مشهرة برقم 11455\2021

السادة أعضاء جمعية رجال الأعمال المصريين الأفارقة المحترمين

تحية طيبة وبعد،،

استكمالًا للجهود والأنشطة المعمول بها والعلاقات المتميزة التي تربط جمعية رجال الأعمال المصريين الأفارقة بشركائها الاستراتيجيين والذي تحرص فيه بعض الجهات الخارجية على التعاون مع الجمعية وأعضائها فقد ورد إلينا من سفارة زامبيا قائمة بمشروعات استثمارية مقدمة من وكالة تنمية زامبيا(ZDA) ، وتتضمن مشروعات في قطاعات النقل والطاقة والبتروكيماويات. نرجو الاطلاع عليها لبحث فرص التعاون والاستثمار.

مرفق المنشور

وتفضلوا بقبول فائق الاحترام،

الأمين العام لجمعية
رجال الأعمال المصريين الأفارقة

مصطفي الامير

م مصطفي الامير

رئيس مجلس إدارة جمعية
رجال الأعمال المصريين الأفارقة

د/ يسري الشرقاوي

جمعية رجال الأعمال المصريين الافارقة
مشهرة برقم ١١٤٥٥ لسنة ٢٠٢١
Egyptian African Businessmen's Association
11455/2021

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In reply please quote
No. ----------

EMBASSY OF THE REPUBLIC OF ZAMBIA
Villa 302 North El Shewayfat, off South 90 St., 5th Settlement, New Cairo

ZEC/101/15/21

17th April, 2025

Dr. Yousrey El Sharkawi
Chairman
EABA
EGYPT

RE: FORWARDING A LIST OF INVESTMENT PROJECT PROFILES FROM THE ZAMBIA DEVELOPMENT AGENCY (ZDA.

The above subject matter refers.

We have the honour to forward herewith, a list of Investment Project Profiles from the Zambia Development Agency (ZDA) which include the following:

1. Lusaka Mass Transit Rail System
2. Green Hydrogen Based Synthetic Fertiliser Project
3. Biomass Green Methanol Project
4. 1000 MW Storage project

The Embassy therefore, requests you to help identify potential investors from your association who may be willing to work on the projects listed above.

Please accept, Madam, the assurances of our highest consideration.

Maj. Gen. Topply M. Lubaya (Rtd)
AMBASSADOR

Hadassah Hart Consultants

Investment Consultants

Lusaka Mass Transit Railway

A legacy Project for Zambia's Economic Transformation

(2025)

Table of Contents

Hadassah Hart Consultants
Investment Consultants

1. Introducing Hadassah Hart Consultants

Hadassah Hart Consultants (HHC) is a Zambian owned investment advisory and project development firm dedicated to mobilizing private sector financing for transformative public and private projects.

As trusted advisors and development partners, HHC supports the Government of Zambia's national priorities by providing:

- Bankable Project Development
- Strategic Investment Advisory
- Infrastructure and Energy Finance Solutions

We specialize in high-impact sectors including:

- Transport Infrastructure (rail, road, airports)
- Energy (renewable power, grid integration)
- Industrial Parks & Economic Zones
- Agriculture & Agri-Infrastructure
- Real Estate & Urban Development

HHC's work is anchored in integrity, innovation, and collaboration. With strong global networks and local insight, we are committed to delivering sustainable, inclusive, and investor ready projects that align with Zambia's development goals.

2. Introducing Lusaka Mass Transit Railway

The Lusaka Mass Transit Railway (LMTR) is a bold and transformative initiative originally conceived by HHC to address two urgent urban challenges:

