

**PAN ASIA NEW ENERGY TECHNOLOGIES
TANZANIA COMPANY LIMITED.**

Business Plan

For

Lithium processing project



Location of The Project: Vikonje B in Mtumba ward, Dodoma city.

1.0 Executive Summary

PAN ASIA NEW ENERGY TECHNOLOGIES TANZANIA COMPANY LIMITED is a company incorporated in Tanzania with Certificate of Incorporation No. **167202780** dated **24.07.2023**. The location of the business will be at **Vikonje B in Mtumba ward, Dodoma Region** the area is strategically located nearby raw materials deposits available.

Business Background of Promoters

The Shareholders are Chinese and Tanzania investors who have vast experience in the mining industry; they have been in the sector for more than 10 years in China and Tanzania, now planning to set up a lithium processing plant in the Dodoma region.

Shareholders	%of Shares	Nationality
YANG ZENG	75	Chinese
MAGDALENA CLETUS MGOMBERE	25	Tanzania

2.0 Legal Status & License

It is proposed to operate the business through the legal entity of a limited liability company called **PAN ASIA NEW ENERGY TECHNOLOGIES TANZANIA COMPANY LIMITED** with Certificate of Incorporation No. **167202780** dated **24.07.2023**.

The company is planning to apply for and get government approval to operate such business in Tanzania. Such as:

- Certificate of incentives
- Industrial license
- Business license
- Osha
- TBS
- Nenc etc.

2.1 **Value Proposition, Mission & Vision**

VALUE PROPOSITION

- To produce high-quality lithium
- . Latest technology producing at cheaper cost.
- Environmental sustainability and responsible mining activities.

2.1.0. Mission

To create values and improve lives through sustainable and responsible extractive activities.

2.1.1. Vision

We will be recognized and respected for exceptional economic, environmental, and social performance.

2.2 Corporate Objectives

The Company's prime objective is to create shareholders' value through participation in the discovery, development, and processing of lithium.

The Company seeks to attain cash flow through the acquisition or discovery of high-quality mineral deposits and concentrating it within its key region of interest.

The Company will achieve these objectives by:

- Focusing on a Geological province with demonstrated strong mineral endowment.
- Seeking to acquire advanced mineral (Lithium) projects in low-risk areas where undervalued opportunities are available.
- Buying ores from artisanal miners to further the production quantity of lithium.
- Applying advanced exploration techniques and concepts to enhance the likelihood of exploration success.

To support the achievement of these objectives, the Company will;

- Endeavour to recruit and retain high-caliber personnel.
- Adding value to the minerals by adopting advanced techniques and concepts of crushing lithium rocks.
- Seek to maximize in-ground expenditure as a proportion of the total budget, and

- Recognize and value the interest of all stakeholders that do business with the company

3.0 **The Industry**

3.1 Lithium Market Segmentation

The market is segmented by;

Type: (a) Metal

(b) Compound (Carbonate, Chloride & Hydroxide)

(c) Alloy.

Traditional Application:

(a) Battery

(b) Lubricant

(c) Aluminum smelting

(d) Air Treatment

(e) Medical

(f) Glass & ceramics

(g) Metallurgical(iron and steel coating)

(h) Polymer

(i) Others.

End-User Industry:

(a) Industrial

(b) Consumer Electronics

(c) Electric Vehicle

(d) Energy Storage

(e) Medical.

Geography:

Asia-Pacific,

North America,

Europe,

South America,

The Middle East and

Africa

3.2 Market Overview

The market for lithium is anticipated to register a CAGR of over 10% during the forecast period.

Key factors driving the market growth include the accelerating demand for electric vehicles, growing usage and demand from portable consumer electronics, increasing demand from the glass-making industry, and many others.

The growing adoption of electric vehicles (EVs) is driven by rising concerns for the environment, as these vehicles help reduce carbon emission levels. Governments across the world are implementing stringent emission norms to control and reduce carbon emissions, thereby augmenting the growth of the market.

3.3 Key Market Trends

- Electric vehicles have been increasingly used in most developed economies, and are fast replacing traditional vehicles. Lithium

batteries can be categorized into two segments, namely, disposable and rechargeable. Disposable lithium batteries use lithium in the metallic form, as an anode, and these batteries have a long life (high charge density) compared to other standard batteries.

- Lithium is used in high-energy density, rechargeable lithium-ion batteries in full-electric, plug-in hybrid, and hybrid vehicles (EVs, PEV, and HEVs), respectively. Due to the growth in EV technology, as well as concerns over increased carbon dioxide pollution from the combustion engine and rising fuel costs, lithium has been put into widespread use in EV batteries.
- The major regions in which the production of electric vehicles is prominent include European countries, such as Norway, Iceland, Sweden, and, Belgium among others, it is estimated that Norway accounted for almost one-third of the total market share in 2018. This is expected to see a sharp surge in the coming year, due to the environment-viable nature of electric vehicles, over other/diesel-based cars in the automotive sector.
- Lithium-ion batteries used in electric vehicles have a rechargeable nature and commendable life time. Moreover, EVs can also be used with rapid charging points that can top up the batteries to 80% capacity in around 30 minutes. All the aforementioned factors have helped electric vehicles gain popularity.

