

PROJECT REPORT

Of

SOLAR LANTERN

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Solar Lantern 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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INTRODUCTION

A solar lamp or lantern is a portable light fixture composed of an LED lamp, a photovoltaic solar panel, and a rechargeable battery. Outdoor lamps may have lamp, solar panel and battery integrated in one unit. Indoor solar lamps with separately-mounted solar panels are used for general illumination where centrally generated power is not conveniently or economically available. Solar-powered household lighting may displace light sources such as kerosene lamps, saving money for the user, and reducing fire and pollution hazards.

Solar lamps recharge during the day. Automatic outdoor lamps turn on at dusk and remain illuminated overnight, depending on how much sunlight they receive during the day.

Solar garden lights are used for decoration, and come in a wide variety of designs. They are sometimes holiday-themed and may come in animal shapes. They are frequently used to mark footpaths or the areas around swimming pools. Some solar lights do not provide as much light as a line-powered lighting system, but they are easily installed and maintained, and provide a cheaper alternative to wired lamps.

Solar street lights provide public lighting without use of an electrical grid; they may have individual panels for each lamp of a system, or may have a large central solar panel and battery bank to power multiple lamps.

To reduce the overall cost of a solar lighting system, energy saving lamps of either the fluorescent or LED lamp type are used, since incandescent bulbs consume several times as much energy for a given quantity of light.

The technology in this sector is undergoing rapid strides of change and there is a need for regular monitoring of the national and international technology scenario. The unit, may therefore, keep abreast with new technologies in order to keep them in pace with the developments for global competition. Quality today is not only confined to the product or service alone. It also extends to the process and environment in which they are generated. The ISO 9000 defines standards for quality management system and ISO 14001 defines standards for environmental

MARKET POTENTIAL

India is a nation in transition. Considered an "emerging economy," increasing GDP is driving the demand for additional electrical energy, as well as transportation fuels. India is a nation of extremes. Poverty remains in areas with no energy services, while wealth grows in the new business hubs. Coal fired generation currently provides two thirds of the generation capacity, and hydropower supplies the other third. Yet, India is blessed with vast resources of renewable energy in solar, wind, biomass and small hydro. In fact, the technical potential of these renewable exceeds the present installed generation capacity. Unique in the world, India has the only Ministry that is dedicated to the development of renewable energies: the Ministry of New and Renewable Energy. This bodes well for the acceleration of renewable development throughout the nation –both to meet the underserved needs of millions of rural residents and the growing demand of an energy hungry economy.

The development and deployment of renewable energy, products, and services in India is driven by the need to

- decrease dependence on energy imports
- sustain accelerated deployment of renewable energy system and devices
- expand cost-effective energy supply
- augment energy supply to remote and deficient areas to provide normative Consumption levels to all section of the population across the country

And finally, switch fuels through new and renewable energy system/ device deployment. Renewable energy remains a small fraction of installed capacity, yet India is blessed with over 150,000 MW of exploitable renewable. It makes sense that all efforts and investment should consider accelerating these sustainable energy resources before committing to the same fossil fuel path as western nations.

BASIS AND PRESUMPTIONS

- i. The basis for calculation of production capacity has been taken on single shift basis on 67% efficiency.
- ii. The maximum capacity utilization on single shift basis for 300 days a year. During first year and second year of operations the capacity utilization is 70% and 80% respectively. The unit is expected to achieve full capacity utilization from the third year onward.
- iii. The salaries and wages, cost of raw material, utilities, rents, etc. are based on the prevailing rates are likely to vary with time and location.
- iv. Interest on term loan and working capital has been taken @ 11.50% on an average. This rate may vary depending upon the policy of financial institutions/agencies from time to time.
- v. The cost of machinery and equipments refer to a particular/make model and prices are approximate.
- vi. The break-even point percentage indicated is of full capacity utilization.
- vii. The essential machinery and equipments required for the project have been indicated. The unit may also utilize common facilities available at Electronics Test & Development Centres (ETDC) and Electronic Regional Test Laboratories (ERTLs) set up by state Governments and STQC Directorate of Department of Information Technology, Ministry of Communication and Information Technology to manufacture products conforming to Bureau of Indian Standards.

