INVEST IN ZAMBIA'S MINING SECTOR

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1.0 OVERVIEW OF MINING SECTOR

Zambia has a rich mining history which spans over ninety years, beginning in the colonial era when it was the world's third largest copper producer, after the US and the former Soviet Union. Mining has remained central to the Zambian economy. It has played a key role in the social and economic development of the country especially after independence when mining revenue was the main source of financing infrastructure development, creation of governance structures, setting up public service institutions, and Government administrative activities, to mention a few.

Zambia has predominantly been a copper mining country and is currently the second largest producers in Africa and seventh in the world. In the early 1970's, copper production in Zambia reached its peak of 700,000 tons. Subsequently, falling copper prices caused annual production to drop to 200,000 tons in the late 1990's. In the early 2000s, following the completion of the privatisation of the mining sector, Zambia's mining sector got a new lease of life as the new private owners of the mines restored production to the 1960s levels.

Gains from the restructuring of the Mining sector were consolidated by the global commodity market that experienced a boom in copper prices between 2007 and 2010. This development resulted in significant investment commitments by the large mining companies in Zambia resulting in the country's copper production surpassing the peak level recorded in 1972 of 700,000 tons.

Zambia's copper production grew by 7.8% from 799,329 tons in 2017 to 861,946 tons in 2018. Government expects production to surpass 1 million tons by 2020.

Zambia's endowment of mineral resources is substantial and the mineral wealth includes metals, gemstones, industrial minerals, building, and energy minerals. Production of metallic minerals dominates the mining sector. Nevertheless, the full potential of these and other known mineral deposits is yet to be realised creating greater exploration opportunities.

1.1 Geology of Zambia

Zambia comprises of a number of diverse geological terrains ranging from a stable early Proterozoic craton to structurally complex "mobile belts" and younger cover rocks. This diversity hosts considerable exploration potential. The geological complexities and multiple tectonothermal events evident in Zambia are due, in large part, to the country's unique geographic location between the massive Kasai Craton to the west and the Zimbabwe-Kaapvaal ('Kalahari') and Tanzania cratons to the south and north respectively. Inter-cratonic dislocations and the buttressing effects of these stable blocks have exerted considerable control on the geological evolution of the country.

About 80% of the country has been mapped, although a significant amount of this work is unpublished, including the reconnaissance mapping of the western and north-eastern parts of the country. Prospective investors can view the tenements map showing the locations of exploration and mining licences at the Geological Survey Department in the Ministry of Mines, Energy and Water Development.

1.2 Exploration Potential

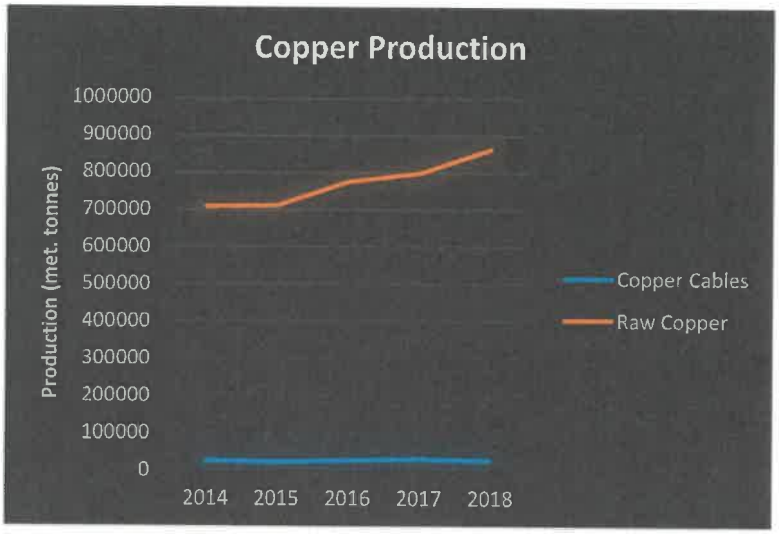
The complex geological evolution of Zambia together with its abundance and diversity of mineral and other natural resource deposits confirm the considerable potential for discovery of new resources through exploration. Promising locations are being identified through modern scientific methods by numerous exploration companies working throughout the country.

