

PROJECT REPORT

Of

GAS LIGHTER

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Gas Lighter**.

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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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxx
- 3 Father / Spouse Name : xxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxx
- Pin: xxxxxxx State: xxxxxxxx
- Mobile xxxxxxx
- 5 Product and By Product : **GAS LIGHTER**
- 6 Name of the project / business activity proposed : **GAS LIGHTER MAKING UNIT**
- 7 Cost of Project : Rs.12 Lakhs
- 8 Means of Finance
- Term Loan Rs.8.8 Lakhs
- Own Capital Rs.1.2 Lakhs
- Working capital Rs.2 Lakhs
- 9 Debt Service Coverage Ratio : 2.52
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 45%
- 13 Employment : 8 Persons
- 14 Power Requirement : 30.00 HP
- 15 Major Raw materials : Stainless steel 202 Pipe,PP Resins,Piezo-Electric Igniter
- 16 Estimated Annual Sales Turnover (Max Capacity) : 65.14 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

Particulars	(Rs. In Lakhs)	
	Amount	
Land		Own/Rented
Building / Shed 800 Sq ft		5.00
Plant & Machinery		3.28
Furniture & Fixtures		1.50
Working Capital		2.22
Total		12.00

MEANS OF FINANCE

Particulars	Amount
Own Contribution	1.20
Working Capital(Finance)	2.00
Term Loan	8.80
Total	12.00

GAS LIGHTER

Introduction: The electronic gas lighter uses piezo-electric crystal. This crystal has a property to generate voltage when it is mechanically deformed. It generates high voltage across a spark gap which when in proximity to a gas would ignite it. Gas lighters are being used by cooking gas users. It is used in gas stoves which do not have automatic ignition systems. It uses a physical phenomenon called piezo-electric effect to generate an electric spark which ignites the combustible gas from the stove burner. It is durable due to its performance and economical as compared to the mechanical and electrical lighters. It does not require battery for its operation. It is safer, economical, reliable and quick in action. It requires virtually no maintenance. The gas lighter is mostly cylindrical in shape and consists of a piezo-electric crystal over which a spring-loaded hammer is placed. The hammer and spring set up is attached to a button. When this button is pressed, the hammer is moved away from the piezo-electric crystal.



Uses & Market Potential: The demand of any type of gas lighter is directly related to the release of domestic gas connections by various gas companies in the country. The preference to use electronic gas lighters is quite high because of inherent advantages stated above. Even existing gas users have been increasingly switching over to electronic gas lighters. At

present, there is no small scale unit engaged in the manufacture of electronic gas lighter major states of India. The cost of gas lighter is very well within the reach of users and therefore demand is increasing day by day.

Raw Material: Major raw material requirements are as follows:

1. Stainless Steel 202 Pipe
2. PP Resins or ABS resins
3. Piezo-Electric Igniter
4. Packing material

Machinery & Equipments: Major machineries & equipments are as follows:

S No.	Machine	Unit	Price
1.	Semi-Automatic pipe cutting machine	1	74000
2.	Fly Press Machine	1	10000
3.	Bench Drilling Machine	1	38000
4.	Bench Grinder	1	6000
5.	Injection Molding Machine	1	150000
6.	Other machineries & equipments		50000
	Total Amount		328000

Manufacturing Process: At first, the raw material is procured from the authorized local vendor and stored in the inventory. In the first step, the stainless steel tube are brought from the inventory and sheared along its length as per the required dimension of the lighter. This operation is performed by using hydraulic semi-automatic pipe cutting machine.

In the next step, the desired profile of the lighter is machined over the pipe surface using fly press. It is used for piercing holes in sheet metal work using fly press tool. The holes are drilled using suitable drill bits on the ignition end of the lighter using drilling machine.

In the next step, the pipe is fed into embossing machine to impart the desired profile over the surface of the pipe. The pipe is pressed between two rolling threaded dies of desired profile. In the next step, the outer surface of the pipe is grinded to remove any excess outlines and impart desired profile. This improves overall luster of the lighter and improves its look. After this, the PP and ABS resins are fed into the hopper along with additives like colorants, foaming agents, and other fillers. The machine barrel heater are tuned on and brought up to the desired meting temperature of the resin.

