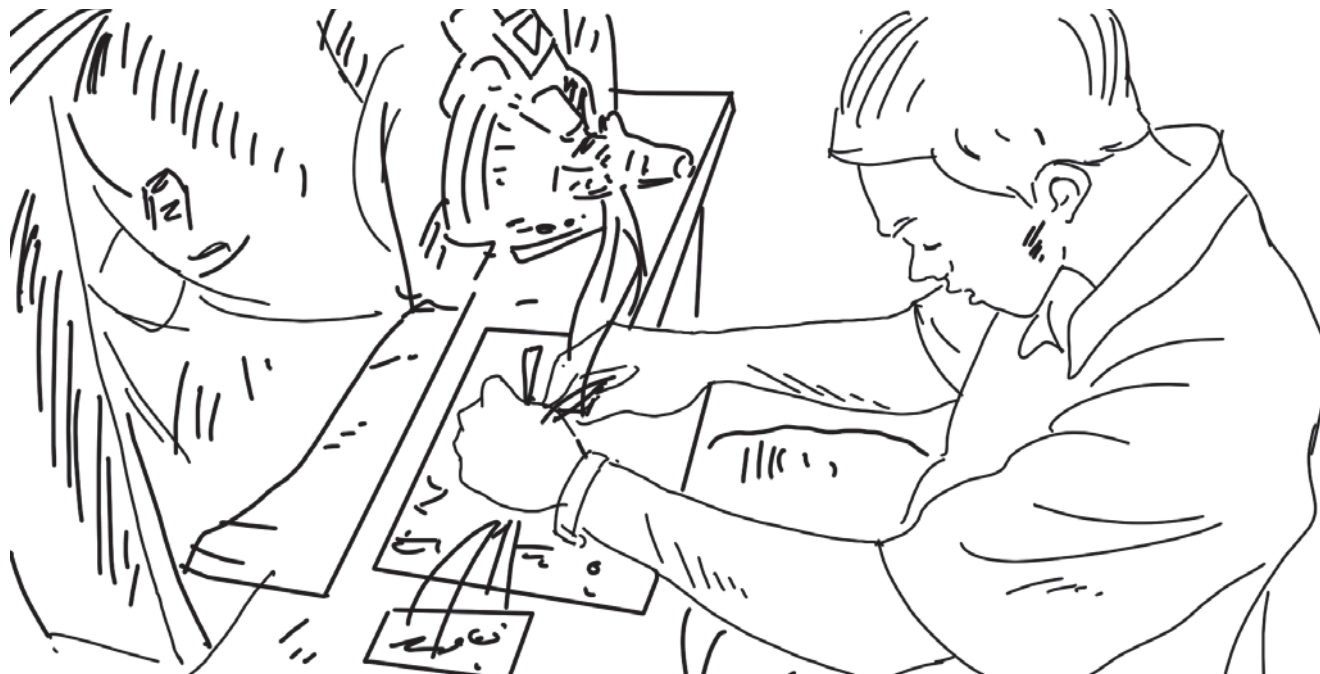


REPAIRING OF ELECTRICAL APPLIANCES



1.0 INTRODUCTION

Consumer electrical & electronic products such as Air-conditioner, Refrigerator, Washing machine, Water filter, electric fan etc. has become the back bone of the consumer industry in the modern living society. There is hardly any household which does not possess these items. In course of time, these items/appliances need periodic servicing and repairing service. Due to such requirements, there appears tremendous scope for the growth of these repair & servicing centres, specially in semi-urban and Rural Areas, which can be undertaken by the educated-unemployed youths of the area with a little skill development without much capital requirement.

This project profile is for setting up of a Electrical Appliances Repairing unit, based on 300 working days per annum and 8 working hours per day. The installed capacity of the unit per annum is as follows;

Repairing Service - 4800 Nos.

2.0 MARKET POTENTIAL

As the society is moving towards materialism and a lot of emphasis is put on purchasing modern utilities/amenities and domestic appliances with maximum facilities, the demand for servicing and repairing is bound to increase in times to come. Therefore, there is good demand for servicing and repairing unit in cities & towns.

3.0 PROCESS DETAILS:

The main services involved in this typical servicing units are:

- 1) Testing & maintenance
- 2) Fault finding
- 3) Repairing & Servicing
- 4) Fabrication & Welding
- 5) Painting
- 6) Assembling
- 7) Charging of Gas
- 8) Final Testing.