The Bangweulu Block, Kafue Anticline, Irumide Belt, Mozambique Belt, Zambezi Belt, Katanga Terrain Choma- Kalomo Block, Mwembeshi Shear Zone and the Hook Granite Complex constitute areas with exploration potential for gold, copper-cobalt, uranium, base metals mineralisation and for industrial minerals.The Karoo sediments in the Luangwa, Zambezi, and Kafue Basins are being targeted to determine their potential for energy minerals and hydrocarbons. These basins are also known to have prospects for oil.

2.0 INVESTMENT OPPORTUNITIES IN THE MINING SECTOR IN ZAMBIA

Zambia's broad spectrum of mineral resources such as copper-cobalt, gold, gemstones, a variety of industrial minerals and potential energy resources including uranium, coal and hydrocarbons, presents excellent investment opportunities in the extraction and processing of these minerals in the country.

With Government policy strongly tailored towards the promotion of value addition to minerals such as copper through the introduction of incentives such as a preferential corporate tax rate of 15% for companies that add value to copper cathodes, compared to the standard 35% for other non-incentivized firms.



Source: World Mining Data, 2019

The illustration above indicates that a tremendous opportunity exists for investment in value addition to mining products such as copper. As shown, Zambia's production of raw copper (about 790,000 metric tonnes per annum) far surpasses its production of value added copper wires/cables (about 25,000 metric tonnes per annum).

2.1. Metallic Minerals

2.1.1. Gold

The majority of the gold deposits are in the Mwembeshi Shear Zone. Significant gold deposits also occurs with copper and uranium in major thrust zones near the base of the Katanga succession. More than 300 gold occurrences have been recorded but most were only prospects. Historically, the largest producers are Dunrobin (990kg) and Matala (225kg) in the Mumbwa area, Jessie (390kg) in the Rufunsa area, and Sasare (390kg) in eastern Zambia.

2.1.2. Copper and Cobalt

Apart from the copper belt province, Copper has been identified in the north-western part of Zambia, which represents zones of detachment between Basement and Katanga sequences, and in western and central Zambia through the lower Katanga succession have generated considerable deposits. Other deposits have been found in the Mkushi area in central Zambia and in the Lusaka area. In excess of one billion tonnes of copper-cobalt ore (c.2.7 % Cu) have been extracted from the mines in the Copperbelt. Conservative estimates indicate that a further two billion tonnes may be exploited in future.

2.1.3. Zinc and Lead

In the past, Zinc ore has been mined from Kabwe in central Zambia to Kapiri Mposhi in the north. Other deposits have been discovered in the Copperbelt and in the Lower Kundelungu rocks in western Zambia. Exploration efforts continue to discover more deposits throughout the country.

2.1.4. Iron Ore

Substantial resources of iron ore have been identified, occurring primarily as sedimentary ironstones in central and western Zambia. Total deposits of more than 900Mt have been estimated, with some individual deposits of about 200Mt distributed throughout these regions.

2.1.5. Manganese

Occurrences are numerous but mostly found as small deposits around the country. Currently, small scale mining is being done in Mansa, Luapula Province. Occurrences are also known to occur around central Zambia, stretching north wise towards the north.

2.1.6. Nickel and Platinum Group Elements

Nickel is known to occur in the south and east of Lusaka. Deposits in Mwashia and north-western Zambia show evidence of hydrothermal enrichment. Minor platinum group elements are produced as a by-product of copper refining on the major Copperbelt mines and in the Munali deposit, south of Lusaka.

A variety of barite deposit types are known to occur in Zambia, the most significant being in Mporokoso within the Luongo Fold and the Thrust Zone of the Bangweulu Block.

Apatite, the most important potential source of phosphate occurs in significant concentrations in the Chilembwe deposit near Petauke , in the Rufunsa-Feira area, and Nkombwa Hill in the northern end of the Luangwa Rift.

