PROJECT REPORT

Of

UPS/STABILIZERS

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **UPS/Stabilizers making Unit**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

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EXECUTIVE SUMMARY

UPS & Stabilizer Assembling Unit business is proposed in all major cities 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. 17.70lacs with fixed investment of Rs.7.10lacs and working capital of Rs.10.50lacs

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.

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 India, 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.
- **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 centers and semi urban areas of India. 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.

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.

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
India, 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

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 India 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 India.

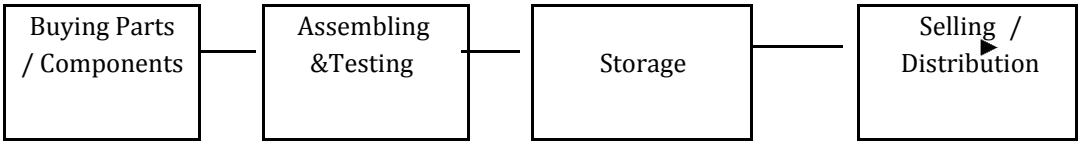
POTENTIAL TARGET MARKETS/CITIES

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

- Industry / Small & Medium Enterprises
- Offices
- Households

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:



PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of this project under the '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.

Project Economics

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

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.

Project Financing

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

Project Financing

Description	Amount(Rs.)
Total Equity (10%)	17,00,000
Bank Loan (90 %.)	1,588,914
Markup to the Borrower (%age/annum)	12.50%
Tenure of the Loan (Years)including grace period	7
Grace period (year)	1

Project Cost

Total project cost of the UPS & Stabilizer Assembling business would be Rs. 17.70lacs. Out of this, fixed capital cost of the project is Rs.7.10lacs and remaining will be the working capital.

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**

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.

Space Requirement

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
5.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.

Machinery and Equipment

Following table provides details of machinery and equipment:

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**

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:

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**

Office Vehicle Cost

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

Raw Material Requirements

There are two major end products of the proposed assembly unit i.e. UPS of1000, 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.

UPS Cost					
			1000 watts	**1200 watts**	**1500 watts**
	Parts Detail	**Specification**	**Price/piece**		
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/Import	40	40	40
5	Light Emission Diode	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
			5,320	**6,320**	**7,320**

Stabilizer cost			
		10000watts	**2000watts**
	Servo Motor	**130**	**130**
	Servo Transformer	1100	2,100
	Casing & Screws	300	300
	Power Cord	50	50
	On/off switch (Circuit breaker)	**90**	**90**
	Fuse with holder	20	20
	Power socket	**36**	**36**
	Volt meter	**40**	**40**
	PCB with component	**180**	**180**

Table 10: Battery CF

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

Human Resource Requirement

	Title/Designation	No of Employees	Salary PM
	Strategic Business Unit Manager / Owner	1	25000
	Supervisor	1	17000
	Technical staff	2	24000
	Loader	2	10000
		5	76000

Revenue Generation

Product Name	Quantity Assembled	Unit Price	Total Sales
UPS Products Revenue	6		49600
UPS - 1000 watts	2	6800	13600
UPS - 1200 watts	2	8500	17000
UPS - 1500 watts	2	9500	19000
Stabilizer Products	4		11000
1000VA	2	2500	5000
2000VA	2	3000	6000
Daily sales value	10		60600
Monthly sales value(25 days)			1515000
Gross Annual Value			18180000

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:

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.

KEY ASSUMPTIONS

Item	
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
Loan Period	8 Years
Grace Period	1 Year
Loan Installments	Monthly
Financial Charges	8 % per annum
Bad Debts	2% of Sales

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