

RESETTLEMENT POLICY FRAMEWORK FOR THE LUSAKA

RP1418

TRANSMISSION AND DISTRIBUTION REHABILITATION PROJECT

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ACRONYMS

DACO	District Agricultural Coordinator
ECO	Environmental Coordinator
ESIA	Environmental and Social Impact Assessment
EIS	Environmental Impact Statement
EMA	Environmental Management Act
ESD	Environment and Social Affairs Department
FRP	Full Resettlement Plan
IFC	International Finance Cooperation
OP	Operational Policy
PAP	Project Affected Properties
PCR	Physical Cultural Resources
PIAs	Project Impact Areas
PIU	Project Implementation Unit
RCAP	Resettlement and Compensation Action Plan
RPF	Resettlement Policy Framework
TDRP	Transmission Distribution and Reinforcement Project
WB	World Bank
ZEMA	Zambia Environmental Management Agency

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I PROJECT DESCRIPTION

Recent studies on the linkages between energy access and employment and poverty reduction in Burkina Faso, Kenya, Mali, Malawi, South Sudan, and a sub-regional study in Southern Africa strongly suggest that increasing energy access is a necessary precondition for growth and employment¹

While Zambia was not specifically included in these studies, the similarity of its economic performance and energy access situation to other African countries suggests that the above findings could also apply to Zambia. The proposed project will facilitate access to reliable electricity and will foster growth and employment in project target areas.

ZESCO has four operational divisions (Lusaka, Copperbelt, Northern, and Southern), and the transmission/ distribution infrastructure in all four divisions needs to be strengthened. However, Lusaka is given priority due to the fact that the majority of industrial, commercial, and household customers of ZESCO are located in this division, and the load growth in Lusaka is higher than other ZESCO divisions. Additional funds from KfW will take care of the investments needs to strengthen the transmission and distribution infrastructure in the other ZESCO divisions in a second phase.

The proposed project will reinforce and upgrade the power transmission and distribution infrastructure in Lusaka area as a priority to increase the capacity and improve the reliability of the electricity network for all consumers throughout the area. This will improve the quality of electricity supply to existing customers and facilitate connection of new customers.

Lusaka area is one of the key economic hubs of Zambia with a population of about 1.4 million, more than 65 percent of which have access to electricity services. The city center has a significant commercial demand being supplied at 11kV from Coventry substation. West of the city center consists mainly of industrial sites, also supplied from Coventry substation. South West of the city center has high density, low income residential compounds, a large portion of which consist of unbilled customers with a fixed electricity usage. The residential areas at the north of the city are of lesser density and of medium income. The East of the city has high income and low to medium density. The outskirts of Lusaka are bordered by plots / small holdings and large farming areas.

The Lusaka transmission network is supplied by two main supply stations, Leopards Hill substation in the East of the city and Lusaka West substation in the West of the city. These substations supply the three main bulk supply points (BSP) into Lusaka: Coventry, Roma and Waterworks. These BSP's further supply 33kV distribution substations throughout the area, which in turn supply the 11kV distribution network.

The recorded 2011 Lusaka demand is approximately 450MVA. This is a suppressed load which implies that the Lusaka system peak could be higher (up to 10 percent higher). The transmission and distribution networks do not currently have sufficient capacity to supply this demand, resulting in periodic load shedding. The historical

¹ Integrating Energy Access and Employment Creation to Accelerate Progress on the MDGs in Sub-Saharan Africa; United Nations Development Programme, April 2012.

load growth in Lusaka averages about 6percent per year and is estimated to continue to grow at this rate in the short to medium-term.

A recent study by ZESCO's consultants has confirmed that significant network reinforcements are required within the Lusaka area to adequately support the existing and predicted medium and long-term demand arising from increased consumption of existing customers as well as potential new customers.

The increase in demand for electricity is also due to the increase in the connection rate in the Lusaka Division. ZESCO is currently adding around 30,000 additional customers in the Lusaka Division each year.

The ongoing IDA financed IAES project (P077452) directly supports increase access through grid extension, intensification and connection fee subsidies for low income households. Other partners have recently expressed interest in supporting the connection fee subsidy program for low income households. These funds along with the investments in the energy infrastructure under the proposed project could increase energy access and provide electricity to a greater number of low income households in rural areas. The results will be monitored through the IAES project's results framework.