Limestone and dolomite are abundant in the area around Lusaka and these and other deposits in Southern, North Western, Northern, and Luapula Provinces of the country have been identified as being suitable for cement and agricultural use.

Clay deposits, a considerable number of deposits of ball clay and brick clay are known to ocurr in parts of Zambia but they are rarely subjected to bench tests and firing tests. Large deposits of ball clay occur in Solwezi , while some have been recorded in Masuku in southern Zambia and in Shiwa Ngandu in Muchinga Province.

2.2 Energy Minerals

2.2.1. Uranium

Three significant types of uranium occurrences have been recorded in Zambia. These have been found in Karoo sandstones associated with the copper mineralisation of the Copperbelt as well as in the structurally

controlled mineralisation of north-western Zambia. Uranium mineralisation in the Basement domes is variously accompanied by copper and gold. These are now known to extend beyond the Lumwana Malundwe deposit in north-western Zambia. Major exploration activities are underway in southern Zambia as well as around the Siavonga area in the Gwembe valley.

2.2.2. Coal

Zambia possesses substantial coal resources and has been producing coal since 1967 from the Maamba mine near Lake Kariba in southern Zambia. The Maamba deposit and other known coal occurrences are confined exclusively to the lower-Karoo Gwembe Formation within a series of fault-controlled basins that comprise the Mid-Zambezi Rift Valley. Other reserves been identified in the Gwembe Formation of the Luangwa and Luano-Lukusashi Valleys and in the eastern part of the Barotse Basin in western Zambia.

2.2.3. Hydrocarbons

Historically, the country has had two major exploration programs by Mobil and Placid Oil undertaken between 1986 and 1991 within the Luangwa Rift Valley, one was terminated before intersecting the most favorable reservoir horizons. Considerable thicknesses of littoral and continental sediments underlain by carbonaceous rocks with oil generating potential are present in the Luangwa and Mid-Zambezi Valleys. Recent exploration work for petroleum covering parts of North-Western, Western and Eastern Provinces of Zambia, using modern exploration techniques indicated that the Okavango and North Luangwa basins have potential for oil and gas. Government has tendered the oil blocks for oil and gas prospecting by private sector.

3.0 LEGAL FRAMEWORK

The investment framework in the mining sector is regionally competitive and tailored to enhance private sector participation in the sector. The Mines and Minerals Development Act No. 11 of 2015 was enacted to guide the mining, exploration, and processing of minerals as well as environmental and administrative issues. The main features of this act are:

- Types of Mining Rights
- Acquisition of Mining Rights
- Rights/Obligations Conferred on the Mining Right Holder
- Transferability of Mining Rights
- Safety, Health and Environment and Provides for the Environmental Protection Fund
- Mineral Royalties, Fees and Charges, and Export of Minerals

3.1 Types of Mining Licenses

STRUCTURE OF MINERAL RIGHTS IN ZAMBIA

Type of right	**Large-scale prospecting licence (PL)**
Place of application	Registry for Mineral Rights (RMR)
Required documents or data	■ Prescribed form and payment of fee ■ Name and applicant information ■ Description and plan for the applied area ■ Statement about the target minerals ■ Mineral rights previously granted to the applicant ■ Such further information as may be prescribed by the minister
Validity	Two years for the initial period, and two renewals for two additional years each, plus one more year. Maximum total of seven years
Maximum surface	1,000km^2 up to a maximum cumulative of 5,000km^2
Rights granted	Exclusive rights for prospecting (for minerals specified in licence)
Other comments	50% relinquishment is mandatory for renewal

Type of right	**Small-scale prospecting permit**
Place of application	Registry for Mineral Rights (RMR)
Required documents or data	■ Prescribed form and payment of fee ■ Statement of the ores, other than gemstones, to be prospected ■ Description of the land and a plan of the proposed mining area ■ Sum to be expended ■ Mineral rights previously granted to the applicant
Validity	Two years, not renewable
Maximum surface	10km²
Rights granted	Exclusive rights for prospecting operations in the granted area, excepting gemstones