4.0. COST OF THE PROJECT

The estimated project cost is given below:

		(Rs. in lacs)
Particulars	Amount (Rs)	
Land & Site Development	Rented	
Building & Civil works	Rented	
Plant & Machinery	2.97	
Misc. Fixed assets	0.44	
Preliminary & pre-operative expenses	0.37	
Contingencies & escalation @ 3%	0.10	
Working capital	0.38	
TOTAL	4.26	

4.1 Land & Site Development: Nil. Covered Area: 500 Sq. Ft.

4.2 Building & Civil Works: Nil.

4.3 Plant & Machinery: Details of plant & machinery are given below.

Particulars	Qty	Amount (Rs)
Gas welding set, Switching Tools set, Flying tools set,	1	220000
Drilling Machine, Soldering Iron, AMP Meter, Multi Meter, Pressure Meter, Earth meter, Frequency Meter	2	
Electronic Insulation Tester, Digital Techno-meter, Voltage Stabilizer	2	
Miscellaneous Tools and Equipment	LS	50000
Sub total		270000
Add: Installation, transportation, etc @ 10%		27000
TOTAL		297000
Say (Rs. in lacs)		2.97

4.4 Misc. Fixed assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Furniture including Working Tables & fixtures	LS	--	25000
Miscellaneous items	LS	--	15000
Sub total			40000
Add: Installation, transportation etc @ 10%			4000
TOTAL			44000
Say (Rs. in lacs)			0.44

4.5 Contingencies & escalation: Contingencies & escalation has been assumed at 3% of the cost of land & site development, building & civil works, plant & machinery and miscellaneous fixed assets.

4.6 Preliminary & pre-operative expenses: Details of preliminary & pre-operative expenses are given below.

		(Rs. In lacs)
Particulars	Amount (Rs)	
Travelling expenses	5000	
Professional & other fees	10000	
Interest during implementation	6820	

Miscellaneous expenses	15000
TOTAL	36820
Say (Rs. in lacs)	0.37

4.7 Working capital: Details of working capital are given below.

(Rs. in lacs)

	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw materials	15	0.16	0.19	0.22
Power & fuel	30	0.02	0.03	0.03
Salary	30	0.19	0.19	0.19
Finished Goods	15	0.28	0.31	0.34
Receivables	15	0.31	0.36	0.41
Total		0.96	1.07	1.19
Working capital margin in Year 1 (40%)	0.38			

5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

(Rs. in lacs)

Particulars	Percent	Amount
<u>EQUITY</u>		
A. Equity from Promoters	40%	1.71
B. Subsidy from Central/State Govt.	-	
<u>DEBT</u>		
Term Loan from Banks/Financial Institutions	60%	2.56
TOTAL	100%	4.26

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
<u>A. INCOME</u>					
Annual Capacity (Nos./annum)	4800	4800	4800	4800	4800
Capacity utilisation	60%	70%	80%	80%	80%
Production/annum at capacity utilisation	2880	3360	3840	3840	3840
Total income/annum	7.49	8.74	9.98	9.98	9.98
<u>B. OPERATING EXPENSES</u>					
Raw Materials	3.96	4.62	5.28	5.28	5.28
Power & Utility	0.29	0.34	0.39	0.39	0.39
Salary	2.28	2.29	2.30	2.31	2.33
Repair & Maintenance	0.07	0.07	0.07	0.07	0.07
Other Expenses	0.15	0.17	0.20	0.20	0.20
Total Operating Expenses	6.75	7.49	8.24	8.25	8.27
Operating profit	0.74	1.24	1.74	1.73	1.72
<u>C. FINANCIAL EXPENSES</u>					
Depreciation	0.18	0.18	0.18	0.18	0.18
Interest on Term Loan	0.20	0.16	0.12	0.07	0.02
Interest on Working Capital Loan	0.05	0.05	0.06	0.06	0.06
Net Profit	0.31	0.85	1.39	1.42	1.45
Net cash accruals	0.49	1.03	1.57	1.60	1.64
Principal Repayment	0.28	0.57	0.57	0.57	0.57

6.1 Production capacity and Sales Realisation: Total repairing services at 100% capacity utilization is estimated as below.

Repairing Services	4800
Total services per annum at 100% capacity (in Ton)	4800

Products	Qty (In Nos.)	Average Rate (Rs.)	Amount (Rs)
Repairing Services	4800	260	1248000
Total Sales per annum at 100% capacity			1248000

6.2 Raw materials: Total expenses on raw materials at 100% capacity utilization are estimated as below.

Particulars	Qty	Average Rate (Rs.)	Amount (Rs)
Spare Parts of Electrical Goods	LS	--	600000
Various Consumables	LS	--	60000
Expenses on raw material at 100% capacity (Rs)			660000

6.3 Power & Utility: Total expenses on power & utility at 100% capacity utilization is estimated as below.

Particulars	Quantity	Power (Kw)	Total (Kw)
Plant & Machinery	--	5.00	5.00
General Lighting	5	0.10	0.50
Total power requirement/ day (Kw)			5.50
No. of hrs/day	8		
No. of days/annum	300		
Annual power requirement (kwh)	13200		
Rate per unit (Rs)	3.50		
Expenses on power (Rs)	46200		
Expenses on other utility (Rs)	2400		
Expenses on power & utility at 100% capacity (Rs)		48600	

6.4 Salary: Total expenses on salary in the 1st year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employees	Numbers	Salary/ Month (Rs)	Cost/ annum (Rs)
Manager	1	5000	60000
Skilled Workers	2	4000	96000
Unskilled workers	2	3000	72000
Expenses on salary in the 1st year (Rs)			228000

6.5 Repair & Maintenance: Total expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year.

			(Rs. in lacs)
Particulars	Cost (Rs)	Rate	Amount (Rs)
Building & Civil works	0.00	1.00%	0.00
Plant & Machinery	2.97	2.00%	0.06
Misc. Fixed assets	0.44	1.50%	0.01
Expenses on repair & maintenance in year 1			0.07