Looking at the demand side, high connection fees for households in rural areas (about \$200 per household for new basic connections) are often the main obstacle to electrification and the main reason why it often takes years for the consumers to be connected after the grid has been extended to their communities. Programs and subsidies for connection costs (from a delayed monthly payment of the connection fee over a relatively long period to a complete subsidy) are a cost effective way of increasing electricity access.

Although this project will not have a specific component for access, it will be complementary to the ongoing IAES project which directly supports increased access to electricity services. The project will improve the capacity and quality of electricity access and it will allow better voltage levels, improved reliability, and lesser load shedding during peak hours. Moreover, it will also strength and improve the performance of existing system, allowing a greater number of connections. This will help satisfy the power demand growth.

Project Components

The proposed project consists of the following three components.

Component 1: Rehabilitation of the 132kV and 88kV Transmission Network in Lusaka Area (estimated US\$150). This component will include:

- (a) *Lusaka Transmission Ring Upgrade:* This sub-component aims at increasing the transfer capacity of the transmission ring which supplies the Lusaka area to enhance the security of supply and to satisfy future load growth. It includes: (i) Replacement of the existing 50km of the old 132kV (86MVA) lines which are installed on lattice steel towers between the Leopards Hill – Roma – Lusaka West substations , with a new 132kV (300MVA) transmission line on compact monopole double circuit structures; (ii) Replacement of about 10km of the old 132kV (86MVA) lines which are installed on lattice steel towers between Lusaka West and Coventry substations with a new132kV (400MVA) transmission line on compact monopole double circuit structures; (iii) replacement of about 22km of two old 88kV (57MVA) lines which are

installed on standard towers between Waterworks and Leopards Hill substations with a new 132kV (200MVA) transmission line on compact monopole double circuit structures; and (iv) construction of 132kV looping in/out lines for Kanyama, Bauleni and Matero substations .

(b) *Upgrade of existing Bulk Supply Point Substations of the transmission ring:* This sub-component would focus on the upgrading of the capacity of transformers at the existing BSPs to allow the evacuation of power supply to the distribution network. The activity under this sub-component concerns the upgrading of the transformers, switchgear and other equipment at existing BSPs including Leopards Hill, Lusaka West and Waterworks substations. For Waterworks substation, the 132/33kV transformation would be upgraded to 2x 90MVA and the 132/11kV transformation would be replaced by 3x 30MVA. For Leopards Hill and Lusaka West substations, the 330/132kV transformation would be upgraded to 3x 250MVA.

(c) *Upgrade/Construction of 132kV substations and lines (estimated US\$ 86million):* The upgrading and construction of 132kV substations and lines at strategic locations would increase the capacity and reliability of the network by enhancing its configuration. This sub-component would consist of the following activities: (i) *construction of new 132/11kV substations*, including the construction of new 132/11 kV 3x30MVA substations at Kanyama, Roma, Chawama, and Ibex; (ii) *upgrading of existing 132/11kV substation*, including the upgrading to 3x30MVA or to 2x30MVA of the Bauleni, Matero, Chongwe, and Unza substations and the corresponding 132kV line extensions throughout the network as recommended by ZESCO's consultants; (iii) *upgrading of 88kV lines to 132kV and construction of 132kV new lines*: this activity includes the upgrading of the Leopard Hill –Chongwe – Figtree 88 kV line to a 132kV - 200MVA line, and the construction of 132kV 200MVA lines between the following substations: Leopards Hill –Ibex; Ibex-Unza; and Lusaka West - Mungwi Road.