Type of right	**Artisanal mining right**
Place of application	Regional Mining Bureau
Required documents or data	Prescribed form and payment of fee
Validity	Two years, not renewable
Maximum surface	6.68ha
Rights granted	Exclusive rights for exploration and mining operations in the granted area
Other comments	A zone description and sketch map are not mandatory with the application, but must be attached to the right itself

Type of right	**Large-scale mining licence**
Place of application	Registry for Minerals Rights (RMR)
Required documents or data	■ Prescribed form and payment of fee ■ Period for which the licence is sought ■ Statement about the deposit, including reserves and mining conditions ■ Programme for mining operations and capital investment ■ Environmental management plan ■ Expected infrastructure requirements ■ Plans for employment of Zambian citizens ■ Description of the land and a plan of the proposed mining area ■ Such other information as the Minister may reasonably require
Validity	25 years and additional renewal periods of 25 years each. Total duration unlimited
Maximum surface	250km² per licence
Rights granted	Exclusive rights for prospecting and mining operations in the granted area

Type of right	**Small-scale mining licence**
Place of application	Registry for Mineral Rights (RMR)
Required documents	■ Prescribed form and payment of fee ■ Description of the land and a plan of the proposed mining area ■ Identify the relevant prospecting permit ■ Description of the mineral deposit ■ Programme of mining operations ■ Applied duration ■ Such other information as the director may reasonably require
Validity	Ten years, not renewable
Maximum surface	400ha
Rights granted	Exclusive rights for mining operations in the area, excepting gemstones
Other comments	It can be transformed into a large-scale mining licence

Type of right	**Large-scale gemstone licence**
Place of application	Registry for Mineral Rights (RMR)
Required documents or data	■ Prescribed form and payment of fee ■ Area description and sketch ■ Statement of the gemstone deposit ■ Programme for mining operations ■ Such other information as the Director may reasonably require
Validity	■ Ten years, and additional renewals of ten years each. Total duration, unlimited.
Maximum surface	250km²
Rights granted	Exclusive rights for mining operations for gemstones in granted area
Other comments	The large-scale gemstone licence is tranferable

3.2 Mining Taxes

3.2.1 Underground Mining Operations

"Underground Mining Operations" means any working beneath the surface of the ground, which is accessed by means of a ramp, adit, raise, shaft or winze, but does not include an open pit mine or quarry.

Applicable Taxes for Open Cast Mining Operations are as follows:

- **Corporate Tax;**
  - 35% corporate income tax
  - 15% for companies involved in value addition to copper cathodes
- **Mineral Royalty;**
  - 8% mineral royalty tax
  - 10% mineral royalty when the price of copper exceeds US$ 7,500
  - Mineral royalty tax is non-deductible for income tax purposes

3.2.2 Other Taxes applicable to Mining Operations

- Import duty of 5% on copper and cobalt concentrates
- 15% export levy on precious metals including Gold
- 15% export duty on manganese ores and concentrates
- ZMW 3,300 exempt threshold for pay as your earn (personal income tax)

3.3Prescribed Fees/Charges

The prescrivbed fees and charges applicable to various mine licences are as follows.