When resin melts the barrel compress the molten plastic into the profile dies to form the desired contours. After this, it solidifies to form the desired molded part. In the next step, the Piezo-electric igniter along with spring is assembled inside the gas lighter to perform the desired function.

In the next step, the quality testing of the assembly is performed to check the desired function accuracy. After this, they are packed and dispatched as per the required quantity.

Area:

The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area required for complete industrial setup is 1000 to 1500Sqft. Civil work cost will be around 5 Lac Rs.(Approx.)

Power Requirement –The power consumption required to run all the machinery could be approximated as 30hp

Manpower Requirement- There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the

material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 8 including 1 Supervisor, 1 Plant operator, 1 unskilled worker, 1 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

Bank Term Loan: Rate of Interest is assumed to be at 11%

Depreciation: Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

Approvals & Registration Requirement:

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require

Implementation Schedule:

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

FINANCIALS

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	1.20	-			
Reserve & Surplus	2.18	3.74	4.66	6.02	7.32
Depriciation & Exp. W/off	1.14	1.00	0.88	0.78	0.68
Increase In Cash Credit	2.00				
Increase In Term Loan	8.80	-	-	-	-
Increase in Creditors	0.33	0.05	0.03	0.03	0.03
TOTAL :	15.66	4.79	5.57	6.83	8.03
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	9.78	-	-	-	-
Increase in Stock	1.46	0.18	0.17	0.18	0.19
Increase in Debtors	1.39	0.22	0.18	0.19	0.20
Repayment of Term Loan	0.98	1.96	1.96	1.96	1.96
Taxation	-	-	-	0.90	1.10
Drawings	1.50	2.00	3.00	3.50	4.00
TOTAL :	15.11	4.35	5.31	6.73	7.44
Opening Cash & Bank Balance	-	0.54	0.98	1.25	1.35
Add : Surplus	0.54	0.44	0.26	0.10	0.59
Closing Cash & Bank Balance	0.54	0.98	1.25	1.35	1.94

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	1.88	3.62	5.28	6.90
Add: Additions	1.20	-	-	-	-
Add: Net Profit	2.18	3.74	4.66	5.12	6.22
Less: Drawings	1.50	2.00	3.00	3.50	4.00
Closing Balance	1.88	3.62	5.28	6.90	9.12
CC Limit	2.00	2.00	2.00	2.00	2.00
Term Loan	7.82	5.87	3.91	1.96	0.00
Sundry Creditors	0.33	0.38	0.41	0.44	0.46
TOTAL :	12.04	11.87	11.60	11.29	11.59
APPLICATION OF FUND					
Fixed Assets (Gross)	9.78	9.78	9.78	9.78	9.78
Gross Dep.	1.14	2.15	3.03	3.80	4.49
Net Fixed Assets	8.64	7.63	6.75	5.98	5.29
Current Assets					
Sundry Debtors	1.39	1.61	1.79	1.98	2.17
Stock in Hand	1.46	1.64	1.81	1.99	2.18
Cash and Bank	0.54	0.98	1.25	1.35	1.94
TOTAL :	12.04	11.87	11.60	11.29	11.59

PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	41.76	48.24	53.63	59.27	65.14
Total (A)	41.76	48.24	53.63	59.27	65.14
B) COST OF SALES					
Raw Material Consumed	14.21	16.17	17.41	18.65	19.90
Electricity Expenses	2.74	2.97	3.20	3.42	3.65
Repair & Maintenance	8.35	9.65	10.73	11.85	13.03
Labour & Wages	7.43	7.73	8.58	9.53	10.57
Depreciation	1.14	1.00	0.88	0.78	0.68
Cost of Production	33.88	37.52	40.80	44.23	47.84
Add: Opening Stock /WIP	-	1.22	1.37	1.52	1.68
Less: Closing Stock /WIP	1.22	1.37	1.52	1.68	1.85
Cost of Sales (B)	32.66	37.37	40.64	44.07	47.67
C) GROSS PROFIT (A-B)	9.10	10.87	12.99	15.19	17.47
	21.80%	22.52%	24.22%	25.63%	26.82%
D) Bank Interest (Term Loan)	0.95	0.78	0.56	0.35	0.13
ii) Interest On Working Capital	0.22	0.22	0.22	0.22	0.22
E) Salary to Staff	4.91	5.16	5.93	6.82	7.85
F) Selling & Adm Expenses Exp.	0.84	0.96	1.61	1.78	1.95
TOTAL (D+E)	6.92	7.12	8.33	9.17	10.16
H) NET PROFIT	2.18	3.74	4.66	6.02	7.32
	5.2%	7.8%	8.7%	10.2%	11.2%
I) Taxation	-	-	-	0.90	1.10
J) PROFIT (After Tax)	2.18	3.74	4.66	5.12	6.22

COMPUTATION OF MAKING OF GAS LIGHTER			
Item to be Manufactured Gas Lighter			
Manufacturing Capacity per day		400	pcs
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		1,20,000	pcs
Total Production per Annum		1,20,000	pcs
Year		Capacity	GAS LIGHTER
		Utilisation	
I		60%	72,000.00
II		65%	78,000.00
III		70%	84,000.00
IV		75%	90,000.00
V		80%	96,000.00

COMPUTATION OF RAW MATERIAL					
Item Name		Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)
Stainless steel 202 pipe		9,600.00	kg	118.00	11,32,800.00
PP Resins		2,400.00	kg	90.00	2,16,000.00
Piezo-Electric igniter		1,20,000.00	pcs	8.00	9,60,000.00
Packing Material		Lumsum			60,000.00
Total					23,68,800.00
Total Raw material in Rs lacs					23.69

Raw Material Consumed	Capacity		Amount (Rs.)		
	Utilisation				
I	60%		14.21		
II	65%		16.17	5% Increase in Cost	
III	70%		17.41	5% Increase in Cost	
IV	75%		18.65	5% Increase in Cost	
V	80%		19.90	5% Increase in Cost	

<u>COMPUTATION OF SALE</u>					
Particulars	I	II	III	IV	V
Op Stock	-	2,400.00	2,600.00	2,800.00	3,000.00
Production	72,000.00	78,000.00	84,000.00	90,000.00	96,000.00
	72,000.00	80,400.00	86,600.00	92,800.00	99,000.00
Less : Closing Stock(10 Days)	2,400.00	2,600.00	2,800.00	3,000.00	3,200.00
Net Sale	69,600.00	77,800.00	83,800.00	89,800.00	95,800.00
Sale Price per pc	60.00	62.00	64.00	66.00	68.00
Sale (in Lacs)	41.76	48.24	53.63	59.27	65.14

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(7 Days requirement)	1.22	1.37	1.52	1.68	1.85
Raw Material					
(5 Days requirement)	0.24	0.27	0.29	0.31	0.33
Closing Stock	1.46	1.64	1.81	1.99	2.18

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	1.46		
Less:			
Sundry Creditors	0.33		
Paid Stock	1.13	0.11	1.02
Sundry Debtors	1.39	0.14	1.25
Working Capital Requirement			2.27
Margin			0.25
MPBF			2.27
Working Capital Demand			2.00

BREAK UP OF LABOUR				
Particulars	Wages Per Month	No of Employees	Total Salary	
Supervisor	20,000.00	1	20,000.00	
Plant Operator	15,000.00	1	15,000.00	
Unskilled Worker	10,000.00	1	10,000.00	
Helper	8,000.00	1	8,000.00	
Security Guard	6,000.00	1	6,000.00	
				59,000.00
Add: 5% Fringe Benefit				2,950.00
Total Labour Cost Per Month				61,950.00
Total Labour Cost for the year (In Rs. Lakhs)		5		7.43

