



ENERGY SECTOR PROFILE

2024



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1. ZAMBIA FACT SHEET



Population (2022)
19.6 million



Annual GDP
Growth Rate (2023)
5.8 %



Average
Exchange Rate
(2023)
ZMW 1 = USD 20.21



Inflation Rate
(March, 2024)
13.7 %



Land-Linked Country

8 + 1 Neighboring
Countries

**Malawi, Botswana,
Zimbabwe,
Tanzania, DRC,
Angola, Namibia,
Mozambique and
South Africa**



Member of the
Southern African
Development
Community

SADC Population=
345 million



Member of the
Common Market for
Eastern and Southern
Africa

COMESA Population =
560 million



Trade Surplus (2023):
USD 306.8 million



**Working-age
Population (2022)**
10.4 million



Ease of getting credit (2021)
Africa: 1st, World: 4th



2. SECTOR OVERVIEW

Zambia's main energy sources include; hydro-electricity, solar, petroleum, coal, and biomass; of all the energy sources, petroleum and its derivatives are the only sources of energy that are wholly imported into the country. The Energy Sector in Zambia is made up of three main Sub-Sectors namely; Electricity, Renewable Energy and Petroleum Sub-Sectors.

Statutory Instrument no. 47 of 2023 defines energy as:

- i. the building and installation of a power station, including an electric vehicle charging station;
- ii. building and installation of a liquefied petroleum gas station;
- iii. building and installation of processing plants for biofuel;
- iv. construction of a petroleum refinery; and
- v. construction of a pipeline and construction of a rural filling station.

The demand for electricity has been growing at an average of approximately 3 percent per annum mainly due to increased economic activity in the country especially in the agriculture, manufacturing and mining sectors, as well as increased access to grid power through the Rural Electrification Programme. Electricity access rate averages at 31 percent with 67 percent of the urban and 4 percent of the rural population having access to power. Government, in the National Vision 2030, set a target for electricity access for all Zambians by the year 2030.

In 2023 the Energy Sector contributed to 0.2 percent of Gross Domestic Product (GDP). The demand for renewable energy has seen significant growth in recent years as the market explores alternative sources such as biofuels, solar, and wind energy to supplement conventional energy sources.

Following the approval of the Renewable Energy Feed-In Tariff (REFiT) Strategy by Government, the nation will benefit from an additional 200 Mega Watts (MW) through renewable energy generating projects. Further, progress was made under the Industrial Development Corporation (IDC) scaling solar projects for the construction of Bangweulu (54 MW) and Ngonye (34 MW). To promote investment in the renewable energy sub-sector, Government finalised the development of a framework for regulating off-grid renewable energy projects.

Investment in the electricity sub-sector continued to grow through projects such as the commissioning of the Kafue Gorge Lower Hydropower plant with 750 MW capacity in late April 2023. The TAZAMA Pipeline which runs from Dar-es-Salaam in Tanzania to Indeni in Ndola has been converted from a petroleum feedstock to a low-sulphur diesel carrier and regulations have been developed to enable players in the sector to have third-party access to the Pipeline.

3.0 INVESTMENT OPPORTUNITIES

There is enormous potential for investment in the energy sector which will aid Zambia in meeting not only the demand of the country but of the

Southern African region. The main opportunities in electricity generation are in petroleum, coal, biofuels, solar, and wind energy sources.

3.1 ELECTRICITY

The Electricity sub-sector contributed 1.3 percent to the country's GDP in 2023. There are currently three main electricity companies in Zambia; the state-owned utility Zambia Electricity Supply Corporation Limited (ZESCO), Copperbelt Energy Corporation (CEC), and Lusemfwa Electricity Company.

The installed generation capacity in Zambia is 3790 MW, 84 percent of which is generated by hydropower, 9 percent by coal, 5 percent by heavy fuel oil, and 3 percent by solar Photovoltaic (PV). The growth in demand is estimated to be between 150MW and 200MW per annum, presenting an opportunity for investment in electricity generation.

