

PROJECT PROFILE ON ELECTRICIAN

- 1. Product** : **Installation and Maintenance/Repairing & Servicing of Domestic Electrical Equipment's/ Appliances and House Wiring.**

- 2. Product Code** : **NIC -2004 : 52335 & ASICC: 97115**

- 3. Product Range** : **All types of Electrical Fans, Refrigerator, Motor Pump, Room Heater/Normal Heater, Tube Lights fittings, Geysers, Normal House Wiring**

- 4. Year of Preparation** : **2020-21**

- 5. PREPARED By** : **MSME-Development Institute , Guwahati**

6. Introduction :

Electricians install and maintain all of the electrical and power systems for our homes, businesses, and factories. They install and maintain the wiring and control equipment through which electricity flows. An Electrician focuses on various aspects of electricity such as – wiring (residential, commercial and industrial), home appliances, electrical machines, lighting, electrical installations etc. As well as being hard working and committed to the job, electricians need to have:

- Good practical skills.
- Confidence when using power tools.
- The ability to analyse technical drawings.
- Close attention to detail.
- The ability to focus for long periods of time.
- The ability to follow instructions.
- A methodical approach to work.

7. Potenciality of Market :

The electrical appliances like Electrical Fan, Refrigerator, Motor Pump, Room Heater/Normal Heater, Tube Lights fittings, Mixer Grinder, Geysers, and Normal House Wiring are almost used in every household as well as office/commercial places and other places. Electrical Equipment's/Appliances/ Wiring needs repairing and sometimes regular maintenances by servicing of these items. In some items though authorized servicing center is there but still there is huge demand for repairing/servicing of these types of Electrical items locally categorically in village/remote area, rural and urban areas.

8. Basis and Presumption:

- a) The factory premises is on rental basis.
- b) Production capacity has been taken on single shift basis on 75% efficiency.
- c) Capacity utilization is 60% during first year, 80% during second year of operation. The Unit is expected to achieve full capacity utilization from the third years onward.
- d) The salaries and wages cost of raw material, utilities, rent of the shed etc. are based on the prevailing rates in and around Guwahati. These cost factors are likely to vary with time and location.

- e) Interest on term loan and capital loan has been taken at the rate of 16 % on an average. The rate may vary depending upon the policy of the financial institutions and agencies from time to time.
- f) The cost of machinery and equipment refers to a particular make/model and the price is approximate.
- g) The project preparation cost etc. whenever required may be considered under the head of preoperative expenses.
- h) The Break Even Point indicated is of full capacity utilization.

9. Quality Control:

The essential production machinery and test equipment required for the project has been indicated. The unit may also utilize common testing/Calibration facilities of Equipment/instrument used available at Various MSME-Testing Centers/ Field Testing Station, Electronics test & Development center (ETDCs) , Electronics Regional Test Laboratories (ERTLs) and Other Testing Laboratories as approved by NABL accredited Laboratory.

10. Implementation Schedule:

The major activities in the implementation of the project have been listed and the approx. time for implementation of the project is estimated at 12 Months:

	Period (In Months)
i) Preparation of project report	1
ii) Registration and other Formalities	1
iii) Sanction of Loan by financial Institution	3
iv) Plant and Machinery :	
a. Placement of orders	1
b. Procurement	2
c. Power connection/Electrification	2
d. Installation/erection of machinery/test equipment	2
v) Procurement of Raw materials	2
vi) Recruitment of Technical personnel etc.	2
vii) Trial production	11
viii) Commercial Production	12

Note :

- i) Many of the above activities shall be initiated concurrently.
- ii) Procurement of raw materials commences from the 8th Month onwards.

- iii) When imported plant and machinery are required, the implementation period of project may vary from 12 months to 15 months.

11. TECHNICAL ASPECTS

i) Process of Manufacturing:

Basically the process of repairing and servicing of Electrical Appliances would be servicing in nature. The periodic servicing of the appliances can be carried out at a time interval as and when the customer brings the Appliances for servicing. The Appliances i.e. electric fans, mixer, Geysers, Iron ,Heaters, Motor Pump etc. which is completely de-assembled after overhauling and replacing worn out parts, changes of ball bearings, etc. and lubrication the appliance is re-assembled and tested. On the other hand, under repairing activity, after testing and fault diagnosing, the repair activity can be carried out by rectifications or replacement of worn out/ defective item, etc. Apart from these, the winding of armature of the motorized appliances can also be carried out.

ii) Plant Capacity per Annum:

Quantity : 6300 Nos. Servicing & Repairing
Value : Rs. 22,95,000/-

iii) Power Required: 5 KW

iv) Energy conservation

With the growing energy needs and shortage coupled with rising energy cost a greater thrust in energy efficiency in industrial sector has been given by govt. of India since 1980. The energy conservation act 2001 has been enacted on 18th August 2001, which provides for efficient use of energy, its conservation & capacity building of Bureau of Energy Efficiency created under the act. The following steps may help for conservation of energy:

a) Adoption of Energy conserving technologies, production aids and testing facilities.