6.6 Other Expenses: Other expenses have been assumed at 2% of sales realisation.

6.7 Depreciation: Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)

Description	Cost (Rs)	Rate	Amount/ annum (Rs)
Building & Civil works	0.00	3.34%	0.00
Plant & Machinery	2.97	5.28%	0.16
Misc. Fixed assets	0.44	6.33%	0.03
TOTAL			0.18

6.8 Interest on term loan & principal repayment: Interest rate has been assumed at 8%. Duration of Loan repayment has been considered for a period of 5 years including moratorium period of 6 Months with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)

Month	Year	1	2	3	4	5
Month 1	Opening balance	2.56	2.27	1.71	1.14	0.57
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest (8%)	0.02	0.02	0.01	0.01	0.00
	Closing balance	2.56	2.23	1.66	1.09	0.52
Month 2	Opening balance	2.56	2.23	1.66	1.09	0.52
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	Closing balance	2.56	2.18	1.61	1.04	0.47
Month 3	Opening balance	2.56	2.18	1.61	1.04	0.47
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	Closing balance	2.56	2.13	1.56	0.99	0.43
Month 4	Opening balance	2.56	2.13	1.56	0.99	0.43
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	Closing balance	2.56	2.08	1.52	0.95	0.38
Month 5	Opening balance	2.56	2.08	1.52	0.95	0.38
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	Closing balance	2.56	2.04	1.47	0.90	0.33
Month 6	Opening balance	2.56	2.04	1.47	0.90	0.33
	Repayment	0.00	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	Closing balance	2.56	1.99	1.42	0.85	0.28
Month 7	Opening balance	2.56	1.99	1.42	0.85	0.28
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	Closing balance	2.51	1.94	1.37	0.81	0.24
Month 8	Opening balance	2.51	1.94	1.37	0.81	0.24
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00
	Closing balance	2.46	1.90	1.33	0.76	0.19
Month 9	Opening balance	2.46	1.90	1.33	0.76	0.19
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.01	0.00

	Closing balance	2.42	1.85	1.28	0.71	0.14
Month 10	Opening balance	2.42	1.85	1.28	0.71	0.14
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.00	0.00
	Closing balance	2.37	1.80	1.23	0.66	0.09
Month 11	Opening balance	2.37	1.80	1.23	0.66	0.09
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.00	0.00
	Closing balance	2.32	1.75	1.18	0.62	0.05
Month 12	Opening balance	2.32	1.75	1.18	0.62	0.05
	Repayment	0.05	0.05	0.05	0.05	0.05
	Interest	0.02	0.01	0.01	0.00	0.00
	Closing balance	2.27	1.71	1.14	0.57	0.00
Principal Repayment		0.28	0.57	0.57	0.57	0.57
Interest		0.20	0.16	0.12	0.07	0.02

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5
Profit After Tax (Net Profit)	0.31	0.85	1.39	1.42	1.45
Depreciation	0.18	0.18	0.18	0.18	0.18
Interest	0.20	0.16	0.12	0.07	0.02
Total	0.69	1.19	1.69	1.67	1.66
Interest	0.20	0.16	0.12	0.07	0.02
Loan repayment	0.28	0.57	0.57	0.57	0.57
Total	0.48	0.73	0.68	0.64	0.59
DSCR	1.43	1.63	2.47	2.62	2.80

Average DSCR = 2.21

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	7.49	8.74	9.98
B. Variable cost			
Raw Materials	3.96	4.62	5.28
Power & Utility	0.29	0.34	0.39
Other expenses	0.15	0.17	0.20
Interest on Working Capital Loan	0.05	0.05	0.06
Total variable cost	4.45	5.19	5.93
C. Contribution (A-B)	3.04	3.55	4.06
D. Fixed & Semi-fixed Costs			
Salary	2.28	2.29	2.30
Repair & maintenance	0.07	0.07	0.07
Interest on Term Loan	0.20	0.16	0.12
Depreciation	0.18	0.18	0.18
Total fixed cost	2.73	2.70	2.67
E. BREAK EVEN POINT	89.80%	76.19%	65.83%
F. BEP at operating capacity	53.88%	53.33%	52.67%
G. Cash BEP	50.24%	49.69%	49.03%

9.0 INTERNAL RATE OF RETURN (IRR)**(Rs. in lacs)**

Year	0	1	2	3	4	5
CASH OUTFLOW						
Capital Expenditure	3.51	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	0.96	0.11	0.11	0.00	0.00
Total (A)	3.51	0.96	0.11	0.11	0.00	0.00
CASH INFLOW						
Profit After Tax		0.31	0.85	1.39	1.42	1.45
Add: Depreciation		0.18	0.18	0.18	0.18	0.18
Add: Interest		0.20	0.16	0.12	0.07	0.02
Add: Salvage Value						
Total (B)	0.00	0.69	1.19	1.69	1.67	1.66
NET FLOW (B-A)	-3.51	-0.26	1.08	1.57	1.67	1.66

IRR = 28%