Component 2: Rehabilitation of the 33kV and 11kV Distribution Network in Lusaka Area (estimated US\$80). This component consists of the following sub-components:

(d) *Upgrading of existing distribution substations:* This sub-component will upgrade the transformers, switchgear, busbars and other equipment as needed in the 33/11kV distribution substations throughout Lusaka area to ensure that each substation will have adequate firm capacity to handle the load growth in the mid-term based on N-1 criterion. This activity includes the following substations: Kamwena, Woodland, L85, Kabulonga, Makeni, Kabangwe, Chelstone, and Barlastone. The completion of the activities of this sub-component would increase the reliability of the distribution networks

(e) *Construction of new substations, new switching stations, and associated lines:* Due to the continuing growth of Lusaka's commercial and residential areas, construction of a few distribution substations at strategic locations will be necessary. These substations are required to eliminate low voltages, maintain flexibility and support new development. The construction of new 33/11kV substations includes Chalala substation of 2x20MVA and Workshop substation of 3x30MVA. The construction of 11kV switching stations and corresponding lines is also recommended by the Consultant to supply the growing demand

from bordering substations which have excess capacity in order to delay capital investment related to the construction of new substations. The construction of switching stations and 120sqmm corresponding lines includes the following sites: Roma, Chalala, Bauleni, Kanyama, Chawama, Ibex, and Unza. The completion of the activities of this sub-component would enhance the reliability of the distribution networks.

(f) *Construction of 33kV underground lines:* This sub-component will involve construction of about 145 km of underground 33kV cables in Lusaka to 300 millimeter square Cross-Linked Polyethylene (XLPE) cables. Due to lack of firm capacity and interconnectivity on some 33kV lines, these reinforcements will increase security and reliability of supply. The installation of cables would include the following connections between substations: Roma-Kamwena; Waterworks-Chalala; Coventry-Workshop; Lusaka West-L85;

(g) *Upgrading / extension of the distribution control system:* The sub-component involves upgrading of the Lusaka Division Control Centre's computer and software, extending the Supervisory Control and Data Acquisition (SCADA) facilities to all 33kV and 11kV Substations.

Component 3: Technical Assistance and Project Supervision (estimated US\$10).

This component will support:

(h) *Technical assistance* to ZESCO in designing, developing and executing investment projects for improved service delivery;

(i) *Funding for identification and preparation* of new energy infrastructure projects;

(j) *Environmental and social mitigation activities* as detailed in the Project's Environmental Impact Assessment and Resettlement Policy Framework (RPF);

(k) *Financing* of Engineering and Project Implementation Management consultants;

(l) *Strengthening* of the project implementation team's capacity and financing of the operating expenses of the Project Implementation Unit (PIU).

In addition, implementation of the following activities will be completed by ZESCO:

(m) Upgrading of the existing 88kV lines of about 7km between Coventry BSP and Waterworks BSP to 132kV lines to increase the thermal capacity from its current 57MVA value to a capacity of at least 200MVA;

(n) Installation of 2x45MVA 132/11kV transformers and construction of line bays at Coventry substation;

(o) Replacement of about 22 km of 132 kV (86MVA) conductors between Coventry and Leopard Hills on the existing towers to increase the line capacity from the current capacity of 86MVA to a capacity of at least 200MVA;

(p) Installation of the new 330kV Lusaka South BSP with 3x150MVA 330/132kV transformers; and 2x90MVA 132/33kV transformers to de-load transmission substations including Leopard Hills BSP and to accommodate the Lusaka South Multi Economic Facility Zone project and future load growth in the areas.

(q) Construction of the following 200MVA 132kV lines:

- (i) Line between Lusaka South substation and Waterworks substation;
- (ii) Line between Lusaka South substation and Chilanga1 substation;
- (iii) Line between Chilanga1 substation and Chilanga2 substation.

ZESCO is currently in the process of determining and establishing specific sites and designs. Once these sites have been identified and designs completed, if it is determined that land acquisition is required, or assets impacted, a Resettlement and Compensation Action Plan will be prepared based on standards and guidelines provided in this RPF.

Although the Lusaka Transmission Line passes through an urban setting, there are no permanent structures built under the lines where upgrading activities would need to operate. There are some areas where people have encroached in the wayleave for cropping purposes. It is possible that ZESCO could time their upgrading activities after crops are harvested thus dramatically reducing the number of people impacted by project activities. Once ZESCO has completed their upgrades, people would be allowed to continue their cropping activities. With the replacing current steel structures with monopoles, this will result in a smaller footprint for electric poles. Therefore, once the project has been completed, people will have an even greater area by which to utilize for crops.

The area with the most congested encroachment is between Coventry and Water Works Substations. Upgrades will be funded by GRZ through ZESCO, and is not classified as an associated project with World Bank funded upgrades. ZESCO, however, is committed to reducing negative impacts, in line with World Bank policies.