BREAK UP OF SALARY				
Particulars	Salary Per Month	No of Employees	Total Salary	
Manager	20,000.00	1	20,000.00	
Accountant cum store keeper	15,000.00	1	15,000.00	
Sales	12,000.00	1	12,000.00	
Total Salary Per Month				39,000.00
Add: 5% Fringe Benefit				1,950.00
Total Salary for the month				40,950.00
Total Salary for the year (In Rs. Lakhs)		3		4.91

COMPUTATION OF DEPRECIATION					
Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased		-	-	-
Addition	-	5.00	3.28	1.50	9.78
	-	5.00	3.28	1.50	9.78
		-	-	-	
TOTAL		5.00	3.28	1.50	9.78
Less : Depreciation	-	0.50	0.49	0.15	1.14
WDV at end of Ist year	-	4.50	2.79	1.35	8.64
Additions During The Year	-	-	-	-	-
	-	4.50	2.79	1.35	8.64
Less : Depreciation	-	0.45	0.42	0.14	1.00
WDV at end of IInd Year	-	4.05	2.37	1.22	7.63
Additions During The Year	-	-	-	-	-
	-	4.05	2.37	1.22	7.63
Less : Depreciation	-	0.41	0.36	0.12	0.88
WDV at end of IIIrd year	-	3.65	2.01	1.09	6.75
Additions During The Year	-	-	-	-	-
	-	3.65	2.01	1.09	6.75
Less : Depreciation	-	0.36	0.30	0.11	0.78
WDV at end of IV year	-	3.28	1.71	0.98	5.98
Additions During The Year	-	-	-	-	-
	-	3.28	1.71	0.98	5.98
Less : Depreciation	-	0.33	0.26	0.10	0.68
WDV at end of Vth year	-	2.95	1.46	0.89	5.29

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	8.80	8.80	0.24	-	8.80
	IInd Quarter	8.80	-	8.80	0.24	-	8.80
	IIIRD Quarter	8.80	-	8.80	0.24	0.49	8.31
	Ivth Quarter	8.31	-	8.31	0.23	0.49	7.82
					0.95	0.98	
II	Opening Balance						
	Ist Quarter	7.82	-	7.82	0.22	0.49	7.33
	IInd Quarter	7.33	-	7.33	0.20	0.49	6.84
	IIIRD Quarter	6.84	-	6.84	0.19	0.49	6.36
	Ivth Quarter	6.36		6.36	0.17	0.49	5.87
					0.78	1.96	
III	Opening Balance						
	Ist Quarter	5.87	-	5.87	0.16	0.49	5.38
	IInd Quarter	5.38	-	5.38	0.15	0.49	4.89
	IIIRD Quarter	4.89	-	4.89	0.13	0.49	4.40
	Ivth Quarter	4.40		4.40	0.12	0.49	3.91
					0.56	1.96	
IV	Opening Balance						
	Ist Quarter	3.91	-	3.91	0.11	0.49	3.42
	IInd Quarter	3.42	-	3.42	0.09	0.49	2.93
	IIIRD Quarter	2.93	-	2.93	0.08	0.49	2.44
	Ivth Quarter	2.44		2.44	0.07	0.49	1.96
					0.35	1.96	
V	Opening Balance						
	Ist Quarter	1.96	-	1.96	0.05	0.49	1.47
	IInd Quarter	1.47	-	1.47	0.04	0.49	0.98
	IIIRD Quarter	0.98	-	0.98	0.03	0.49	0.49
	Ivth Quarter	0.49		0.49	0.01	0.49	-
					0.13	1.96	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

CALCULATION OF D.S.C.R

PARTICULARS	I	II	III	IV	V
<u>CASH ACCRUALS</u>	3.32	4.74	5.54	5.89	6.90
Interest on Term Loan	0.95	0.78	0.56	0.35	0.13
Total	4.28	5.52	6.11	6.24	7.04
<u>REPAYMENT</u>					
Repayment of Term Loan	0.98	1.96	1.96	1.96	1.96
Interest on Term Loan	0.95	0.78	0.56	0.35	0.13
Total	1.93	2.74	2.52	2.31	2.09
DEBT SERVICE COVERAGE RATIO	2.21	2.02	2.42	2.71	3.37
AVERAGE D.S.C.R.			2.52		

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