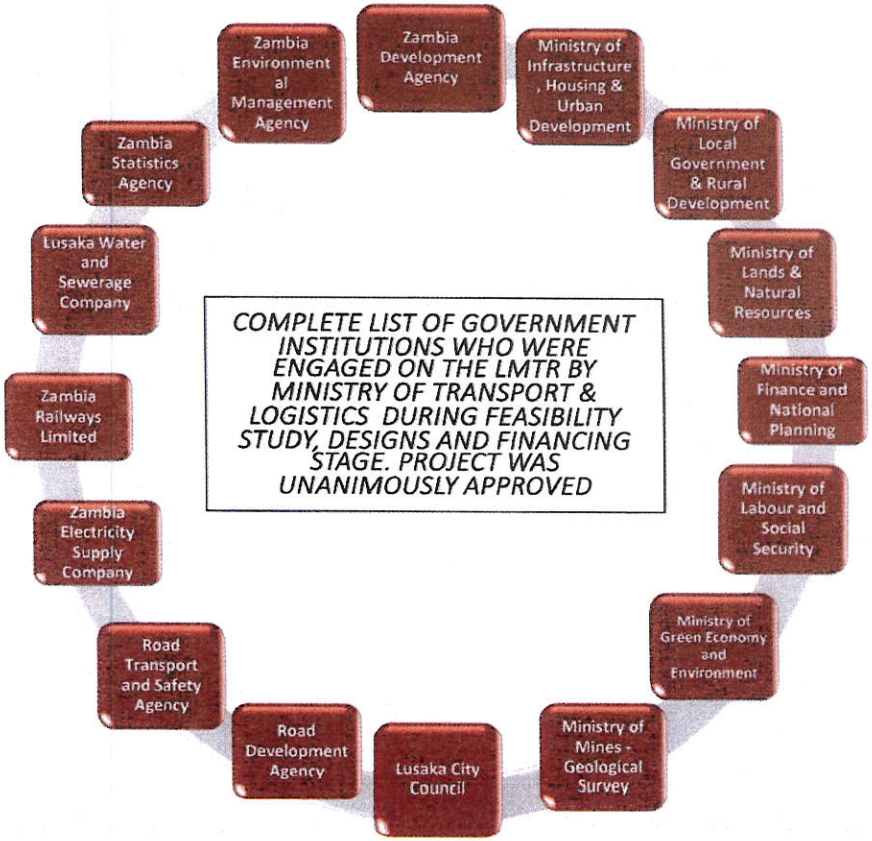
- Decongesting Lusaka, one of Africa's fastest-growing cities
- Greening the capital, by shifting to cleaner, more sustainable public transport options

Today, LMTR aligns seamlessly with the Government's vision for a modern, inclusive, and climate-smart Zambia, and is now positioned as a strategic component of the Presidential Legacy Agenda.

Key Objectives of the LMTR:

- Modernize Lusaka's transport infrastructure to meet growing urban demand
- Promote low-emission, high-efficiency transit systems in support of Zambia's green economy goals
- Facilitate inclusive urban development by improving access to jobs, education, and services
- Stimulate investment in surrounding infrastructure, commercial hubs, and housing corridors

The LMTR represents an opportunity to build a greener, more liveable Lusaka, one where infrastructure not only supports growth but also enhances the quality of life for all residents.



3. Summary of the Study on LMTR

Visual of track and station on Great East Road

Hadassah Hart Consultants (HHC) conceptualized the LMTR project and facilitated the onboarding of NORINCO International, a global leader in rail infrastructure development and a subsidiary of Chinese State-owned company, NORINCO Group.

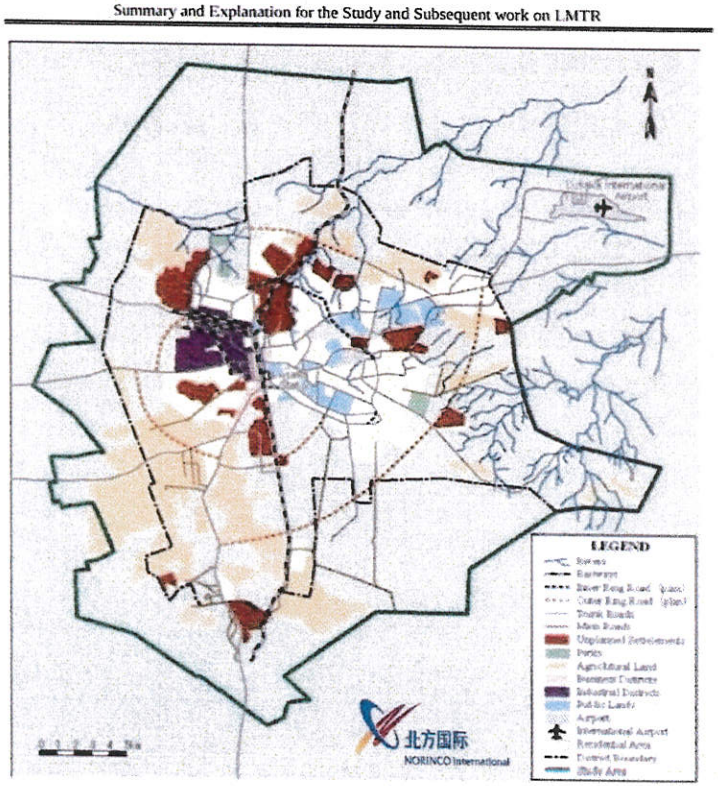
Under the direction of the Ministry of Transport, NORINCO International conducted a comprehensive feasibility and conceptual planning study grounded in Lusaka's urban development, population dynamics, and economic growth projections at no cost to Government.

The study covered:

- Network scale planning and phased development strategy
- System selection and alignment with Lusaka's terrain and mobility needs
- Depot and stabling yard siting
- Phase 1 route design, including:
  - Proposed station locations
  - Design principles and technical standards
  - System integration across disciplines
  - Functional alignment with Lusaka's infrastructure

The conceptual proposal offers a structured and technically sound foundation to move the LMTR from vision to implementation, supporting Zambia's goals for urban modernization, economic connectivity, and climate-smart infrastructure.