Congestion consists of a localized area where temporary tables area set up for an informal, temporary, open air market. ZESCO will consult and coordinate with the venders, Marketeers Association of Zambia, Lusaka City Council, and Lusaka District Development Committee to determine what areas will be impacted and mitigation measures that could be implemented. It may be possible to allow venders to continue their trading activities in areas adjacent to their current location, in cooperation with ZESCO activities, without experiencing negative impacts on their economic activities.

II. RESETTLEMENT POLICY FRAMEWORK PURPOSE AND OBJECTIVES

The most important concerns of the RPF are to ensure that, where land acquisition is anticipated obligatory and related adverse impacts cannot be avoided, affected persons are compensated for lost assets. This RPF for TDRP must therefore provide procedures and methods to identify and compensate the affected persons.

The specific objectives of this Resettlement Policy Framework are to:

- i) Minimize and mitigate impacts of involuntary resettlement resulting from all components of projects under TDRP.

ii) Ensure that people adversely affected by projects are fully compensated for loss of assets, livelihoods, access rights, etc. and successfully relocated, the livelihoods of impacted people are re-established and the standard of living improved.

iii) Ensure that no impoverishment of people shall result as a consequence of compulsory land acquisition or impact on assets, for purposes of implementing TDRP project.

iv) Assist adversely affected persons in dealing with the psychological, cultural, social and other stresses caused by compulsory land acquisition.

v) Make all affected persons aware of processes available for the redress of grievances that are easily accessible and immediately responsive.

vi) Have in place a consultative, transparent and accountable involuntary resettlement process with a time frame agreed to by the project implementer and the affected persons.

vii) Provide adequate assistance in form of transport, temporary accommodation, housing, training capacity building, service provision etc to the project affected persons (PAPS)

As such this RPF clarifies the principles for social impact mitigation with regards to compensation for impact on property, livelihood and relocation or resettlement. The operational framework is to provide guidelines to stakeholders participating in the mitigation of adverse social impacts of the project, in order to ensure that Project Affected Persons (PAPs) will not be impoverished as a result of project activities. Best Practice implies that PAPs should be compensated for any attendant loss of livelihood; compensated for loss of assets at replacement costs; given opportunities to share project benefits; and be assisted in case of relocation or resettlement.

Ideologically, the purpose is to restore the income earning capacity of the PAPs with the aim of improving or at the very least sustaining the living conditions of the PAPs prior to project operations or to resettlement. PAPs must be no worse off than prior to resettlement. Also critical to the resettlement process is that the PAPs are involved, through appropriate consultation, in drawing up the resettlement plans that affect them. It should be noted that even where there is no physical displacement but people lose access to assets, such as land for farming, the requirements to produce and implement a RCAP are full filled.

III. DESCRIPTION OF THE PROCESS FOR PREPARING AND APPROVING RESETTLEMENT and COMPENSATION ACTION PLANS (RCAPS)

According to the World Bank Operational Policies on involuntary resettlement preparation of a resettlement instrument is a condition for appraising projects involving potential for involuntary resettlement. In case of programs/projects, the Bank requires that a satisfactory resettlement and compensation action plan or an abbreviated resettlement plan that is consistent with the provisions of the policy framework be submitted to the Bank for approval before the project is accepted for Bank financing (WB OP 4.12).

People who are affected and are eligible will have to be compensated before any implementation is commenced as per World Bank OP 4.12. The acquisition of land and the related impact on assets may take place only after the affected persons have been provided compensation. It is also a requirement of the WB OP 4.12 that measures to assist the affected persons be implemented as per the project's resettlement and compensation plan of action.

Screening Mechanism for Resettlement and Compensation Action Plans

Resettlement and Compensation Action Plans which would be prepared shall include measures to ensure compliance with policy directives. Furthermore, the implementation schedule of these policy measures should ensure that no individual or affected household would be impacted by project's civil works activity before compensation is provided.

