

# **ELEMECH ENGINEERING TANZANIA LIMITED.**

P.O. BOX 32950  
DAR ES SALAAM.

Feasibility Study Report

On

Construction Of Double Circuit Overhead Transmission Line.

Nyakanazi – Kigoma - Tanzania

Prepared for:

M/s ELEMECH ENGINEERING TANZANIA LIMITED.

P.O. BOX 32950

DAR ES SALAAM.

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## 0.1 Introduction

This feasibility study report is being prepared for **M/S ELEMECH ENGINEERING TANZANIA LIMITED of P.O. BOX 32950 DAR ES SALAAM Tanzania** hereinafter referred to as EETL. EETL has undertaken a project to venture into the Construction of Double Circuit Overhead Transmission Line and other allied products. The promoters are well experienced in the envisaged line of business, The promoters have enough financial resources to see through the project and will contribute toward the economical benefit of the nation right from the inception stage of the project.

The purpose of this study is to assess the commercial viability and operational feasibility of the project being undertaken by EETL. Most of the data has been complied by the promoters' own research and study in Tanzania and is first hand information. The financials have also been worked out on the basis of market and cost information provided by the promoters of the project.

This report has additionally deliberated upon the social and related economic benefits (net) that will accrue to the nation and has given adequate weightage for the same in the conclusion & recommendation paragraph.

## 02. Company Details:

Registration:

M/S EETL was registered with the Registrar of Companies on 04<sup>th</sup> of May 2012 as a limited liability company. The authorized share capital of the company is same as the paid-up share capital. The registration number of the company is 90691.

Object Clause:

“To carry on the business of Construction of Double Circuit Overhead Transmission Line or goods of allied products as well”

### Promoters/Shareholders & Directors:

The Shareholders of EETL are as under:

<b>Name of the Share Holder</b>	<b>Nationality</b>	<b>% Holding</b>
NARAN KURJI PATEL P.O. BOX 32950 DAR ES SALAAM.	Kenyan	1%
RAMJI NARAN PATEL P.O BOX 32950 DAR ES SALAAM.	Kenyan	1%
DEVJI NARAN PATEL P.O.BOX 32950 DAR ES SALAAM	Kenyan	1%

The first directors of the company are:

01. NARAN KURJI PATEL
02. RAMJI NARAN PATEL
03. DEVJI NARAN PATEL

**Location of the Proposed Site:**

The site for the business shall be in Nyakanazi - Kigoma Region. The project is concerned with new installations of Power Transmission Lines.

**Registered Office Address:**

Block No. 6, House No. 85, Shekilango Road, Sinza, Dar es Salaam.

**04. The Project:**

The basic purpose of the entire project is to add value to the abundantly available inputs, which have hitherto not been adequately exploited. The project will create more wealth for the nation and shall endeavor to bring in more prosperity and economic independence.

EETL is interested in venturing deeper into this area, as they are confident about their latest technology, methodology and engineering processes. EETL is sure to process high quality Construction of Double Circuit Overhead Transmission Lines.

The project will create nearly 150 employment opportunities directly and more than indirectly.

Apart from adding to the wealth of the nation, it shall also increase the purchasing power of the community thereby leading to an overall increase in demand for other construction products, which shall in turn lead to better economic conditions.

The project shall bring in plant and machinery from outside the country and shall eventually train the local population in the operation of the respective plant and equipment.

The project will thus contribute towards the Power sector of the economy.

As per the latest findings of CTI (Confederation of Tanzanian Industries), manufacturing contributes less than 10% of contribution towards this sector which is very much welcome by the government.

The Power Line Installation process being undertaken shall also ensure that value addition is being done within the country, which is added advantage.

## **05. Project Location & Inputs: -**

Since the project is related to Construction and Installation of Double Circuit Overhead Transmission Lines, the project location preferably has to be near to the raw materials region.

A part from the very fact that the project requires lot of road transport related convenience, it is preferred that the location of such projects as being nearer to the source of raw materials.

The promoters reportedly carried out a survey of various regions in Tanzania where such project can be established with minimal obstacles.

The Nyakanazi - Kigoma region, has advantages in terms of availability of adequate local manpower, power, roads and also, enjoys the benefits of being near to the source of raw materials i.e., cement suppliers, quarries, sands e.t.c, relatively better infrastructure and also being quite near to the main market.

The local authorities have assured the promoters about adequate supply of power and water, which is required for the successful running of the business.