- b) Using efficient temperature controlled soldering and disordering stations can obtain optimum use of electrical energy for heating, during soldering process.
- c) Periodical maintenance of Fan/motors, compressors etc.
- d) Use of power factor correction capacitors, proper selection and layout of lighting system, timely switching on off of the lights use of Fan/LED/CFLs wherever Possible.

v) **Financial Aspects:**

A. Fixed capital

I. Land and Building:

Built up area	1,200 sq. ft.
Office, Stores	300 sq. ft.
Assembly and testing	900 sq. ft.
Rent payable/ month	Rs. 8,000/- per month i.e Rs. 96,000/Annum

II. Machinery and Equipment:

Sl. No	Name of the machine and specification	Indige nous	Qty Nos.	Price Rs	Total Rs
1.	Coil winding machine (Motorized)	Ind.	1	50,000	50,000
2.	½ Inch Bench Drilling machine	Ind.	1	4,500	4,500
2.	Coil winding machine (Manual)	Ind.	2	23,000	46,000
3.	Heating Chamber	Ind.	1	34,500	34,500
5.	Portable drilling machine tool set	Ind.	1	3,500	3,500
6.	Bench Grinder 200 mm	Ind.	1	4,500	4,500

7.	Soldering Iron	Ind.	2	300	600
8.	High Voltage test Set (2.5KV)	Ind.	1	8,500	8,500
9.	Panel board for testing Kit	Ind.	1	7,000	7,000
10.	3 ½ digit clamp meter (Tong Tester)	Ind.	1	3,000	3,000
11.	Megger 500 volts DC	Ind.	1	5,000	5,000
12.	Multi meter	Ind.	2	1000	2,000
13.	Leakage current Earth Leakage Tester	Ind.	1	6,000	6,000
14.	Auto Transformer (Variac) 10 Amps	Ind.	1	6,000	6,000
15.	Other misc. instruments and meters	Ind.	Lum Sum	6,000	6,000
Total					1,87,100
Total Cost of Machinery and Equipment					Rs. 1,87,100
Electrification Charges @ 12% of the cost of Machinery and equipment					Rs. 22452
Office equipment, furniture and working Table etc.					Rs. 45,000
Mould, die, tools, jigs and fixtures etc.					Rs. 6,000
Pre operative expenses					Rs. 11,500
Total Fixed Capital					Rs. 2,72,052/-
Say					Rs.2,72,000/-

B. Working Capital per Month:

(i) Staff & Lab our

Sl. No	Description	Number of Persons	Salary per Month (Rs)	Total Salary Per Month(Rs)
1.	Service Supervisor	1	20,000	20,000
2.	Salesman/Accountant	1	10,000	10,000
3.	Skilled Worker & Electrician	1	15,000	15,000
4.	Unskilled worker	2	10,000	20,000
Total				65,000
Add 15 % perquisites Of above Total				9750
TOTAL				74750

(ii) Raw Material requirement per month:

Sl No.	Description	Indig enous	Qty	Total (Rs)
1.	Super Enameled Cooper/Aluminum	Ind.	40 kgs	20,000
2.	Ball Bearing	Ind.	60 Nos.	6,600
3.	Coil of Iron	Ind.	50 Nos.	3,000
4.	Geyser Coil	Ind.	40 Nos.	4,500
5	Shaft, Bush, Capacitor, Field Coil, Armature, Carbon etc.	Ind.	LumSum	6,500
6.	Consumables stores & Cables, Paper Insulations	Ind.	LumSum	4,500
7.	Mechanical & Electrical Accessories, Hardware & misc.	Ind.	LumSum	6,000
TOTAL				Rs. 51,100/-

(iii) Utilities per month:

Power	Rs.3,500
Water	Rs. 300
Total	Rs. 3,800/-

(iv) Other contingent expenses per month:

Rent	Rs. 8,000
Postage & stationary	Rs. 500
Telephone charges	Rs. 1,000
Repair & Maintenance	Rs. 2,000
Transport & conveyance charges	Rs. 3,000
Publicity & Advertisement	Rs. 1000
Insurance & Taxes	Rs. 500
Misc. Expenditure	Rs. 2,500
TOTAL	Rs. 18,500

a) Total recurring expenditure per month (i+ ii+ iii+ iv) = Rs 1,48,150/-

b) Working Capital per Month (2 Month) = Rs 1,48,150 X 2 =Rs. 2,96,300/-

C. Total Capital Investment: (Rs.)

Fixed Capital	2,72,000/-
Working Capital on 2 months basis	2,96,300/-
Total	5,68,300/-

