,965,397
Subtotal	1,690,428	1,921,224	2,168,721	2,452,836	2,778,767	3,143,498	3,571,820	4,062,774	4,625,487	5,270,462
Operating Income	525,063	955,677	1,175,448	1,430,505	1,726,212	2,077,619	2,473,633	2,930,784	3,457,628	4,063,711
Financial Charges (8% Per Annum)	127,113	120,737	106,092	90,231	73,055	54,452	34,306	12,487	-	-
Earnings Before Taxes	404,326	849,585	1,085,217	1,357,450	1,671,760	2,043,314	2,461,146	2,930,784	3,457,628	4,063,711
Tax	40,433	49,938	85,282	126,118	173,264	228,997	291,672	433,657	539,026	741,613
Net Profit	363,893	799,647	999,934	1,231,333	1,498,496	1,814,317	2,169,474	2,497,127	2,918,602	3,322,098
Monthly Profit After Tax	30,324	66,637	83,328	102,611	124,875	151,193	180,790	208,094	243,217	276,841

14.2 Statement of Cash Flow

UPS AND STABILIZER ASSEMBLING UNIT											
Projected Statement of Cash Flows (Rs.)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash Flow From Operating Activities											
Net Profit	0	363,893	799,647	999,934	1,231,333	1,498,496	1,814,317	2,169,474	2,497,127	2,918,602	3,322,098
Add: Depreciation Expense	0	66,390	59,751	53,776	48,398	43,558	40,203	36,182	32,564	29,308	26,377
Amortization Expense	0	10,000	10,000	10,000	10,000	10,000	-	-	-	-	-
(Increase) / decrease in Receivables	0	(298,037)	(51,159)	(54,125)	(62,515)	(72,205)	(83,396)	(96,323)	(111,253)	(128,497)	(148,414)
(Increase) / decrease in Raw Material Inventory	0	(595,560)	(29,778)	(31,267)	(32,830)	(34,472)	(36,195)	(38,005)	(39,905)	(41,901)	(43,996)
(Increase) / decrease in Finished Goods Inventory	0	(297,780)	(46,156)	(53,310)	(61,573)	(71,117)	(82,140)	(94,872)	(109,577)	(126,561)	(146,178)
Net Cash Flow From Operations	0	(751,094)	742,306	925,008	1,132,813	1,374,261	1,652,788	1,976,457	2,268,957	2,650,951	3,009,887
Cash Flow From Financing Activities											
Receipt of Long Term Debt	1,588,914										
Repayment of Long Term Debt			(176,445)	(191,090)	(206,951)	(224,127)	(242,730)	(262,876)	(284,695)	-	-
Owner's Equity	176,546										
Net Cash Flow From Financing Activities	1,765,460	0	(176,445)	(191,090)	(206,951)	(224,127)	(242,730)	(262,876)	(284,695)	0	0
Cash Flow From Investing Activities											
Capital Expenditure	(242,900)					(10,000)					(10,000)
Factory/Office Furniture	(221,000)										
Preliminary Operating Expenses	(50,000)										
Renovation	(200,000)										
Net Cash Flow From Investing Activities	(713,900)	0	0	0	0	(10,000)	0	0	0	0	(10,000)
NET CASH FLOW	1,051,560	(751,094)	565,861	733,918	925,862	1,140,134	1,410,058	1,713,581	1,984,262	2,650,951	2,999,887
Cash at the Beginning of the Period	0	1,051,560	300,466	866,327	1,600,244	2,526,107	3,666,241	5,076,299	6,789,879	8,774,141	11,425,092
Cash at the End of the Period	1,051,560	300,466	866,327	1,600,244	2,526,107	3,666,241	5,076,299	6,789,879	8,774,141	11,425,092	14,424,979