Power requirement has been estimated at 1,100 h.p. With 24 hours running.

## 0.5 **The Market Demand: -**

Sub base materials for construction forming the core product line of this project are all sourced from river sands, sometimes floods sands. These products are being used in construction industry as well as in preparation of industrial and domestic use.

Tanzania as a country has been enjoying a steady economic growth rate of nearly 4.5% to 5% for last more than 8 years and that has resulted into spurt of demand for quality Power Lines Infrastructure.

The demand has been more pronounced in the basic necessity sector.

The installation works by EETL form the basis for Power Grid Lines within the sector and the nation as a whole.

From the marketing angle, apart from the points noted above, this project will enjoy a distinct advantage. There are certain international standards in which the dimensions are available for Power Transmission Line materials; however, EETL envisaged producing concrete in various ratios which can suit the installation of the power lines with the highest quality.

This strategy shall provide the project with an additional advantage compared to imports, the first edge being promotion of local economy by procuring concreting raw materials locally. EETL

believes that the installation of the Construction of the Transmission Line shall not only make it more viable/profitable but will in long run also ensure maximum utilization of available resources.

EETL promoters firmly believe that they will not encounter any, or if any, will be minimal major hurdle during the installation/construction phase.

Sometime will definitely be required as the product boast of being import substitute and the products are not meant for direct consumption (which implies that they are being sold to an intermediary).

However, in long run EETL promoters and management are very much sure about the successful operation of the project.

The per capital consumption of Sub base materials for Construction of Double Circuit Overhead Transmission Line in Tanzania is one of the lowest in the world and the growing economy and changes in international situation it is very likely that the demand for is growing in geometric proportions. EETL seeks to initiate its activities on the premise of such calculations.

## **06. Promoters & Management: -**

The importance of well-informed promoters and professional management can never be over estimated for successful implementation of the any project. It is said that well – informed promoter and professional management can make even a not so viable project otherwise and vice-a-versa.

## **07. Construction Process & Technology: -**

The facility to be put-up for Construction of Double Circuit Overhead Transmission Line shall be a very simple and target oriented.

This will not only ensure that the initial set – up cost of the project will be minimal but will also enable EETL to increase the facility will maintain a very large open space to accommodate the storage waiting for further processing. In other words, the facility will not be consuming a very large area of land.

## **08. Manpower: -**

Although the project of Construction of Double Circuit Overhead Transmission Line will require quite a number of semi-automatic machines, a lot of manpower, especially at the lower end shall be required to carry out preparatory processes as well as for quick movement of Transmission Lines along the defined routes.

EETL will hire one expatriate to oversee the operations supported by twenty local workers. Workers will be guided and trained by the expatriate technical experts on the methodology of the works and to run machines. Organization hierarchy shall be as under: -

**a. Top level**

Chairman cum Managing Director

Project Manager

**b. Middle Level**

Construction Manager

Electrical Engineer

Commercial Manager

ESHS Manager

**c. Lower Level**

Site Supervisors

Personnel and Administrative Officer

Accounts Officer

Linesmen and their respective teams

EETL shall endeavor to promote local staff as much as possible to ensure better employment opportunities to the local populace.

However, it shall always ensure that efficiency of the unit is kept intact.

EETL shall run simultaneously a small in-house training house, where the experts will provide training to the new recruits before they are put on the jobs for on-job training.

EETL believes that a motivated and skilled manpower can for sure bring in immense benefits to the industry and can ensure peaceful co-existence of all concerned.

**09. Cost of the Project & Means of Finance: -**

A. Cost of the Project: -

<b>Sr. NO.</b>	<b>Details</b>	<b>US \$</b>
1	Land & Building	300,000
2.	Plant & Machinery	5,993,020
3.	Furniture, Computers & Fixtures	55,000
4.	Vehicles	876,000
5.	Pre-operating Costs	52,580
6.	Others	73,400
7.	Initial working capital	150,000
	<b>Total Cost of the Project</b>	<b>7,500,000</b>

B. Means of Finance: -

Sr. NO.	Details	US \$
1	Equity Funds	2,000,000
2	Promoters' Loan	5,500,000
	Total Means of finance	7,500,000

The total cost of the project consisting of both the phases has been estimated at **US \$ 7,500,000** as can be seen from the above chart, majority of the expenses involved will be on Plant, Machinery and Vehicles. Nearly 73.33%.