Scope of Resettlement and Compensation Action Plans (RCAPs)

Overall responsibility for preparing a RCAP will lie with the ZESCO Program Implementation Unit (PIU). The PIU shall ensure that a RCAP that conforms to this RPF and to the requirements of the World Bank OP 4.12 is prepared. The RCAP is a detailed time bound plan of action plan outlining the following among others: - resettlement objectives, strategic options, responsibilities, approvals, entitlements, actions; and monitoring and evaluation. The process to be followed in preparing a RCAP shall involve several steps as outlined in the following sections.

Preliminary Assessments

The initial preliminary assessments and surveys should include (i) potential social impacts, (ii) direct consultations with individuals and groups who are expected to be directly affected by project activities; and (iii) identification of the major population groups that may be affected by the proposed project. These surveys and assessments at this preliminary stage would form the basis for preparing the terms of reference for the RCAPs Social Assessment Component.

Preliminary Information

Preliminary information is required to be provided to ZESCO – PIU as early as possible. The required information shall include a description of the nature, scope and location of the proposed project impacts, accompanied by location maps and any other details as may be required by the PIU. If the preliminary information submitted to ZESCO should indicate that the project has potential for land acquisition, impact on assets, loss of livelihood or restriction of resource use, then this RPF is triggered and a RCAP needs to be prepared.

It is expected that any impacts experienced would be temporary in nature. If it's determined that substation upgrades must expand beyond their current footprint, it is quite possible to either expand into the electric line wayleave already owned by ZESCO, or utilize adjacent unused land owned by the government. ZESCO would also be willing to approach land owners in a willing buyer – willing seller

arrangement. If the land owner is unwilling to sell, then ZESCO would approach other land owners who may be anxious for an opportunity to sell land.

In areas where people have encroached into the wayleave for cropping purposes, ZESCO would allow for crops to be harvested before implementing transmission line upgrades. People would be allowed to continue using the area for similar low-level crops currently being grown. It is foreseen that because the new monopoles require less space than current steel structures, upgrading of the t-line will actually have a positive impact for those cropping in the wayleave as there would be more space available in the future.

Impacts between Coventry and Water Works Substations, being funded by GRZ through ZESCO, would impact on venders who set up temporary tables for a daily informal, open-air market. These venders are highly mobile as witnessed during the rainy season where venders relocated to alternate areas due to flooding and stagnant water.

The venders occupy a very small portion of the transmission line, concentrated near to the Coventry Substation. Due to the extreme mobility and temporary nature of the vending activities, it can be possible for ZESCO to work in cooperation with the venders such that venders would experience no noticeable reduction in their economic activities. In fact, with an influx of workers in the area, venders may experience an increased customer base. ZESCO would work directly with the venders as well as Marketeers Association of Zambia, Lusaka City Council and Lusaka District Development Committee to ensure venders are able to continue with their business practices without experiencing negative impact on their income.

Socio-economic Baseline Census

This shall be carried out to provide baseline data on various factors including the following:-

- **Identification of current occupants of the affected area**, to establish the basis for the design of the resettlement program and to exclude subsequent inflows of people from eligibility for compensation and resettlement assistance;
- **Standard characteristics of impacted persons**, including a description of production systems, labour, and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities) and standards of living (including health status) of the impacted population;
- **The magnitude of the expected loss** of assets, total or partial, and the extent of impact;
- **Information on vulnerable groups** or persons for whom special provisions may have to be made;
- **provisions to update information** on affected peoples' livelihoods and standards of living at regular intervals to ensure most recent information at the time of impact ;

- **Land tenure and transfer systems**, including an inventory of common property natural resources from which people derive their livelihoods and sustenance, non-title-based usufruct systems (including fishing, grazing, or use of forest areas) governed by local recognized land allocation mechanisms, and any issues raised by different tenure systems in the project area;
- **The patterns of social interaction** in the affected communities, including social networks and social support systems, and how they will be affected by the project;
- **Public infrastructure and social services** that will be affected; and
- **Social and cultural characteristics of affected communities**, including a description of formal and informal institutions (e.g., community organizations, ritual groups; and Non-Governmental Organizations (NGOs)) that may be relevant to the consultation strategy and to designing and implementing the resettlement activities.

The preliminary assessments and information and the socio-economic baseline census will assist in determining the cut-off date, period of registration of claims and valuation of land and immovable assets.