TECHNICAL ASPECTS

CEL SOLAR LANTERN is a versatile and reliable source of lighting. It comprises a Lantern, Solar Photovoltaic (SPV) module and a connecting cable. The SPV module when exposed to sunlight charges the battery in the lantern. This stored energy in the battery is used to operate the lamp when required.

Solar Lantern consists of a 7W CFL (light output equivalent to a 40W incandescent lamp) which can be used for 3-4 hours daily. The system comprises SPV Panel, lantern (with maintenance free lead acid battery) and a detachable connecting cord.

SOLAR PV MODULE:

A number of high-grade crystalline Silicon Solar Cells, interconnected in a series combination and hermetically sealed with a toughened and highly transparent front glass cover, form the SPV Module. CEL's Solar Lantern is the final and latest answer to many lighting problems.

SALIENT FEATURES:

- Environment Friendly
- Portable
- Rugged and Dependable
- Silent Operation
- Light output 400 lumens i.e. equivalent to a 40 watts incandescent lamp
- LED for battery status indication and its safeguard.

APPLICATIONS:

- Emergency Light Source
- Light Source in remote unelectrified villages
- Picnic Sports and Farm Houses
- Military Outposts
- Light sources for the field personnel of Agriculture extension, Adult Education and other Mass Communication Programmers
- Garden Lighting

SPECIFICATIONS:

Solar PV Module:	Wattage 10 -12Wp
Operation per Day:	3-4 Hrs.
Light Source:	7 Watt Compact Fluorescent Lamp
Battery:	12 Volt/7AH Sealed maintenance free.
Weight:	3.0 Kgs. Approx (Lantern).

PROCESS OF MANUFACTURING

The incoming raw material and components are tested for required quantity and specifications. The components are shaped, formed and soldered on pre-designed printed circuit boards. The assembled printed circuit boards are tested for desired performance. The PCBs, transformer, sub-assemblies, and battery, CFL and electro-mechanical parts are connected inside the enclosure and the electrical wiring is made. The switches, knobs, Solar Photo voltaic Panel and other parts are connected and the final system is thoroughly tested as per the required specification.

PRODUCTION CAPACITY:

Quantity : 15,000 Nos.
Power Requirement : 5 kVA

PROJECT AT A GLANCE

- 1 Name of the Entrepreneur XXXXXXXX
- 2 Constitution (legal Status) XXXXXXXX
- 3 Father's/Spouce's Name XXXXXXXX
- 4 Unit Address XXXXXXXX
- Taluk/Block: XXXXX
 District : XXXXX State:
 Pin: XXXXX
 E-Mail : XXXXX
 Mobile XXXXX
- 5 Product and By Product : **Solar Lantern**
- 6 Name of the project / business activity proposed **Solar Lantern**
- 7 Cost of Project : Rs25lac
- 8 Means of Finance
 Term Loan Rs.6.53 Lacs
 KVIC Margin Money - As per Project Eligibility
 Own Capital Rs.2.15 Lacs
 Working Capital Rs.12.77 Lacs
- 9 Debt Service Coverage Ratio : 10.90
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 8 Months
- 12 Break Even Point : 23%
- 13 Employment : 14 Persons
- 14 Power Requirement : 5.00 HP
- 15 Major Raw materials : Solar PV Module 12V/10 wp Battery 12V/7 Ah an dother electrial and electronic parts
- 16 Estimated Annual Sales Turnover : 188.10 Lacs
- 16 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lacs)	
Particulars	Amount
Land	Rented/Owned
Building & Civil Work (1200 Sq Ft)	2.25
Plant & Machinery	3.50
Furniture & Fixtures computer	1.01
Pre-operative Expenses	0.50
Working Capital Requirement	14.19
Total	21.45