- Some of the major manufacturers of EV batteries are Tesla, Nissan, General Motors, Volkswagen, and BMW, among others.
- All the aforementioned factors are expected to drive the global market during the forecast period.

Asia –Pacific Region to Dominate Market

- The Asia-Pacific region is the largest consumer of lithium globally with the majority of the consumption coming from China.
- Rise in technological development and increasing need for cleaner energy sources have brought Li-ion batteries on the forefront across various industries, as well as end-use sectors.
- Japan is one of the prominent regions for the lithium battery market, along with China, and Korea, occupying a 96% market share in terms of battery capacity shipment.
- Energy economies are expected to increase the consumption of lithium in various end-use products.
- Owing to the increasing population, the increase in regional acceptance of solar thermal and solar electric technologies (renewable heat) in energy countries, such as Pakistan, Bangladesh, Nepal, Sri Lanka, Cambodia, Laos, etc., are expected to increase consumption of lithium in energy storage, in the coming years

3.2 Market strategy

To ensure customer specification/design is fully understood, face-to-face sales and service are required. By offering expert advice it will be

possible to identify customer needs and find solutions to offer quality products at as low a price as possible.

3.4 Advertising

An overall marketing budget has been agreed to ensure the target market is made aware of the product and its unique selling points. In terms of advertising, there will be limited, but focused ads and editorial placed in a selection of relevant trade journals. TV, Newspapers, and Radio

4.0 Building an efficient lithium ore processing plant

An effective lithium ore processing plant mainly includes a crushing line, grinding line, beneficiation line, and some auxiliary equipment.

The most commonly used production equipment is a crusher (jaw crusher, impact crusher, cone crusher), ball mill, flotation machine or magnetic separator, etc. Fote Machinery can provide a set of Lithium ore beneficiation equipment, which are well received in the world market. We aim for creating more wealth for customers. How to choose an efficient beneficiation method needs to be determined according to the ore properties and actual needs.

The first step is to conduct a mineral test

It is recommended to conduct a lithium mineral test before the separation and production.

At the same time, customers can customize the most effective and scientific beneficiation process and equipment based on the ore properties and investment budget to avoid waste of resources.

Crushing production line

First, lithium ore goes through a crushing and grinding process in turn to produce a uniform fine particle size.

- When crushing, use a jaw crusher for primary crushing, and then use a cone crusher for fine crushing.
- When grinding, use a ball mill

5.0 Management & Organizational Structure

All aspects of the operations will be managed by the shareholders for the initial three years; there will be a requirement of **15**. Among 10 employees will be primarily in production. The administration, marketing, and finance functions will be managed by the key managers i.e. the promoters. The accountancy function will be outsourced initially. Books will be kept manually during year one but it is

intended to invest in a computerized software accountancy package (e.g. Sage)

The summary of employees is as following

Gender	Foreign Skilled	Local Skilled	Local Unskilled	Total
Women	1	2	2	5
Men	2	3	5	10
TOTAL	3	5	7	15

5.0 **Project's Investment Capital**

The estimated capital investment cost of the project is US \$ 500,000.

PAN ASIA NEW ENERGY TECHNOLOGIES TANZANIA COMPANY LIMITED COST
STRUCTURE

PARTICULAR	
Land and Buildings	25,000.00
Machinery & Equipment	200,000.00
Motor Vehicles	120,000.00
Furniture & Fixtures	2,000.00
Pre expenses	4,000.00
Others	5,000.00
Working Capital	144,000.00
TOTAL	500,000.00

For the project to be a reality a total investment amounting to US \$500,000 is needed

6.0 FINANCING PATTERN

The project will be financed by equity by 100%, constituting US\$ 500,000

7.0 ASPECTS OF PROJECT SUSTAINABILITY

The project sponsors having studied market conditions and the infrastructure in Tanzania are convinced that the project will be able to operate undisturbed. The growing demand for lithium-quality products in the global market gives them assurance of a steady market. The peace and tranquility that exist in Tanzania is another aspect of assured business sustainability.

7.1 MONITORING AND EVALUATION

The monitoring and evaluation tools will be applied in running this project as well, the project sponsors are determined to cooperate fully with the government and other stakeholders for smooth business running.

8.0 FINANCIAL ANALYSIS

8.1 Considerations and Assumptions:

The corporate tax charged is 30% of the profits. The capital investment allowance is 50%. The capital assets are exempted from customs duty

and Value Added Tax. The straight-line method to depreciate the project's capital items has been applied.

It is assumed that. Revenues have been conservatively estimated based on the experience of the promoters and trends in the industry.

8.2 Financial Statements:

8.3 Projected Sales Revenue

For projection purposes, it is assumed that the economic life of the project is 5 years and that production of the different types of packaging materials commences from the first year of operation.