It is estimated that Zambia possesses over 40 percent of total water resources in the Southern African Power Pool (SAPP) and has approximately 6000 MW of unexploited hydropower potential. The hydropower generation mix comprises of large, small and mini power generation stations with ZESCO owning the bulk of the generation

stations and the remainder being owned by Independent Power Producers (IPPs).

Due to the positive economic growth experienced by Zambia in the recent past and the increase in economic activities, the country has seen an increase in the demand for electricity. Increased activity in the Mining, Agriculture and Construction sectors, have contributed to the increase in the demand for electricity with peak demand increasing from 1,600MW in 2009 to 2,300MW in 2022.

The SAPP membership which comprises all countries in Southern Africa has an installed capacity of 80,923 MW. Electricity consumption by the SAPP is approximately 50,000 MW per annum with the highest consumer of electricity in the power pool being South Africa which has an average growth rate of 3 percent per annum. Other leading consumers in the region are Zimbabwe (with a growth rate of 2 percent), Zambia (with a growth rate of 3 percent) and the Democratic Republic of Congo (DRC) (with a growth rate of 3 percent).

Table 1: Electricity Demand in the Southern Africa Region

Country	Main Utility	Installed Capacity (MW)	Estimated Annual Demand (MW)	% Growth in Demand
Angola	ENE	3,129	1,869	11
Botswana	BPC	927	610	6
DRC	SNEL	2,457	1,376	3
Lesotho	LEC	70	150	3
Malawi	ESCOM	352	326	4
Mozambique	EDM	2,724	1,850	7
Namibia	Nampower	614	695	5
South Africa	ESKOM	50,774	38,897	3
Swaziland	SEB	70	232	5
Tanzania	TANESCO	1,366	1,051	8
Zambia	ZESCO	3356.6	2,194	6
Zimbabwe	ZESA	2,045	1,615	2

Source: Energy Regulation Board

3.2 PETROLEUM

Zambia imports all of its petroleum requirements that contribute about 9.4 percent to Zambia's total energy requirements. Petroleum and its derivatives run the engine of growth and development through the crucial role that they play in the production and transportation of goods and services. National petroleum consumption increased by 4.4 percent from 1.8 billion litres in 2021 to 1.9 billion litres in 2022, an increase mainly driven by an upsurge in consumption by the aviation industry.

Demand for petroleum is set to grow at 40 percent per annum mainly due to the growing economy, an increase in the number of motor vehicles, disposable income, and increased mechanization of production processes. It is also noteworthy that new investment projects in agriculture, construction and mining, which are

expected to be actualized in the medium to long term, will significantly increase the demand for petroleum products.

The procurement of petroleum feedstock in Zambia is done through an international competitive bidding process. In the past, imported Petroleum feedstock in the form of spiked crude oil, would then be transported through the 1,710 Km TAZAMA pipeline, by road and to a lesser extent by rail. This commingled feedstock was refined at the Government owned Indeni Petroleum Refinery in Ndola. However, in 2023 Government announced the transformation of the TAZAMA Pipeline from a petroleum feedstock to a low sulphur diesel carrier with the aim of reducing the pump price of diesel.

The monthly consumption of petroleum products is indicated in Table 2:

Table 2: Demand for Petroleum Products in Zambia

Petroleum Product	Monthly Consumption (millions of litres) 2022
Unleaded Petrol	0.5
Diesel /Gas Oil	105
Liquefied Petroleum Gas	8
JET-A-1	39
Heavy Fuel Oil	17
Kerosene	1

Source: Energy Regulation Board

In the petroleum industry, opportunities exist in both the upstream and downstream petroleum projects:

I. UPSTREAM PETROLEUM

Recent exploration work for petroleum covering parts of North-Western, Western and Eastern Provinces of Zambia, using the Microbial Prospecting for Oil and Gas technique, indicated

that North Luangwa basins have potential for oil and gas. Government has tendered the oil blocks for oil and gas prospecting by the private sector.

II. DOWNSTREAM PETROLEUM

The Downstream petroleum sector in Zambia has a deficit of bulk storage facilities of petroleum products. There is currently a legal requirement that mandates all Oil Marketing Company's (OMCs) operating in Zambia to keep reserves equivalent to 15 days of their working petroleum stocks. Due to the deficit in storage, most of the

OMCs have not been able to meet this requirement leading to shortages. In order to address this predicament, Government is engaging strategic partners to construct a 50 million litre Petroleum Terminal in Lusaka on a Build, Operate and Transfer (BOT) basis.