D. Financial Analysis:**(I) Cost of Production Per annum:****(Rs.)**

1.	Total recurring expenditure per year	17,77,800
2.	Depreciation on machinery and equipment @ 10%	18,710
3.	Depreciation on tools, jigs and fixtures @ 25%	1,500
4.	Depreciation on office equipment & furniture @ 20%	9,000
5.	Interest on Bank Loan @ 10%	51,147
	Total	18,58,157

(II) Turnover (Per Annum):

Sl. no.	Item	Qty (Nos)	Total Sales (Rs)
1.	Repairing of fan, Grinder/Mixer, Iron, Geysers	2400	13,20,000
2.	Servicing of fan, Grinder/Mixer, Iron, Geysers	3,900	9,75,000
3	House Wiring	Lum Sum	2,00,000
	Total		24,95,000

(III) PROFIT PER ANNUM BEFORE TAX:

(Turnover per annum – cost of production per annum) = **Rs. 6,36,843/-**

PROFIT RATIO:

Profit per Annum 6,36,843
 ----- x 100 = ----- X 100 = **25.52 %**
 Sales per annum 24,95,000

RATE OF RETURN:

Profit per Annum 6,36,843
 ----- x 100 = ----- X 100 = **112.06%**

Total Capital Investment 5,68,300

E. BREAK – EVEN- ANALYSIS

Fixed cost per annum:

Rent	96,000
Depreciation on Machinery @ 10%	18,710
Depreciation on Tools & Equip. @ 25%	1,500
Depreciation on Office Equipment & furniture @ 20%	9,000
Interest on Total Capital Investment @ 12%	51,147
Insurance	6,000
40% of salary and wages	3,58,800
40% of contingent & utilities(Excluding rent & insurance)	66,240
Total	6,07,397

Fixed cost 6,07,397

BREAK EVEN POINT (BEP) =----- x100 = ----- x100 = 48.82 %

Fixed cost + Profit 6,07,397 + 6,36,843

Additional Information:

- a. The project profile may be modified as per the suitability of the individual entrepreneurship qualities/capacity, production program and also as per locally demand of customers.
- b. The margin money recommended is 25% of the working capital requirement at an average. However the percentage of margin money may vary as per bank’s discretion.
- c. Now a days Technology is undergoing rapid changes and there is need for regular monitoring of changes in technology scenario. The unit may therefore always should try with the new technologies in order to survive in competitive market.

Name & Address of the Machinery & Testing Equipment :

1. M/s. Intego Engineers Pvt. Ltd.,1-62, Site-C, Surajpur Industrial Area, Surajpur, Site B Industrial estate, Greater Noida-201306, U.P, India (Deals in Guwahati)
2. M/s. Labdhi Engineering Co., 67/62, 2nd Floor, Dada Manzil, Masjid bandra, Mumbai-400003 (Deals in Guwahati)
3. M/s. Neo-Tele-Tronix Pvt.Ltd.(Ntpl), No.6/7, Bijoygarh, Kolkata-700032(Deals in Guwahati)
4. M/s. Goyal Electric Works, 1541/D-34, Krishna Market, 1st Floor, Bhagirath Palace, Delhi-110006(Deals in Guwahati)
5. M/s. Olatus Systems Pvt. Ltd., 3rd Floor, Borbora Complex, Near By Lane-2, Rajgarh Road,Guwahati-781003(Assam)
6. M/s Serokon Systems Ltd.,No. C-13, Radhu Place Road, Opposite Scope Minar, Main Vikas Marg, NewDelhi-110031

Name of Raw material Suppliers:

- 1 M/S Lotus Trades, FF/L2/C, Amulya Complex, R.G.B Road, Zoo Tiniali, Guwahati-781021(Assam)
- 2 M/s. Assam Supply Syndicate , Krishna Nagar, Chatribari Road, Chatribari, Guwahati-781001(Assam)
- 3 M/s. Deys Electric, A.J.Road, Paltanbazar, Guwahati-781008 (Assam)
- 4 M/s. Hira Electricals, Paltan Bazar, MLN Road, Panbazar, Guwahati-781001(Assam)

Resource Centre for Quality Control by Testing/ Calibration of Equipment/Instruments used as reference instruments/equipment's for Work :

- MSME-Testing Centre, Kolkata,Mumbai,Delhi, Chennai
- Other Calibration Laboratory situated locally available or other places accredited under NABL authorities.