4. Background of the Study on LMTR



Major Study Areas

According to a study by the Zambia Statistics Agency (ZamStats) supported by the United Nations Economic Commission for Africa (ECA), Lusaka accounts for more than a quarter of the country's annual GDP. Specifically, in 2014, Lusaka Province contributed 28.5% to the national GDP, making it the second-highest contributing province after the Copperbelt, which accounted for 28.9%. This underscores Lusaka's role as a central economic hub in Zambia,

Originally, Lusaka was planned for a population of not more than half a million (Lusaka City Council), but by the 2022 Census, it had grown to over 3 million people—and that number is believed to have increased since.

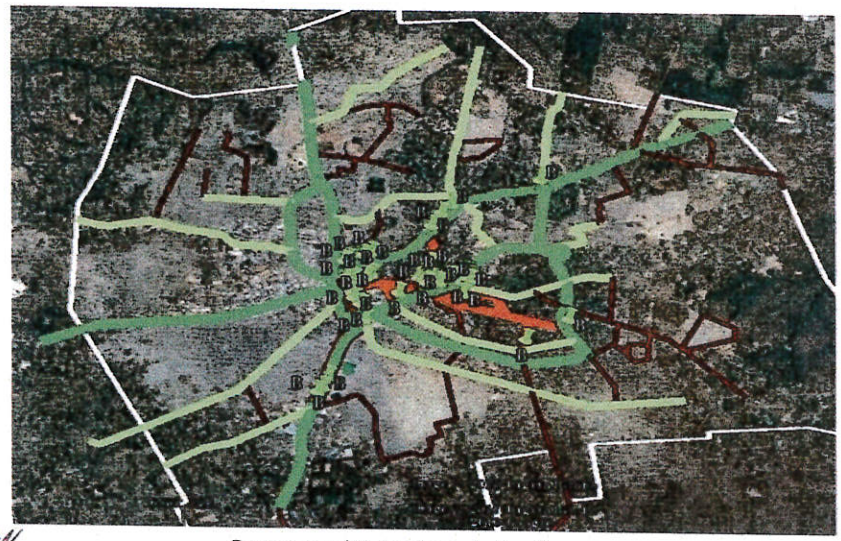
This unprecedented growth has placed pressure on urban infrastructure, encouraging investment in:

- Urban transport development
- Water and sewerage systems
- Improved living environments

The LMTR study was scoped to cover an area of 850 sq. km, including:

- Lusaka City
- Kafue District
- Chongwe District
- Chibombo District (near Lusaka in Central Province)

5. Key Findings from the LMTR Study



Current conditions of regular bus lines

Currently, the regular bus network of Lusaka covers four levels: trunk lines (LP), main lines (LO), supply lines (LM), and express bus for core area (LX), as shown in the figure

Following the technical study led by NORINCO International under the Ministry of Transport, a number of critical urban mobility challenges in Lusaka were identified:

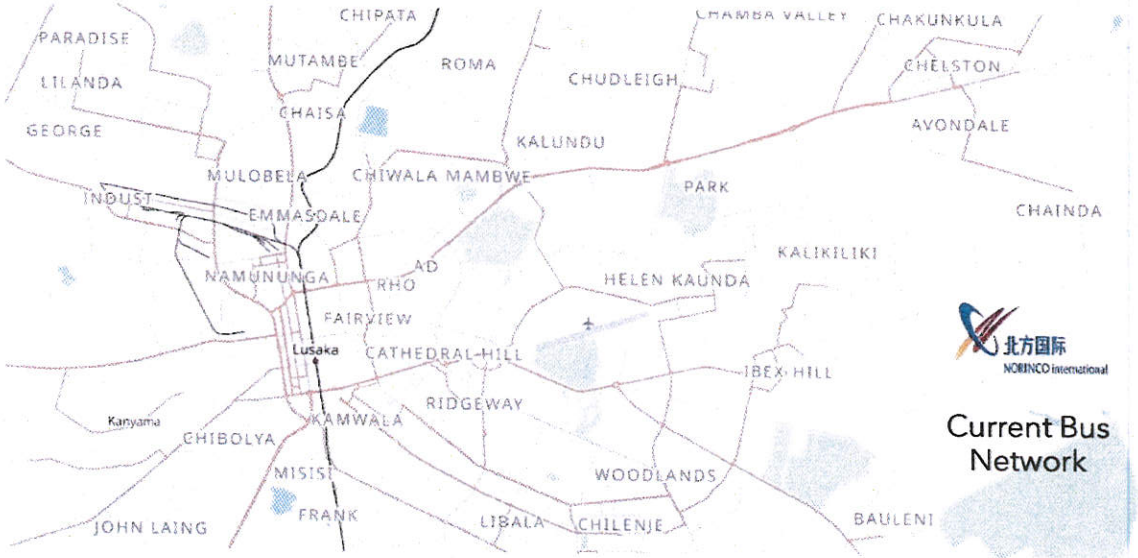
- Excessive traffic congestion, especially during peak hours
- Over-reliance on private vehicles and minibuses as the primary mode of transport
- Environmental strain from rising vehicle emissions
- Inadequate public transport infrastructure to meet current and projected demand

These findings confirmed that Lusaka's rapid urban expansion and rising motorization rates had outpaced its transport infrastructure, creating an urgent need for a mass transit railway system.