TYPE OF LICENCE	VALIDITY PERIOD	LICENCE FEE (ZMK)	AREA CHARGES (ZMK/ha/year)						
LARGE SCALE MINING OPERATIONS			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Prospecting Licence	2 years. Renewable – 7 years maximum tenure	1,800	0.720	0.720	2.160	2.160	2.880	2.880	3.960
			MINIMUM EXPENDITURE (ZMK/ha/year)						
			7.20	7.20	21.60	21.60	28.80	28.80	39.60
Large Scale Mining Licence	25 years. Renewable	28,800	**AREA CHARGES (ZMK/ha/year)**						
			10.080	10.080	10.080	10.080	10.080	10.080	10.080
Large Scale Gemstone Licence	10 years Renewable	28,800	36.00	36.00	36.00	36.00	36.00	36.00	36.00
SMALL SCALE MINING OPERATIONS			**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**
Prospecting Permit	5 years Renewable	540	**AREA CHARGES (ZMK/ha/year)**						
			0.360	0.360	0.900	0.900	1.440	N/A	N/A
Small Scale Mining Licence	10 years Renewable	2,700	5.040	5.040	5.040	5.040	5.040	5.040	5.040
Small Scale Gemstone Licence	10 years Renewable	2,700	9.00	9.00	9.00	9.00	9.00	9.00	9.00
ARTISANAL MINING									
Artisan Mining Rights	2 years Renewable	540	2.520	2.520	N/A	N/A	N/A	N/A	N/A
OTHERS – NON MINING									
Mineral Processing Licence	15 Years. Renewable	28,800							
Transfer Fee (large scale mining operations)		28,800							
Transfer Fees (Small scale mining operations)		2,700							

4.0 INVESTMENT INCENTIVES IN THE MANUFACTURING SECTOR

The Zambia Development Act provides for investment thresholds that have to be met to qualify for fiscal and non-fiscal incentives.

1. Investors that invest not less than US$500,000 in a Multi Facility Economic Zone, an Industrial Park, a Priority Sector, or in a rural area are entitled to the following fiscal incentives:

(i) Accelerated depreciation on capital equipment
(ii) Duty free import of equipment and machinery

In addition to fiscal incentives, the above category of investors is entitled to the following non-fiscal incentives;

(i) Investment guarantees and protection against expropriation;
(ii) Free facilitation of immigration permits, secondary licenses, land acquisition and utilities

2. Investors that invest an amount not less than US$250,000 in any sector are entitled to non-fiscal incentives as follows:

i. Investment guarantees and protection against expropriation; and
ii. Free facilitation of immigration permits, secondary licenses, land acquisition and utilities