3.3 BIOFUELS

Zambia has vast potential for the production of biofuel. The biofuel subsector is characterized by a two-pronged system involving feedstock production and promotion on one hand, and biofuels production on the other. Presently, limited quantities of bio-ethanol are being produced from molasses, which are insufficient to enable blending with petrol. There is a strong drive towards the promotion of Jatropha and Bagasse as the main feedstocks for biofuels in Zambia. However, due to the infancy of the biofuels subsector, the availability of technology and knowledge of crop husbandry techniques still remain a challenge, presenting an opportunity for investment to further knowledge development and build capacity on the subject matter.

It has been estimated that approximately 84 million litres of bio-diesel and 40 million litres of bio-ethanol are required by the country per annum. With the industry still relatively in its infancy with only 5 main companies engaged in the production of biofuels in Zambia, presenting an opportunity for more investors to take part in the production of biofuels.

Zambia has a suitable climate for the cultivation of biofuel crops. Projections show that only 11 percent of the arable land would be required to satisfy the country's diesel consumption of 360 million litres per annum, using biodiesel.



3.4 COAL

Zambia's current coal deposits are located in the Southern Province and estimated to be about 80 million tonnes. Currently Zambia only has two coal mines Maamba Collieries Limited, and Collum Coal Mine, both located in the Southern Province. Other reserves have been reported in Luangwa North, Luano, Lukusashi in the Luangwa Valley and Kahare, Chunga and Lubaba in the Western Province. These reserves are estimated to be about 700 million tonnes, though more exploration

work is required to ascertain the exact quality and quantity of the deposits presenting an investment opportunity in both the exploration and mining of coal in Zambia.

Although current estimated demand for local coal is about 240,000 tonnes per annum, it is possible to develop the local market further by improving the reliability of supplies from coal mines. Major domestic customers include the copper mines, brewery companies, tobacco farmers, and manufacturers. Export opportunities exist in Malawi, Democratic Republic of Congo and other sub-regional countries. The current export market is estimated at 15,000 tonnes per month to Tanzania, Democratic Republic of Congo and Malawi.

Despite the availability of large coal reserves, the country has no coal fired plants. With the regional power deficit, Coal has the potential to become a major source of power generation given the availability of more efficient generation technologies.



3.5 RENEWABLE ENERGY

Although Zambia is endowed with Nuclear and Renewable Energy Resources, efforts to harness these resources have been minimal. Government recognizes the need for promoting renewable energy and has clearly stated its intentions in the Renewable Energy Strategy and Action plan 2022. This policy is intended to promote private sector participation in the renewable energy sector and demonstrate the country's commitment to sustainable energy.

The country has vast potential in Solar Energy with an average of 2001-3000 hours of sunshine per year. However, despite this enormous prospective the penetration of solar energy has remained relatively low due to the high initial costs of investment. To combat this challenge Government has put in place investment incentives to encourage investment in solar energy. As such, the solar market in Zambia is dominated by donor funded projects, Government, NGOs and mission institutions. Opportunities in this subsector include the local production of solar system components, setting

up grid and off grid plants, and the sale of solar panels and related accessories.

Utilization of Wind energy in Zambia is relatively low, however, data indicates wind speeds of 6 meters per second (m/s) in specific areas in the Western Province of Zambia. Government has plans to develop a wind atlas to identify areas where electricity can be generated from wind, presenting an investment opportunity in the supply of equipment for wind measurement; production of wind mills for water pumping; and more advanced technology that can facilitate the production of electricity.

Zambia has more than 80 hot springs, of which 35 were rated high in terms of surface temperature; flow rate, proximity to power lines; ease of access and relative energy potential. These springs have not been tapped for industrial or energy provision purposes, presenting an investment opportunity. At present there is only one small geothermal generation plant which was installed in the mid 1980's. Recent estimates indicate that the plant can be upgraded to produce 2 MW of electricity.