The LMTR was therefore proposed as a sustainable, long-term solution to:

- Decongest urban roads
- Reduce emissions
- Improve connectivity
- Enhance the quality of life for Lusaka's growing population

6. Current Public Transport Network and Traffic Difficulties

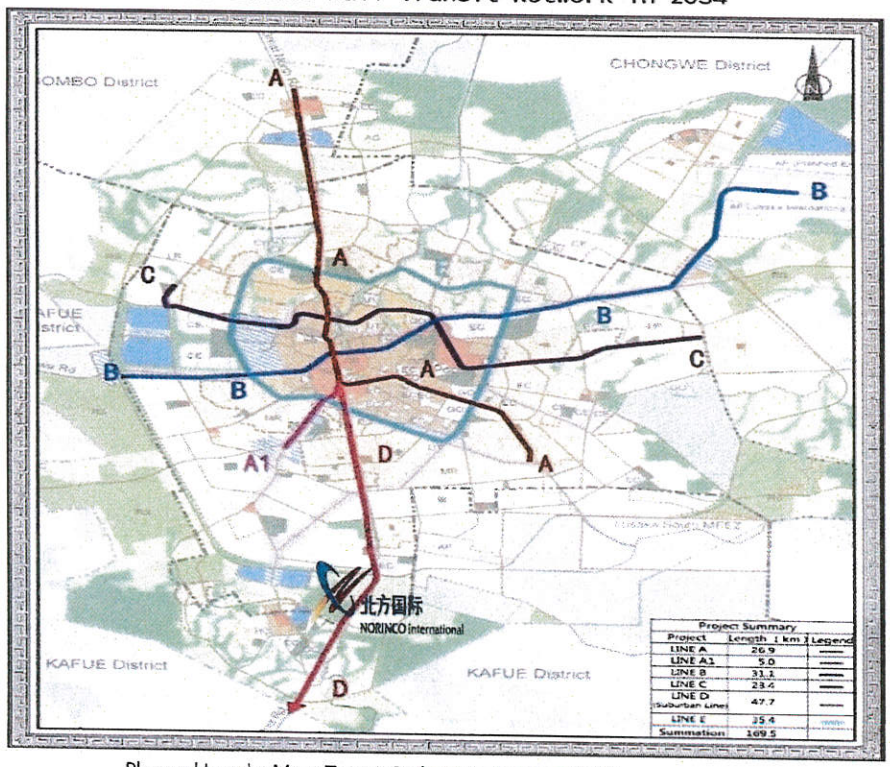


The immature road network is heavily loaded to cause regular traffic jams.

The Lusaka Mass transit railway will attract passengers by its large capacity, high speed, comfortable rides, and good service, and will alleviate road occupation.