MEANS OF FINANCE

Particulars	Amount
Own Contribution @10%	2.15
Term Loan	6.53
Workign Capital Finance	12.77
Total	21.45

Beneficiary's Margin Money **General** **Special**
 (% of Project Cost) 10% 5%

PLANT & MACHINERY

PARTICULARS	QTY.	RATE	AMOUNT IN RS.
Drilling Machine	1	13,000.00	13,000.00
Grinder (portable)	1	10,000.00	10,000.00
Power Supply (0-30V, 3Amps)	2	25,000.00	50,000.00
High Voltage Break Down Tester	1	40,000.00	40,000.00
Auto Transformer	1	10,000.00	10,000.00
Insulation Tester	1	10,000.00	10,000.00
Testing Setup (consisting Voltmeter, Ammeter, Wattmeter, etc.)	1	63,000.00	63,000.00
Digital Multimeter	2	9,000.00	18,000.00
Analogue Multimeter	3	2,000.00	6,000.00
Servo Voltage Stabilizer	1	30,000.00	30,000.00
sub total			250,000.00
Electrification and Installation charges @ 10%			25,000.00
Temperature Controlled soldering stations, Tools,			35,000.00
Jigs, Fixtures, Electronic Srew Drivers etc			40,000.00
Total			350,000.00

PROJECTED CASH FLOW STATEMENT

PARTICULARS	IST YEAR	IIIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Share Capital	2.15	-			
Reserve & Surplus	18.43	22.11	26.63	30.99	35.17
Depriciation & Exp. W/off	0.80	0.74	0.65	0.56	0.49
Increase in Cash Credit	12.77	-	-	-	-
Increase In Term Loan	6.53	-	-	-	-
Increase in Creditors	7.65	1.28	1.28	1.28	1.28
Increase in Provisions	0.36	0.04	0.04	0.04	0.05
TOTAL :	48.69	24.16	28.59	32.87	36.98
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	6.76	-	-	-	-
Increase in Stock	15.57	2.17	1.92	1.92	1.92
Increase in Debtors	6.27	1.38	1.10	1.10	1.10
Increase in Deposits & Adv	2.50	0.25	0.28	0.30	0.33
Repayment of Term Loan	-	1.63	1.63	1.63	1.92
Taxation	-	2.21	5.33	6.20	7.03
TOTAL :	31.10	3.30	10.25	11.15	12.30
Opening Cash & Bank Balance	-	17.59	38.45	56.80	78.52
Add : Surplus	17.59	20.86	18.34	21.72	24.68
Closing Cash & Bank Balance	17.59	38.45	56.80	78.52	103.20