3.6 ZAMBIA'S REGIONAL COMPARATIVE ADVANTAGE

Zambia being a land-linked country with 8 + 1 neighbouring countries and a member of the Regional Economic Communities (RECs) SADC and COMESA avail the country with opportunities to excel in comparison with its neighbours by harnessing its comparative advantages. The following are a few of Zambia's comparative advantages in the energy sector;

- i. numerous water bodies accounting for over 40 percent of all the water resources in the SADC region;
- ii. peaceful and stable political environment;
- iii. investment incentives to enable the growth of the energy sector in Zambia;
- iv. favourable climatic conditions which are suitable for the production of various forms of energy; and
- v. abundant natural resources necessary for the production of renewable and non-renewable energy.

4. PROFILED PROJECTS

For existing profiled projects in the sector, please scan the QR code.



5. INVESTMENT INCENTIVES

Investors who wish to invest in a priority sector or a rural area are eligible for incentives as provided

for in the Investment, Trade and Business Development (ITBD) Act No. 18 of 2022.

Table 2: Incentive Eligibility Criteria

Investor Type	Shareholding Structure	Investment Threshold
Local Investor	100 percent shareholding	USD 50,000
Citizen owned Company	50.1 percent or greater Zambian shareholding	USD 100,000
Citizen Empowerment Company	25.1 percent-percent Zambian shareholding	USD 150,000
Citizen Influenced Company	5 percent – 25 percent Zambian shareholding	USD 500,000
Foreign Investor	100 percent foreign shareholding	USD 1000,000

Source: Investment, Trade and Business development (ITBD) Act No. 18 of 2022

5.1 INVESTMENT INCENTIVES

The Investment, Trade and Business development (ITBD) Act No. 18 of 2022 offers the following fiscal

incentives for companies investing in any priority sector or rural area:

5.1.1 FISCAL (TAX) INCENTIVES

- i. Accelerated depreciation on capital equipment and machinery including trucks and specialized motor vehicles for five years; and
- ii. Duty-free on the import of machinery, equipment including trucks and specialized motor vehicles for five years.

5.1.2 NON-FISCAL INVESTMENT INCENTIVES

Investors investing in a priority sector or rural area are entitled to the following non-fiscal incentives under the Investment, Trade and Business Development Act no. 18 of 2022;

- i. Investment guarantees and protection against state nationalization;
- ii. Free facilitation for the application of immigration permits, secondary licenses and land acquisition;

- iii. Facilitation of business and partnership linkages; and
- iv. Investment advisory on Zambia's Investment Climate, regulatory regime and investment opportunities.

5.2 SECTOR SPECIFIC INVESTMENT INCENTIVES

Investors investing in the Mining Sector are entitled to the following fiscal (tax) incentives;

5.2.1 FISCAL (TAX) INVESTMENT INCENTIVES

Investors investing in the Energy Sector are entitled to the following fiscal incentives;

- (i) Duty free on the import of machinery, equipment and other goods designed for petroleum exploration;
- (ii) Duty free on the import of electric motor cycles, electric vehicles, electric buses, electric

trucks, and attendant accessories such as charging systems; and

- (iii) Excise duty of 25 percent on hybrid vehicles designed for the transportation of persons.



6. LICENSES AND PERMITS

In order to operate a business in Zambia, an investor must obtain authorizing documentation from the following;

- i. The Patents and Companies Registration Agency (PACRA) in order to obtain a Certificate of Incorporation; and
- ii. Zambia Revenue Authority (ZRA) which assigns Tax Payers Identification Number (TPIN) Certificates.

For an investor to operate in the Energy Sector, they must also obtain licenses and permits

from the Zambia Environmental Management Agency (ZEMA) and the Energy Regulation Board (ERB).

Investors may opt to obtain a Certificate of Registration (CoR) from the Zambia Development Agency (ZDA), which is a statutory body mandated by Government to promote and facilitate trade, investment and business development.