7. Planned LMTR Network in 2034

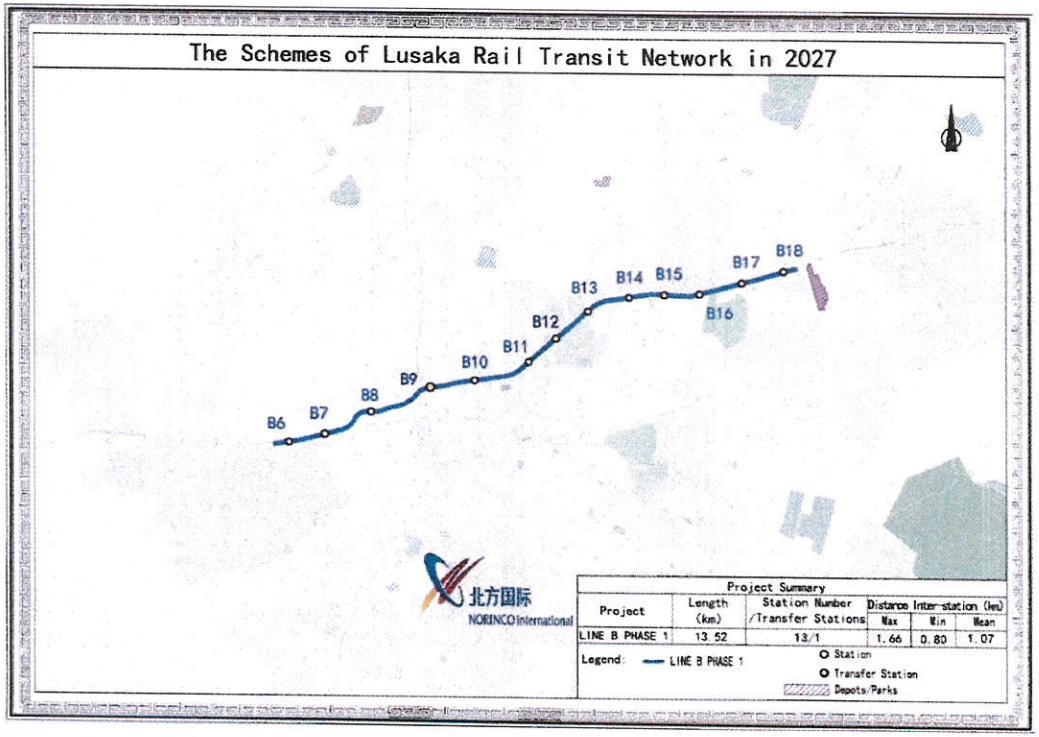
The Lusaka Rail Transit Network in 2034



Planned Lusaka Mass Transit Railway Network in 2034

By 2034, Lusaka's public transport railway network will cover six lines (including one suburban line), with a total length of 169.5 kilometers.

8. Proposed Phase 1 of LMTR

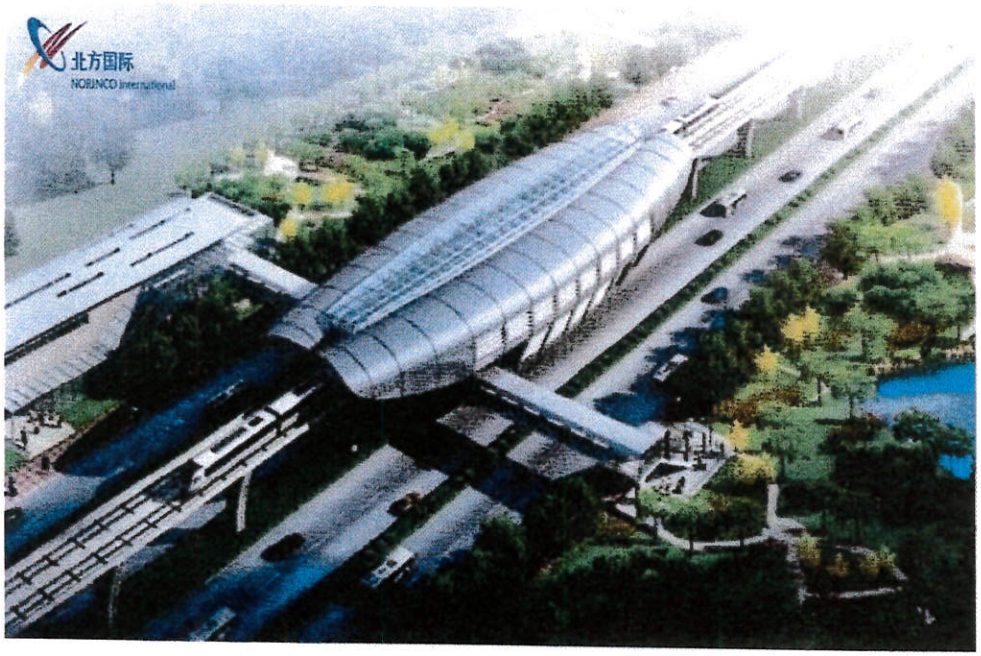


Line B (Urban Rail Transit)

From Kanyama to KKIA, 31.1km;

- Passing Mumbwa Rd. and Great East Rd., connecting with most of the resident zone, CBD, malls and universities;
- Phase 1 is from station B6, extends along the Mumbwa Road, Manda Road, Kalambo Road, and Great East Road, and ends at station B18. It has a total length of 13.52km. However, we propose that first phase of line B extends to KKIA initially.
- A high capacity & high service quality rail transit system.
- Designed as an Elevated line for enhanced safety and efficient and specified operation.