PROJECTED BALANCE SHEET

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Capital Account	2.15	2.15	2.15	2.15	2.15
Retained Profit	18.43	38.33	59.63	84.43	112.56
Term Loan	6.53	4.90	3.27	1.63 -	0.28
Cash Credit	12.77	12.77	12.77	12.77	12.77
Sundry Creditors	7.65	8.93	10.20	11.48	12.75
Provisions & Other Liab	0.36	0.40	0.44	0.48	0.53
TOTAL :	47.89	67.47	88.45	112.93	140.47
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	6.76	6.76	6.76	6.76	6.76
Gross Dep.	0.80	1.55	2.19	2.76	3.25
Net Fixed Assets	5.96	5.21	4.57	4.00	3.51
Current Assets					
Sundry Debtors	6.27	7.65	8.75	9.85	10.95
Stock in Hand	15.57	13.41	15.32	17.24	19.15
Cash and Bank	17.59	38.45	56.80	78.52	103.20
Deposits & Advances	2.50	2.75	3.03	3.33	3.66
TOTAL :	47.89	67.47	88.45	112.93	140.47
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>A) SALES</u>					
Gross Sale	188.10	229.35	262.35	295.35	328.35
Total (A)	188.10	229.35	262.35	295.35	328.35
<u>B) COST OF SALES</u>					
Raw Mateiral Consumed	153.00	178.50	204.00	229.50	255.00
Elecricity Expenses	0.43	0.50	0.57	0.64	0.72
Repair & Maintenance	-	2.29	2.62	2.95	3.28
Labour & Wages	10.03	11.04	12.14	13.35	14.69
Depriciation	0.80	0.74	0.65	0.56	0.49
Consumables and Other Expense	3.76	4.59	5.25	5.91	6.57
Cost of Production	168.02	197.66	225.23	252.92	280.75
Add: Opening Stock /WIP	-	7.92	9.24	10.56	11.88
Less: Closing Stock /WIP	7.92	9.24	10.56	11.88	13.20
Cost of Sales (B)	160.10	196.34	223.91	251.60	279.43
C) GROSS PROFIT (A-B)	28.00	33.01	38.44	43.75	48.92
	15%	14%	15%	15%	15%
D) Bank Interest (Term Loan)	0.56	0.68	0.49	0.31	0.11
Bank Interest (C.C. Limit)	1.28	1.28	1.28	1.28	1.28
E) Salary to Staff	3.96	4.36	4.79	5.27	5.80
F) Selling & Adm Expenses Exp.	3.76	4.59	5.25	5.91	6.57
TOTAL (D+E)	9.56	10.90	11.81	12.76	13.76
H) NET PROFIT	18.43	22.11	26.63	30.99	35.17
I) Taxation	-	2.21	5.33	6.20	7.03
J) PROFIT (After Tax)	18.43	19.90	21.30	24.79	28.13

COMPUTATION OF MANUFACTURING OF SOLAR LANTERN

Manufacturing Capacity per day		50.00	Pcs
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		15,000.00	Pcs
Year		Capacity	Pcs
		Utilisation	
IST YEAR		60%	9,000
IIND YEAR		70%	10,500
IIIRD YEAR		80%	12,000
IVTH YEAR		90%	13,500
VTH YEAR		100%	15,000

COMPUTATION OF RAW MATERIAL

Item Name		Quantity of Raw Material	Recovery	Unit Rate of /MT	Total Cost Per Annum (100%)
Raw Material \$	100%	15,000.00	100%	1,700.00	25,500,000.00
Total (Rounded off in lacs)					25,500,000.00

Particulars\$		Unit Rate	Total
Solar PV Module12V/10 wp	1	620	620.00
Battery 12V/7 Ah	1	600	600.00
High Quality LEDs	5	22	110.00
On/Off Switch	1	20	20.00
Modern Plastic Cabinet	1	150	150.00
Input Connector	1	20	20.00
Fuse & Fuse Holder	1	20	20.00
Connecting Cables	1	20	20.00
PCB, Semi-Conductors, resistors,apactors, transistors and other Electro-mechanical	1	140	140.00
Raw Material Rates per lantern			1,700.00

Annual Consumption cost (In Lacs) 255.00

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)
IST YEAR	60%	153.00
IIND YEAR	70%	178.50
IIIRD YEAR	80%	204.00
IVTH YEAR	90%	229.50
VTH YEAR	100%	255.00

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Finished Goods					
(15 Days requirement)	7.92	9.24	10.56	11.88	13.20
Raw Material					
(15 Days requirement)	7.65	4.17	4.76	5.36	5.95
Closing Stock	15.57	13.41	15.32	17.24	19.15

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars			Total
			Amount
Stock in Hand			15.57
Sundry Debtors			6.27
		Total	21.84
Sundry Creditors			7.65
Working Capital Requirement			14.19
Margin			1.42
Working Capital Finance			12.77