Besides this, considerable money will be required in the starting up of the unit which has been grouped under the head pre-operating and initial working capital costs.

Phase I will be implemented within a span of three months and the second and the final phase will be completed within a span of nearly 21 months from the date of the completion of the first phase.

Building will be a simple structure based on pillars with sidewalls open to facilitate future expansions. The height of the facility shed will be 15 feet. A small training house and a rest room for the workers will also be constructed.

**Details of Plant & Machinery to be imported is as under: -**

<b>Sr. NO.</b>	<b>Description</b>
01	Mobile crusher
02	Excavators
03	Wheel loader
04	Concrete Mixer
05	Concrete vibrator
06	18Tones Lorry
07	Tipping Trucks 7 -8Tones
08	Dumper
09	Theodolite
10	Leveling Equipment
11	Block Making Machine
12	Water Pump
13	Hand compacter
14	Standby Generator
15	Earth moving equipments (Excavators)

Office furniture will be bare minimum and so will be computers (may be three sets). Telephone lines; fax line and Internet line will be kept handy at the facility to ensure speedy and affordable communication.

Pre-operating costs will take care of the preliminary expenses, initial survey and travel costs including accommodation charges, professional

charges for preparation of reports etc and shall also cover for the initial joining costs of various key personnel till the real operations commence.

Initial working capital shall include the money required to bring in enough quantity of line construction materials, spend for the revenue expenses for the process carried out on them and the financing of other revenue costs till the time money starts flowing back from the clients for the mobilization.

The promoters of EETL are in possession of required finances and are committed to put in the same as and when required. The initial capital has been created at 2.0 million dollars and balance amount will be treated as loan from promoters, interest free.

**10. Project Implementation Schedule: -**

As has been stated in the earlier paragraphs, the entire project will be implemented in two phases within a period of 24 months. The first phase is expected to be completed within a span of nearly two to three months and the next phase is expected to be completed in another 21 months.

The project implementation schedule is shown in form of a table hereunder: (PHASE I).

Sr. No	Activity	Completion Period
01	Company Formation, registering with statutory authorities, like Income tax, VAT NSSF, etc. securing TIC certificate of incentive Industrial license etc.	May 2012
02	Site identification, purchasing the same, designing of plant layout and commencing of construction of facility shed.	June 2022
03	Order placement for various machineries, recruitment of key personnel.	June 2022
04	Installation of Machines	November 2022
05	Procurement of, Sand, cement, aggregates for initial trial runs as also for future.	July 2022
06	Commencement of project	August 2022

The project implementation schedule is shown in form of a table hereunder (PHASE II)

<b>Sr. NO.</b>	<b>Activity</b>	<b>Completion Period</b>
01	Site Mobilization & Facility Construction	June 2022
02	Stores Establishment	July 2022
03	Order placement for various machineries, recruitment of key personnel	June 2022
04	Installation of Plant & Machines	July/August 2022
06	Full execution kicks off	August 2022

## **11. Project Financials: -**

### **11.01 Assumptions**

- a) The rate of one US \$ is equal to T.shs 2,490/=
- b) Required labor force will be available
- c) Required permits will be granted within the limited time schedule to ensure implementation as per schedule.
- d) The first phase will be operational within a span of three months.
- e) The second phase will take nearly 15 months to complete after the start of first year.

- f) Total investment will be US \$ 7,500,000
- g) The project will have own finance
- h) Land will be available on lease in future as and when required.
- i) Import duty exemption and deferment of VAT will be available on import of plant and machinery.

### **11.02 Projected Five Years Profitability Statements**

The company will attain a turnover of US \$ 0.62 million in first six months; will go up to US \$ 0.240 millions in the next years and from third year of operation will remain steady at US \$ 1.580 millions.

The profits will start coming from the 2nd year of operations. From the year 4 and onwards the annual profits will be in the range of US \$ 1.0 million and above. The project enjoys a payback period of 5 years.

The company will be earning gross profit @ 6% and net profit of nearly 2.5%. For a very large project, like this a net profit of 2% is quite reasonable. Government will earn lot of revenues due to such high turnover.

Selling costs have been assumed at 2% of the sales and other overheads have been assumed not to cross US \$ 50,000 a month including manpower costs.

Depreciation has been provided as per the prevailing income tax rates. Further full depreciation has been provided on assets purchased during the year. Separate schedules are attached with this report for calculation of depreciation.