9. LMTR Capacity

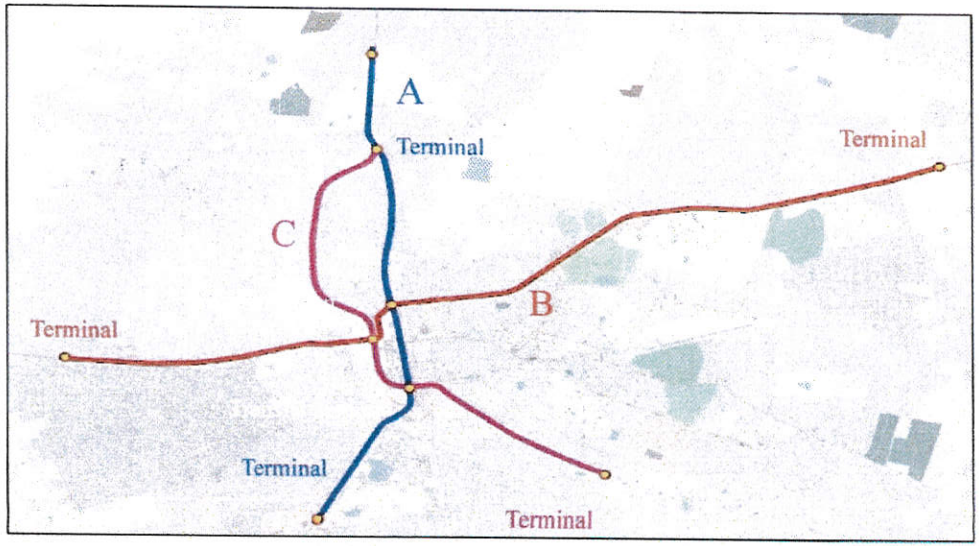


Visual of UNZA station on Great East Road

Recommended vehicle:	B type vehicle, length of train ≤ 120m
Number of marshalling:	4 cars
Transportation capacity:	≥30,000 people per hour
Design maximum speed:	80 km/h
Form of right of way:	Totally enclosed
Laying method:	Above ground

10. Electric Bus Rapid Transit (EV BRT)

To complement the Lusaka Mass Transit Railway (LMTR), Hadassah Hart Consultants proposes the development of a fully electric Bus Rapid Transit (EV BRT) system, designed to provide feeder connectivity to the LMTR while extending access to communities beyond the railway corridors.



Line A (EV BRT)

- From Beit Cure Hospital to Cosmopolitan Mall, 11.6km;
- Passing Great North Rd, Cairo Rd, and Kafue Rd.;

Line B (EV BRT)

- From Kanyama to NRDC, 17.4km;
- Passing Mumbwa Rd.、Kalambo Rd.、Great East Rd.;

Line C (EV BRT)

- From Matero Police Station to Arakan Barracks, 10.9km;
- Passing Lumumba Rd. and Chilimbulu Rd.;
- An integrated public transportation network;
- Afforable investment and simple implement.

11. EV BRT System

12m BRT BUS

18m BRT BUS

Basic Parameters of Electric Vehicles

Length (m)	8-9m	10.5m	12m	15m	18m
Rated Passenger Capacity	55-62	60-70	79-85	90-100	130-140
Minimum Turning Radius (m)	≦10.5m	≦10.5m	≦11.5m	≦12m	≦12m
Width (mm)	≈2420mm	≈2550mm	≈2550mm	≈2550mm	≈2550mm
Height (mm)	≈3200mm	≈3265mm	≈3280mm	≈3280mm	≈3280mm
Battery Endurance Capability (km)	255km	290km	300km	375km	375km

We recommend an adoption of a mixed operation of 12m and 18m BRT and, reserve the transition conditions for other rail transit. Together LMTR and EV BRT form a smart, sustainable and future-ready mobility backbone for Lusaka.

12. SUCCESSFUL REGIONAL TRANSIT TRAIN - GAUTRAIN

Gautrain has presented Gauteng with an opportunity to empower its citizens and to expand the economic activity of the Province.