APPENDIX I: STEPS TO BUSINESS ESTABLISHMENT

1.0 PRIMARY REGISTRATION AND LICENSES

Patents and
Companies
Registration
Agency

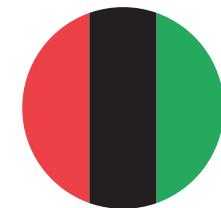


Certificate of Incorporation

Zambia
Revenue
Authority



Tax Payers Identification
Number (TPIN) Certificate



Zambia
Development
Agency

Investment Certificate

2.0 UTILITIES AND SECONDARY LICENSES



Zambia Electricity Supply Corporation (ZESCO)
• Electricity



Immigration Department
• Immigration/work Permits



Local Authorities
• Business Levy • Fire Certificate • Health Permits • Occupancy Licence



Zambia Environmental Management Authority
• Environmental licenses



Zambia Information and Communications Technology Agency
• Telecoms Licences



National Pension Scheme Authority

APPENDIX II: APPLICATION PROCESS AT ZAMBIA DEVELOPMENT AGENCY

STEP 1: CONSULTATION



General consultation through a meeting with a ZDA officer

Investor prepares necessary documents and submits to ZDA officer

Investment Promotion officer reviews documents and advises if there are any missing documents.
For complete applications, investor proceeds to the next step

STEP 2: SUBMISSION OF APPLICATION



Investor pays processing fees and brings a receipt to the ZDA officer

Officer files the application on the system server

A senior investments officer screens the application and checks for suitability

Certificate processing

Approval letter is issued

Application is processed and recommended for approval

Signing of the Certificate by the Director General

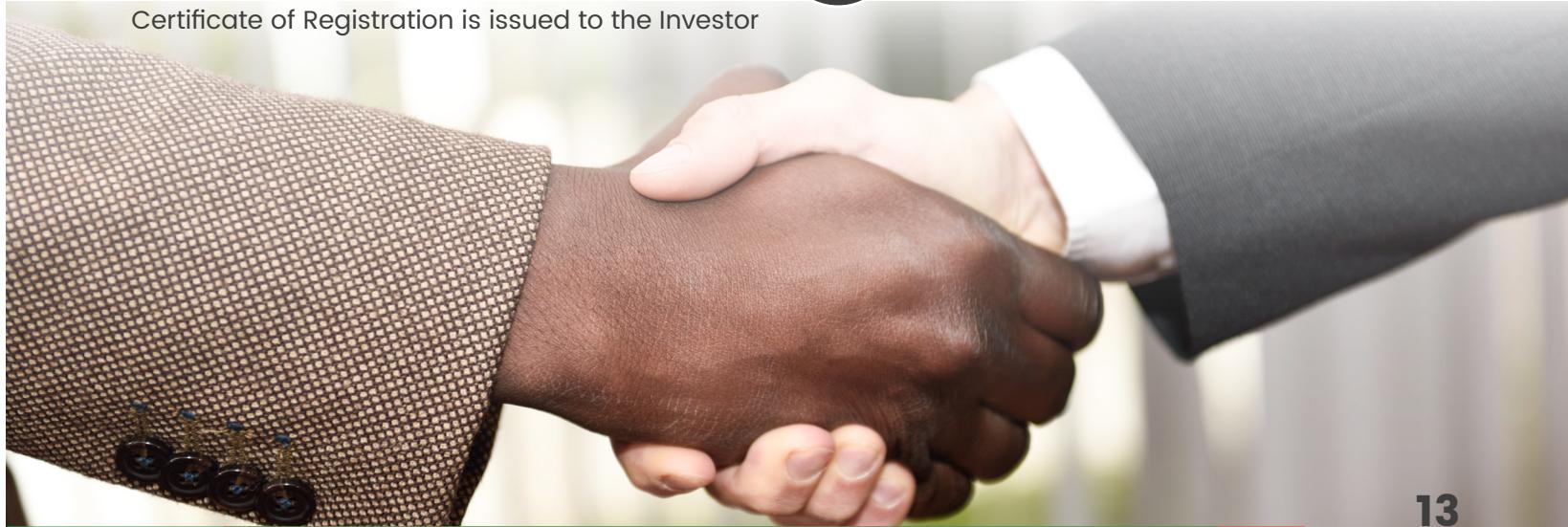
Signing of the Certificate by the Board Secretary/Legal Counsel

Secretary/Legal Counsel

STEP 3: ISSUANCE OF ZDA COR WITHIN 30 DAYS



Certificate of Registration is issued to the Investor



APPENDIX III: PROCEDURE FOR MULTI-FACILITY ECONOMIC ZONE LICENCE, INDUSTRIAL CLUSTER OR RURAL AREA PERMIT

How does a company qualify to develop an MFEZ?