BREAK UP OF LABOUR

Particulars		Wages Per Month	No of Employees	Total Salary
Skilled Worker		8,000.00	5	40,000.00
Semi skilled Worker		6,000.00	5	30,000.00
Watchman		6,000.00	1	6,000.00
				76,000.00
Add: 10% Fringe Benefit				7,600.00
Total Labour Cost Per Month				83,600.00
Total Labour Cost for the year (In Rs. Lakhs)			11	10.03

BREAK UP OF SALARY

Particulars		Salary Per Month	No of Employees	Total Salary
Manager		12,000.00	1	12,000.00
Accountant		8,000.00	1	8,000.00
Sales		10,000.00	1	10,000.00
Total Salary Per Month				30,000.00
Add: 10% Fringe Benefit				3,000.00
Total Salary for the month				33,000.00
Total Salary for the year (In Rs. Lakhs)			3	3.96

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased	-	-	-	-
Addition	-	2.25	3.50	1.01	6.76
	-	2.25	3.50	1.01	6.76
Less : Depreciation	-	0.23	0.53	0.05	0.80
WDV at end of Ist year	-	2.03	2.98	0.96	5.96
Additions During The Year	-	-	-	-	-
	-	2.03	2.98	0.96	5.96
Less : Depreciation	-	0.20	0.45	0.10	0.74
WDV at end of IInd Year	-	1.82	2.53	0.86	5.21
Additions During The Year	-	-	-	-	-
	-	1.82	2.53	0.86	5.21
Less : Depreciation	-	0.18	0.38	0.09	0.65
WDV at end of IIIrd year	-	1.64	2.15	0.78	4.57
Additions During The Year	-	-	-	-	-
	-	1.64	2.15	0.78	4.57
Less : Depreciation	-	0.16	0.32	0.08	0.56
WDV at end of IV year	-	1.48	1.83	0.70	4.00
Additions During The Year	-	-	-	-	-
	-	1.48	1.83	0.70	4.00
Less : Depreciation	-	0.15	0.27	0.07	0.49
WDV at end of Vth year	-	1.33	1.55	0.63	3.51

REPAYMENT SCHEDULE OF TERM LOAN

11.5%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
IST YEAR	Opening Balance						
	Ist Quarter	-	6.53	6.53	-	-	6.53
	IInd Quarter	6.53	-	6.53	0.19	-	6.53
	IIIRD Quarter	6.53	-	6.53	0.19	-	6.53
	Ivth Quarter	6.53	-	6.53	0.19	-	6.53
					0.56	-	
IIND YEAR	Opening Balance						
	Ist Quarter	6.53	-	6.53	0.19	0.41	6.13
	IInd Quarter	6.13	-	6.13	0.18	0.41	5.72
	IIIRD Quarter	5.72	-	5.72	0.16	0.41	5.31
	Ivth Quarter	5.31	-	5.31	0.15	0.41	4.90
					0.68	1.63	
IIIRD YEAR	Opening Balance						
	Ist Quarter	4.90	-	4.90	0.14	0.41	4.49
	IInd Quarter	4.49	-	4.49	0.13	0.41	4.08
	IIIRD Quarter	4.08	-	4.08	0.12	0.41	3.68
	Ivth Quarter	3.68	-	3.68	0.11	0.41	3.27
					0.49	1.63	
IvTH YEAR	Opening Balance						
	Ist Quarter	3.27	-	3.27	0.09	0.41	2.86
	IInd Quarter	2.86	-	2.86	0.08	0.41	2.45
	IIIRD Quarter	2.45	-	2.45	0.07	0.41	2.04
	Ivth Quarter	2.04	-	2.04	0.06	0.41	1.63
					0.31	1.63	
VTH YEAR	Opening Balance						
	Ist Quarter	1.63	-	1.63	0.05	0.41	1.23
	IInd Quarter	1.23	-	1.23	0.04	0.41	0.82
	IIIRD Quarter	0.82	-	0.82	0.02	0.55	0.27
	Ivth Quarter	0.27	-	0.27	0.01	0.55	0.28
					0.11	1.92	