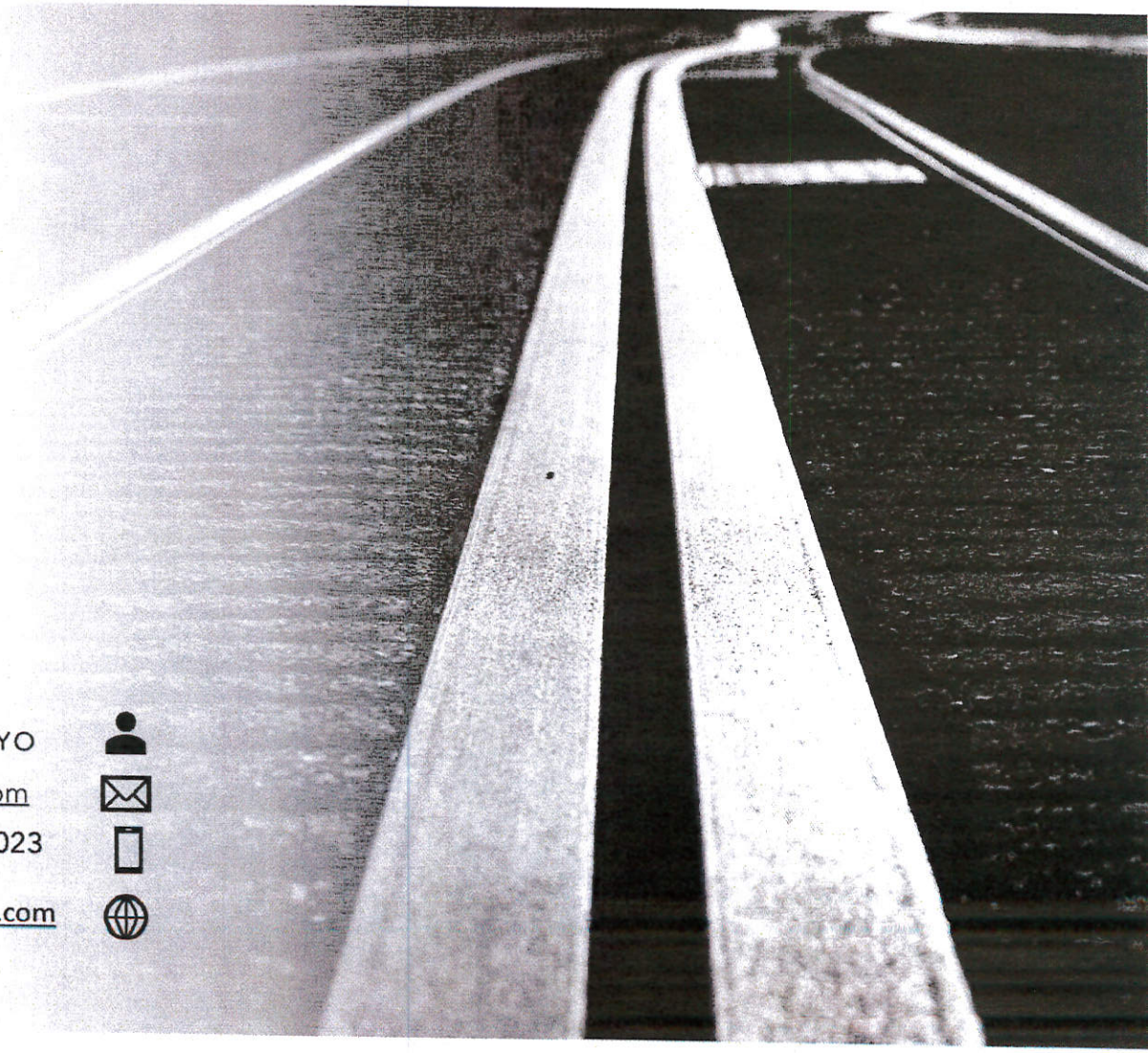
The implementation of the Gautrain's broad-based Socio-Economic Development (SED) strategy ensures that SED remains a cornerstone of the Gautrain.

The strategy focuses on two important concepts: Local skills development and capacity building; and Job creation. Gautrain has created 34,800 direct job opportunities during construction and 922 sustainable jobs after the start of operations.

The Gautrain has also re-activated property development in many areas around its stations and thus has contributed to the goals of transit-oriented development, better land.

It is estimated that R46 billion total GDP impact has been added to the provincial economy due to property development induced by the Gautrain, contributing a further 245,000 jobs.

(Source: Gautrain report 2019)



thank you

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ZAMBIA 1000MW SOLAR-STORAGE POWER PLANT

- **Provide stable clean energy supply to Zambia's national power grid.**
- **Enhance grid stability and reduce reliance on fossil fuel power generation.**
- **Decrease dependence on hydro power.**
- **Serve as a reliable power support point for the grid during power shortages.**
- **Rapidly address the current severe power shortage issue.**

PROJECT PLAN

- According to the capacity structure and load characteristics of Zambia National Grid, 500MW photovoltaic power station and 500MW energy storage are designed to ensure power stability.
- Land required is 60 hectares.
- Proposed location is Southern Province.
- Construction period is 12 months.

ECONOMIC INDICATORS

- Estimated total investment is $500 million.
- Annual power generation is About 1.5 billion kWh.
- Internal Rate of Return (IRR) is Estimated at 12%.
- Payback period is Around 9 years.

SOCIAL BENEFITS

- Reduce at least 1.2 million tons of CO_2 emissions annually.
- Provide around 2,000 jobs during construction phase and about 500 permanent positions during operation.
- Reduce the power tariff.
- Enhance grid supply stability and reduce blackout risks
- Contribution to foreign exchange reserves when the rich resource hydro power.

ZAMBIA 200,000 tons Biomass Green Methanol Project

- Efficient Resource Utilization.
- Lowering Fuel Costs.
- Reduction of Pollution from Straw Burning.
- Protection of Land Ecology.
- Support for Clean Energy Development.
- Reduction of Agricultural Production.
- Replacement of Fossil Fuels.
- Costs Increase in Farmers' Income.