APPENDIX 1: STEPS WHEN STARTING A BUSINESS

1. Patents and Companies Registration Agency

- Certificate of Incorporation

2. Zambia Revenue Authority

- Tax Payers Identification Number (TPIN) Certificate

3. Zambia Development Agency

- Investment Certificate

4. Utilities and Secondary Licenses such as:

ZESCO Ltd

- Electricity

Zambia Environmental Management Agency

- Environmental licenses

Immigration Department

- Immigration/ work Permits

Ministry of Mines and Mineral Development

- Mining licenses

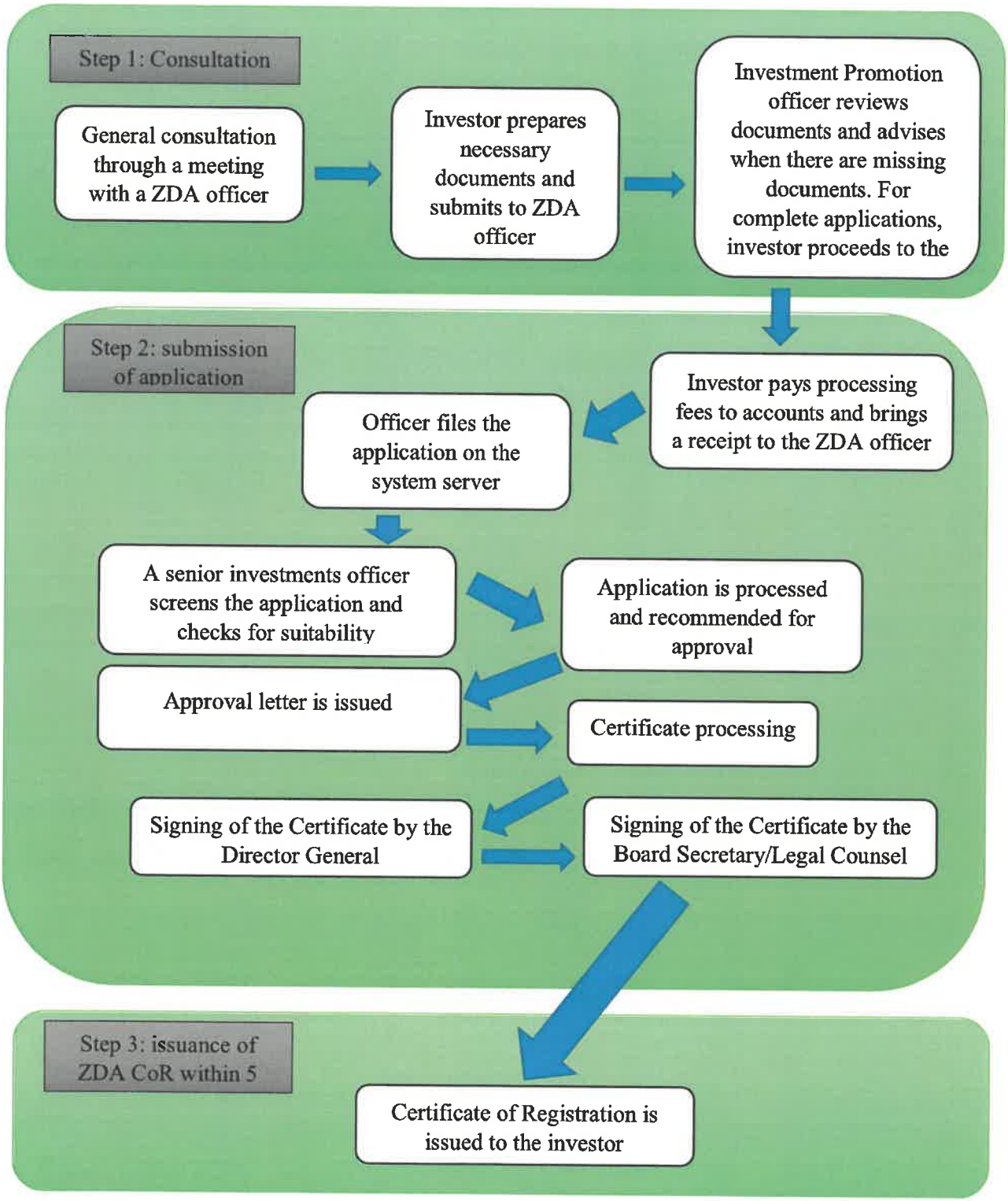
Local authorities

- Business permits/Land

National Pensions Scheme Authority

- Social security

APPENDIX 2: APPLICATION FOR A ZDA CERTIFICATE



APPENDIX 3: USEFULL CONTACTS

NAME	ADDRESS	TELEPHONE	EMAIL
1. Zambia Development Agency (ZDA)	P.O Box 30819, Lusaka	260-211-220177	info@zda.org.zm
2.Chamber of Mines in Zambia	Mpile Office Park		2.Chamber of Mines in Zambia
3.Zambia Environmental Management Authority (ZEMA)	P.O Box 51254, Lusaka	260-211-254130 260-211-254023 260-211-254059	zema@zema.org.zm
3. Ministry of Mines, Energy and Mineral Development (MMEWD)	P.O Box 51254, Lusaka	260-21154686260211-251337	info@mmmd.gov.zm www.mmmd.gov.zm/
4. Office for Promoting Private Power Investment (OPPPI)	P.O Box 36079, Lusaka	260-211-255184	www.opppi.gov.zm/
5. National Water Supply and Sanitation Council (NWASCO)	P.O. Box 34358, Lusaka - Zambia	260 211 226941/2 260977790138 Complaints: Toll Free 5252	mails@nwasco.org.zm
6. ZESCO	P.O Box 33304, Lusaka	260-211-361111	zesco@zesco.co.zm
7. Zambezi River Authority	P.O Box 30233, Lusaka	260-211-227971 260-211-227972 260-211-227973	info@zaraho.org.zm zaraho@coppernet.zm