Company identifies land for the development of the MFEZ and seeks approval in principle from ZDA for an area that is suitable

Once approval of suitability is obtained, Company prepares a master plan of the MFEZ

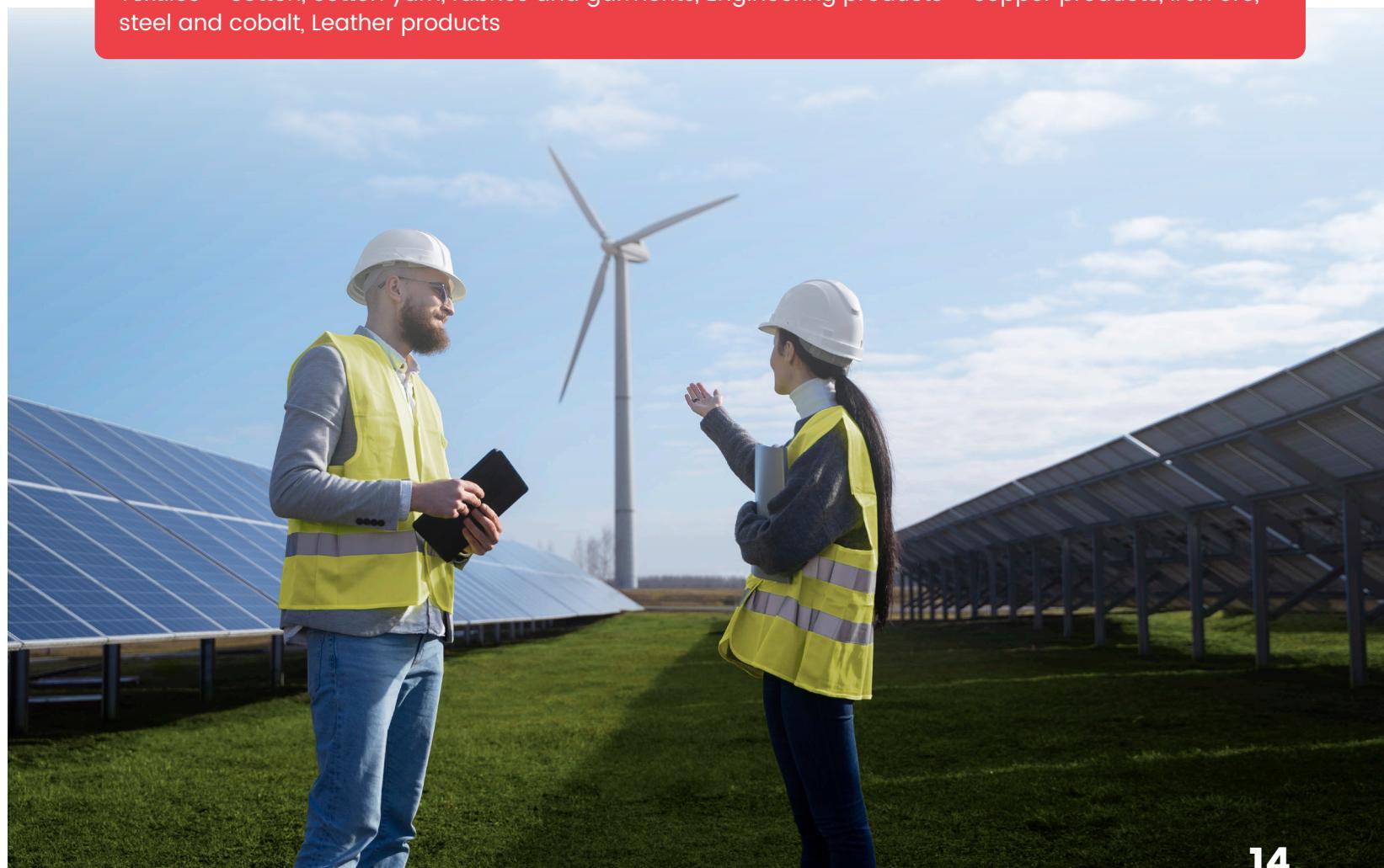
Company submits application for MFEZ Development Permit to ZDA. Application must demonstrate that the project will generate an investment of not less than US\$500,000