### **11.03 Projected Five Years Balance Sheet**

The enclosed balance sheet shows a very sound position of the company. The current assets ration is in excess of 1.2 from the beginning and by the year 5 it reaches 2.

Inventory will be maintained only for a period of one week. The reason being the plant is going to be located in the close proximity of Constructions materials.

Creditors will be outstanding for a period of 15 days and suppliers of services will be paid at the expiry of one month.

### **11.04 Projected Five Years Funds Flow Statements: -**

As can be seen from the appended projected funds flow statement the company will be financed by the promoter's own funds.

Operating profits will be ploughed in to the business. Once the operations are steadied from the year 2022, the annual contribution of operational profits shall be turning the tune of US \$ 400,000

As the operations will grow, the net working capital requirement will also grow. As can be seen the increase in net current assets will be from US \$ 90,000(year 2022) toUS \$ 680,000 (year 2025).

The company assumes to maintain a positive cash balance of US \$ 45,000 to US \$80,000

#### **11.05 Projected Five Years Taxation Schedule: -**

The company will enjoy tax incentives as per the governing laws of the country.

It will have taxable profits only from the year 2027 and will then onwards contribute to the exchequer in excess of US \$ 150,000 in the first year and then onwards in excess of US \$ 340,000 The company may reduce its tax burden by investing or expanding its operations and in either case the country benefits.

#### **12. Social & Development Benefits: -**

Generally, it is presumed that a project for Construction of Double Circuit Overhead Transmission Line will result into some land usage which is authorized by the project owner.

◆ Employment creation

As has been observed earlier this project will provide direct employment opportunities to more than 120 locals inclusive of skilled, semi- skilled and un-skilled class. One expatriate will also be employed as per the requirement of the project.

In a nutshell, it can be concluded that this project will have a very positive impact on the level of employment in the country and will be welcome change.

◆ Transfer of technology

This project being a construction project will usher in the country technology.

Although the technology is simple the advantages to the country are quite significant.

The country will get the advantage of value addition due to such incoming technology.

Further the country can reduce its dependence on imports for the finished products manufactured by this project. Local employees will get on-the-job training from the experts (expatriate) employed and in long run will improve the technical competence of the local population.

◆ Contribution to the exchequer.

This project will contribute substantially to the society in general and to the exchequer in particular. As has been observed the total turnover at 100% utilization will be in the range of US \$ 24 million.

This will result into VAT outflow of substantial amounts. Besides the company will be contributing tremendously in terms of PAYE and NSSF. In addition, the company will also be contributing in terms of corporate taxation from the year 2017 onwards.

◆ Positive cascading impact on the nation's economy.

This project will have overall positive impact on the society. It will not only save the precious foreign currency reserves of the country by producing import substitute products, and by exporting the final product, but will also generate direct employment to more than 121 individuals and will provide means of livelihood to more than 500 individuals.

The cascading positive impact on the society will be too great. This project will lead to creation of national wealth. Its contribution to the exchequer will also be quite significant in terms of NSSF, PAYE, VAT and direct taxation apart from skills and development levy.

One more advantage of this project is its location. Since it is located at Nyakanazi – Kigoma Region, which is not fully developed, will get more opportunities to commercially expand and develop.

This project will thus result into regional development. This project will thus hold the government to further its own objective of promoting regional development.

### **13. Conclusion & Recommendation: -**

The foregoing write-up indicates following benefits to the country, which in turn pleads for immediate acceptance of this project as a feasible project.

- ◆ As on date the country's manufacturing base is very low with contribution of 9% to the GDP and thereby making the economy pre-dominantly agriculture oriented.
- ◆ The project will bring in latest technology in the relevant field and will ensure training or development of skilled labour force

in the country. The labour force will get on –job training and will thus make them more and more competent.

- ◆ The project when implemented in full over a period of 24 months will ensure that there will be a direct flow of foreign currency in the country to the tune of US \$ 1,500,000 which is considerable by any standard.
- ◆ The project will lead to regional development besides. As it will be located in Coast Region.

This advantage has many other advantages running parallel. There will be tremendous boost to the economic development in the region.

It will arrest migration of individuals and will also alleviate the problem of congestion and concentration of working force in neighboring regions.

- ◆ It will provide cascading positive impact on the economic situation in Nyakanazi - Kigoma and other neighboring regions.

There are many other benefits direct and indirect of this project and therefore we conclude that this project is feasible technically as well as economically.