14.3 Balance Sheet

UPS AND STABILIZER ASSEMBLING UNIT											
Projected Balance Sheet (Rs.)	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 Balance	1,051,560	300,466	866,327	1,600,244	2,526,107	3,666,241	5,076,299	6,789,879	8,774,141	11,425,092	14,424,979
Raw Material Inventory	0	595,560	625,338	656,605	689,435	723,907	760,102	798,107	838,013	879,913	923,909
Finished Goods Inventory	0	297,780	343,936	397,246	458,819	529,936	612,076	706,948	816,525	943,086	1,089,265
Accounts Receivable	0	298,037	349,196	403,321	465,836	538,040	621,437	717,759	829,012	957,509	1,105,923
Total Current Assets	1,051,560	1,491,843	2,184,797	3,057,416	4,140,197	5,458,124	7,069,914	9,012,694	11,257,691	14,205,600	17,544,075
Fixed Assets											
Plant Machinery & Facility	179,900	161,910	145,719	131,147	118,032	106,229	95,606	86,046	77,441	69,697	62,727
Factory Construction	200,000	180,000	162,000	145,800	131,220	128,098	115,288	103,759	93,383	84,045	85,641
Land	0	0	0	0	0	0	0	0	0	0	0
Furniture & Fixtures	221,000	198,900	179,010	161,109	144,998	130,498	117,448	105,704	95,133	85,620	77,058
Vehicle	63,000	56,700	51,030	45,927	41,334	37,201	33,481	30,133	27,119	24,407	21,967
Total Fixed Assets	663,900	597,510	537,759	483,983	435,585	402,026	361,824	325,641	293,077	263,769	247,393
Intangible Assets											
Preliminary Expenses	50,000	40,000	30,000	20,000	10,000	-	-	-	-	-	-
Total Assets	1,765,460	2,129,353	2,752,556	3,561,400	4,585,782	5,860,150	7,431,737	9,338,335	11,550,768	14,469,370	17,791,468
Owner's Equity	176,546	540,439	1,340,087	2,340,021	3,571,353	5,069,850	6,884,166	9,053,640	11,550,768	14,469,370	17,791,468
Long Term Liability	1,588,914	1,588,914	1,412,469	1,221,379	1,014,428	790,301	547,571	284,695	0	0	0
Total Equity & Liabilities	1,765,460	2,129,353	2,752,556	3,561,400	4,585,782	5,860,150	7,431,737	9,338,335	11,550,768	14,469,370	17,791,468

14.4 Useful Project Management Tips

Technology

- **List of Machinery & Equipment:** (As per Section 12.5)
- **Required Spare Parts & Consumables:** Suppliers credit agreements and availability as per schedule of maintenance be ensured before start of operations
- **Energy Requirement:** Should not be overestimated or installed in excess and alternate source of energy for critical operations be arranged in advance.
- **Machinery Suppliers:** Training and after sales services to be sought under the contract with the machinery suppliers.
- **Quality Assurance Equipment & Standards:** Required products quality standards need to be defined on the packaging and a system to check them instituted, this improves credibility.

Marketing

- **Product Development & Packaging:** Expert's help may be sought for product / service and packaging design & development.
- **Ads & P.O.S. Promotion:** Business promotion and dissemination through banners and launch events is highly recommended. Product brochures from good quality service providers may be developed and circulated.
- **Sales & Distribution Network:** Expert's advice and distribution agreements are required with.
- **Price - Bulk Discounts, Cost plus Introductory Discounts:** Price should never be allowed to compromise quality. Price during introductory phase may be lower and used as promotional tool. Product cost estimates should be carefully documented before price setting. Government controlled prices shall be displayed.

Human Resources

- **List of Human Resource:** (As per Section 12.8)
- **Adequacy & Competencies:** Recruitment of skilled and experienced staff.
- **Performance Based Remuneration:** Attempt to manage human resource cost should be focused through performance measurement and performance based compensation.
- **Training & Skill Development:** Encouraging training and skill of self & employees through experts and exposure of best practices is route to success. Least cost options for Training and Skill Development (T&SD) may be linked with compensation benefits and awards.

14.5 Useful Links

- Prime Minister's Office, www.pmo.gov.pk
- Small & Medium Enterprises Development Authority (SMEDA), www.smeda.org.pk
- National Bank of Pakistan (NBP), www.nbp.com.pk
- First Women Bank Limited (FWBL), www.fwbl.com.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 Jammu & Kashmir, www.ajk.gov.pk
- Trade Development Authority of Pakistan (TDAP), www.tdap.gov.pk
- Federation of Pakistan Chambers of Commerce and Industry (FPCCI), www.fpcci.com.pk
- State Bank of Pakistan (SBP), www.sbp.org.pk

The logo for SMEDA (Small & Medium Enterprises Development Authority) is displayed in a light blue rectangular box. The letters 'S', 'M', 'E', 'D', and 'A' are arranged horizontally in a bold, white, serif font.

15. KEY ASSUMPTIONS

Item	Assumption(s)
Sales Volume Increase Per Annum	10 %
Sales Price Increase Per Annum	5%
Increase in Cost of Sales	10 %
Increase in Staff Salaries	10 % per year
Increase in Utilities	20 % per year
Increase in Rent	10 % per year
Increase in Office Expenses	10 % per year
Debt / Equity Ratio	90 : 10
Depreciation: Premises Renovation	10 % per annum (Diminishing Balance)
Furniture	10 % per annum (Diminishing Balance)
Loan Period	8 Years
Grace Period	1 Year
Loan Installments	Monthly
Financial Charges	8 % per annum
Bad Debts	2% of Sales