Project Plan

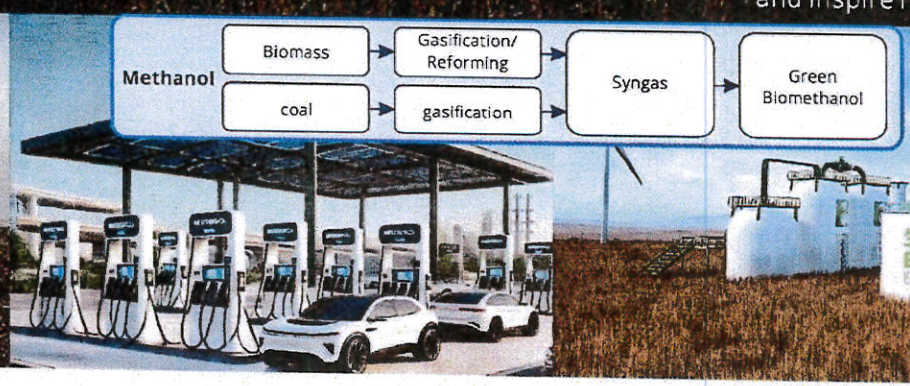
- Project Objective is Utilize straw and other biomass as raw materials to produce methanol through gasification technology, supplemented by locally available low-quality coal.
- Annual Production Capacity is 200,000 tons of green methanol.
- Land required is 40 hectares.
- Construction Period is12 months.

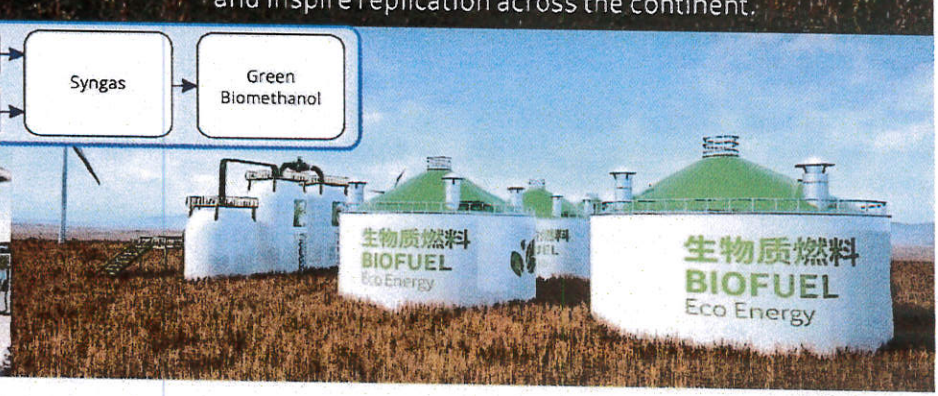
Economic Indicators

- Total Investment is USD400 million.
- Internal Rate of Return (IRR) is Approximately 13.5%Payback.
- Period is Approximately 8 years.

Social Benefits

- Promote Agricultural Development.
- Create Employment for at Least 500 People.
- Increase Farmers Income.
- Provide Technical Training to help local workers acquire new skills and enhance their employability.
- Showcase the potential of biomass energy and inspire replication across the continent.





600,000 TONS GREEN HYDROGEN-BASED SYNTHETIC FERTILIZER AND LIQUID AMMONIA PROJECT IN ZAMBIA

- Using solar energy to produce hydrogen to synthesize chemical fertilizer and liquid ammonia, Reduces reliance on fossil fuels and lowers carbon emissions, aligning with global green energy trends.
- Implements clean hydrogen production and environmentally friendly fertilizer manufacturing processes, significantly reducing Co2 emissions compared to traditional ammonia production.
- Improves soil nutrient supply and boosts agricultural productivity by providing premium nitrogenous fertilizers.
- Reduces dependency on imports, cuts transportation and procurement costs.

Process flow is Solar Power Generation - water Electrolysis for Hydrogen Production - ammonia Synthesis - Fertilizer manufacturing.

Project Plan

- The goal of the project is to use solar energy to produce hydrogen, and to synthesize ammonia through hydrogen and nitrogen for the production of nitrogen-based fertilizer.
- Land is 100 hectares.
- Proposed Location is Southern Province.
- Construction Period is 12 months.

Economic Indicators

- Total Investment is approximately USD500 million.
- Annual production capacity of 600,000 tons of fertilizer or 600,000 tons of liquid ammonia.
- Internal Rate of Return (IRR) is around 15%.
- Payback Period is approximately 7 years.

Social Benefits

- Enhance agricultural productivity and support sustainable farming practices.
- Provide employment for over 500 people.
- Improve crop yields and raise farmers' incomes through better fertilizer availability.
- Strengthen Zambia's position in the global clean energy and agricultural sectors.
- Contribution to foreign exchange reserves, radiating the entire southern African market.