CALCULATION OF D.S.C.R

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>CASH ACCRUALS</u>	19.23	20.64	21.95	25.35	28.63
Interest on Term Loan	0.56	0.68	0.49	0.31	0.11
Total	19.80	21.32	22.45	25.66	28.74
<u>REPAYMENT</u>					
Instalment of Term Loan	1.63	1.63	1.63	1.92	1.92
Interest on Term Loan	0.56	0.68	0.49	0.31	0.11
Total	2.20	2.31	2.13	2.22	2.03
DEBT SERVICE COVERAGE R	9.01	9.21	10.55	11.55	14.16
AVERAGE D.S.C.R.			10.90		

COMPUTATION OF SALE

Particulars	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Op Stock	-	450	525	600	675
Production	9,000	10,500	12,000	13,500	15,000
	9,000	10,950	12,525	14,100	15,675
Less : Closing Stock	450	525	600	675	750
Net Sale	8,550	10,425	11,925	13,425	14,925
Sale Price per Lantern	2,200.00	2,200.00	2,200.00	2,200.00	2,200.00
Sale (in Lacs)	188.10	229.35	262.35	295.35	328.35

COMPUTATION OF ELECTRICITY

(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	5	
Load Factor			0.7460	
Electricity Charges		per unit	8.00	
Total Working Days			300	
Electricity Charges (8 Hrs Per day)				71,616.00
Add : Minimim Charges (@ 10%)				
(B) D.G. SET				
No. of Working Days			300	days
No of Working Hours			-	Hour per day
Total no of Hour			-	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			-	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			-	
Add : Lube Cost @15%			-	
Total			-	
Total cost of Power & Fuel at 100%				0.72
Year		Capacity		Amount (in Lacs)
IST YEAR		60%		0.43
IIND YEAR		70%		0.50
IIIRD YEAR		80%		0.57
IVTH YEAR		90%		0.64
VTH YEAR		100%		0.72

BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	188.10	229.35	262.35	295.35	328.35
Less : Op. WIP Goods	-	7.92	9.24	10.56	11.88
Add : Cl. WIP Goods	7.92	9.24	10.56	11.88	13.20
Total Sales	196.02	230.67	263.67	296.67	329.67
Variable & Semi Variable Exp.					
Raw Material & Tax	153.00	178.50	204.00	229.50	255.00
Electricity Exp/Coal Consumption at 85%	0.37	0.43	0.49	0.55	0.61
Manufacturing Expenses 80%	3.01	5.50	6.30	7.09	7.88
Wages & Salary at 60%	8.40	9.23	10.16	11.17	12.29
Selling & administrative Expenses 80%	3.01	3.67	4.20	4.73	5.25
Intt. On Working Capital Loan	1.28	1.28	1.28	1.28	1.28
Total Variable & Semi Variable Exp	169.06	198.61	226.42	254.31	282.31
Contribution	26.96	32.06	37.25	42.36	47.36
Fixed & Semi Fixed Expenses					
Manufacturing Expenses 20%	0.75	1.38	1.57	1.77	1.97
Electricity Exp/Coal Consumption at 15%	0.06	0.08	0.09	0.10	0.11
Wages & Salary at 40%	5.60	6.16	6.77	7.45	8.19
Interest on Term Loan	0.56	0.68	0.49	0.31	0.11
Depreciation	0.80	0.74	0.65	0.56	0.49
Selling & administrative Expenses 20%	0.75	0.92	1.05	1.18	1.31
Total Fixed Expenses	8.53	9.95	10.62	11.37	12.19
Capacity Utilization	60%	70%	80%	90%	100%
OPERATING PROFIT	18.43	22.11	26.63	30.99	35.17
BREAK EVEN POINT	19%	22%	23%	24%	26%
BREAK EVEN SALES	62.01	71.60	75.18	79.63	84.86

DISCLAIMER

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