PAN ASIA NEW ENERGY TECHNOLOGIES TANZANIA COMPANY LIMITED PROJECTED REVENUE

-	1	2	3	4	5
Revenue	4,050,000.00	4,252,500.00	4,465,125.00	4,688,381.25	4,922,800.31

8.4 Projected Profit and Loss Statement

The Income and Expenditure Statement shows the projected income for the 5 years period. Accumulated after-tax profits grow from. US \$135,660 in the first year to US \$ 752,808 in the 5th year

**PAN ASIA NEW ENERGY TECHNOLOGIES TANZANIA COMPANY LIMITED PROJECTED
INCOME & EXPENDITURE STATEMENT**

-	1	2	3	4	5
Revenue	4,050,000.00	4,252,500.00	4,465,125.00	4,688,381.25	4,922,800.31
Operating Expenses:	3,847,500	4,039,875	4,241,869	4,453,962	4,676,660
Gross Profit Before Interest and Depreciation	202,500	212,625	223,256	234,419	246,140
Interest	-	-	-	-	-
Depreciation	8,700	8,700	8,700	8,700	8,700
Gross Profit	193,800	203,925	214,556	225,719	237,440
Tax (30%)	58,140	61,178	64,367	67,716	71,232
Profit After Tax	135,660	142,748	150,189	158,003	166,208
Accumulated Profit	135,660	278,408	428,597	586,600	752,808

8.4 Projected Cash Flows

This is shown in the financial statements. The project accumulated cash grow from **US 144,360** in the 1st year to **US \$ 796,308** in the 5th

PAN ASIA NEW ENERGY TECHNOLOGIES TANZANIA COMPANY LIMITED PROJECTED CASH FLOW US\$

	0	1	2	3	4	5
SOURCES:						
Profit before interest and depreciation	-	202,500	212,625	223,256.25	234,419	246,140
Equity	500,000					
Loan	-					
Total Sources	500,000	202,500	212,625	223,256	234,419	246,140
Applications:						
Capital expenditure	347,000		-	-	-	-
working Capital & Others	153,000					
Cash	-	144,360	151,448	158,889	166,703	174,908
Tax	-	58,140	61,178	64,367	67,716	71,232
Sub total	500,000	202,500	212,625	223,256	234,419	246,140
Total applications	500,000	202,500	212,625	223,256	234,419	246,140
Accumulated cash		144,360	295,808	454,697	621,400	796,308

8.5 Projected Balance Sheet

The projected Balance Sheet of the project is shown in the financial statements under the same heading. Equity increases from US\$ 500,000 in the first year of operation to US \$1,252,808 in the 5th year.

PAN ASIA NEW ENERGY TECHNOLOGIES TANZANIA COMPANY LIMITED PROJECTED BALANCE SHEET USD

Fixed Assets	1	1	2	3	4	5
Opening balance	-	347,000	338,300	329,600	320,900	312,200
Additions	-					
Total Long-term Assets	-	347,000	338,300	329,600	320,900	312,200
Less depreciation	-	8,700	8,700	8,700	8,700	8,700
Closing balance	-	338,300	329,600	320,900	312,200	303,500
Working capital	153,000	153,000	153,000	153,000	153,000	153,000
Accumulated cash	-	144,360	295,808	454,697	621,400	796,308
Total assets	153,000	153,000	153,000	153,000	153,000	153,000
Financed by						
Equity	500,000	500,000	500,000	500,000	500,000	500,000
Accumulated profit	-	135,660	278,408	428,597	586,600	752,808
Total equity	500,000	635,660	778,408	928,597	1,086,600	1,252,808
Total equity and debts	500,000	635,660	778,408	928,597	1,086,600	1,252,808

9.0 Economic Aspects

Implementation of this project will have the following social and economic values

- The project will involve the transfer of technology.
- The project will create employment for **15** people on a permanent contract basis as well as on a temporary basis.
- It will create more business opportunities for local suppliers.
- It will generate substantial revenue for the government in the form of corporate tax, value-added tax, and pay-as-you-earn.
- The project will earn substantial amounts of foreign exchange.

10.0 Implementation

Project implementation is expected to be relatively very short once the project has been approved

	ACTIVITY	PERIOD
1	Processing TIC Certificate of Incentive	July 2023
2	Ordering of plant and machinery and Vehicles	July 2023
3	Arrival of Plant, Machinery and Vehicles	August-September 2023
4	Assembling and fixing machines	Sept- October 2023
5	Testing machines	October 2023
6	Commercial production	October 2023

11.0 CONCLUSION AND RECOMMENDATIONS

The project is technically feasible, financially viable, and economically sound, provided the sponsors will manage it efficiently.

It is recommended that the project be approved by Tanzania Investment Centre and be granted the TIC Certificate of Incentives with its associated privileges and benefits as provided for under the Tanzania Investment Act, 1997.