ZDA scrutinizes the application with a multisectoral team of local experts, in consultation with the applicant company

The application is then submitted to the ZDA Board for approval

Once the application is approved, ZDA recommends to the Ministry of Commerce that it should issue a Statutory Instrument for declaring the MFEZ

The projects located in the MFEZ that will qualify for incentives are those with investments of US\$500,000 or more. They must be engaged in production of the following products in priority sectors: Floricultural and horticultural products, Processed foods, Beverages and stimulants – tea and coffee, Textiles – cotton, cotton yarn, fabrics and garments, Engineering products – copper products, iron ore, steel and cobalt, Leather products





How does a company qualify to operate in an MFEZ?

- Investor engages with Zone Developer or Zone Management Entity for leasing of land
- Investor enters into Lease Agreement with Zone Developer
- Zone Developer or Zone Management Entity recommends to the ZDA that the Investor be issued with an MFEZ Permit to operate in the Zone/ Industrial Park
- Company submits application for an MFEZ Operator Licence
- Company pays K100 (US\$10) upon collection of MFEZ operator licence, which takes approximately 10 days from date of application
- The application is then submitted to the ZDA Board for approval
- Once application is approved, the ZDA Board issues Applicant with an MFEZ Licence

ACCOMPANYING DOCUMENTS FOR MFEZ OPERATOR LICENCE

- Certified copy of company registration/incorporation
- Certified copy of certificate of share capital
- Certified copy of the list of shareholders and/or directors
- Business plan and/ or feasibility study
- Verifiable evidence of project finance
- Brief resumés/CVs for shareholders and /or directors
- Letter from MFEZ Developer welcoming the project to be located in the MFEZ/industrial cluster or rural area
- Clear statement on how the project, if approved, will contribute to the country's economic growth and development.

APPENDIX IV: USEFUL CONTACTS

Zambia Environmental Management Agency

P.O. Box 35131, Lusaka

Tel: +260 211 2541301/

Fax: +260 211254164

Email: zema@zema.org.zm

Website: www.zema.org.zm

Lusaka Stock Exchange

P.O. Box 34523 Lusaka

Tel: +260 211 228537/ 228391

Fax: +260 211225969

E-mail: luse@zamnet.zm

Immigration Department Kent Building

P.O. Box 50300, Lusaka

Tel: +260 211252650

Fax: +260211254393/252008

Ministry of Commerce, Trade and Industry

P.O. Box 31968, Lusaka

Phone: +260 211 2283019

Fax: +260 211 226984

Email: mcti@gov.co.zm

Website: www.mcti.gov.co.zm

Patents and Companies Registration Agency

P.O. Box 32020, Lusaka

Tel: +260 211255127255127/

Fax: +260 211 255426

Email: pro@pacra.org.zm

Website: www.pacra.org.zm

Zambia Development Agency

P O Box 30819 Lusaka

Tel: +260 211220177223859/

Fax: +260 211 225270

E-mail: info@zda.org.zm

Website: www.zda.org.zm

Zambia National Tourist Board

P.O. Box 30017 Lusaka

Tel: +260 211 222714

Fax: +260 211 225174

Email: zntb@zamnet.zm

Website: www.zambiatourism.com

Zambia Revenue Authority

P.O. Box 35710, Lusaka

Tel: +260 211 223754/ 2292148-

Email: advice@zra.org.zm

Website: www.zra.org.zm

National Pension Scheme Authority Levy Business Park

Cnr. of Church and Kabelenga Roads

P O Box 51275, Lusaka

Tel: +260 211 2280468

Fax: +260 211 221195

Email: infor@napsa.co.zm

Website: www.napsa.co.zm