It is unlikely that the upgrade activities will encounter immovable assets. Instead, most items impacted will be crops being grown under the transmission and distribution line or a small, congested area of a daily, open air, informal market. This market consists of temporary tables set up by vendors each day and has shown to be quite mobile thus numbers dramatically differs each day and according to the season. Due to the fluctuation, it cannot be determined the number of vendors who may be impacted or crop fields that maybe affected, although it could be less than 1000.

It is possible to reduce the number of impacted people by waiting for crops to be harvested before implementing project upgrades. ZESCO would also be able to establish a vendor market area adjacent to the current location which would not cause negative impacts on economic activities. With proper timing, it may be possible that no cropping activities would be impacted. This would need to be determined once project activity places are finalized.

Resettlement and Compensation Action Plan Contents (RCAP)

If the preliminary assessments (scoping and screening exercises) indicate the need for involuntary resettlement, then a RCAP shall be prepared in accordance with this Resettlement Policy Framework, World Bank Safeguard Policy and the relevant Zambian legal requirements. The preparation of the RCAP will be done by ZESCO – Environment and Social Affairs Department.

The contents of a RCAP will include:

1. Project description
2. Guiding principles for resettlement
3. Process for developing subsequent resettlement and compensation action plan
4. Census of affected population
 - Number of potentially affected people
 - Demographic and social economic profile

- Income services and livelihood practices in the subproject area
5. Eligibility criteria
 - People to be affected
 - Grievance redress if required for people already affected
 6. Legal frameworks
 - Host country legal requirements
 - World Bank policies and procedures
 7. Methodology for valuation of assets and potential loss of all other income opportunities and assets – including:
 - specific compensation rates and standards
 - detailed cost estimates
 8. Alternative income generation opportunities
 9. Income restoration plans for specific subprojects
 10. Organisational responsibilities
 11. Implementation process and schedule
 12. Grievance redress mechanism
 13. Finding and cost of resettlement
 14. Consultative mechanisms
 15. Monitoring of resettlement

Resettlement and Compensation Action Plan Approval Process

ZESCO shall ensure that the draft RCAP is made available at a place accessible to impacted persons, local NGOs, and other interested parties in a form, manner and language that are understandable to them once a draft RCAP has been prepared.

The Draft RCAP shall be transmitted to the World Bank for appraisal and review at the same time. Once the RCAP has been finalized, the World Bank shall also make the RCAP available to the public through its Info-Shop. The final RCAP will also be disclosed in-country at District and National level. RCAP implementation will commence once the World Bank is satisfied with the public disclosures and has approved the RCAP.

Resettlement and Compensation Action Plan's Implementing Agencies

The overall responsibility of monitoring and evaluating the RCAP activities shall lie with ZESCO – Environmental and Social Affairs Department, while the World Bank shall periodically supervise the resettlement compensation and action plan activities to ensure compliance with the RCAP provisions. The ZESCO Environmental Coordinator shall be responsible for the overall smooth implementation of the RCAPs.

IV: CONSULTATION

Consultations with the stakeholders, including directly affected people, will be an integral part in the RCAPs preparation, implementation and monitoring processes at all stages as follows:

Consultation Mechanisms

Consultation is a continuous process from early stages of the RCAP and throughout the implementation. After the approval of a RCAP the community, landholders and other Project Affected Persons (PAPs) would be informed of their involvement in resettlement, compensation, appropriation of land other aspects of RCAPs implementation and monitoring.

The Project Implementation Unit of ZESCO, which includes the Environmental Coordinator, will ensure impacted people are notified and consulted. Ward Councilors and Community Development Coordinators will be contacted to assist in the notification and consultation process.

Other groups that may be contacted for assistance and consultation include:

- Agricultural Cooperatives (including marketing associations, producer associations)
- Area Development Committees
- Community Resources Boards,
- Resource User Groups (e.g. beekeeping groups, crafts associations)
- Youth/women's clubs
- Marketeers Association of Zambia
- Lusaka District Development Committee
- Lusaka City Council
- Other special interest groups

Means of communication include:

- Verbal announcements/messages through face-to-face interactions
- Community radio/ TV (where available), and print media
- Written notification

Consultations have been held to explain the project, including environmental and social impacts. A summary of the consultations is included in Appendix 2.

Screening and Preliminary Assessments

People affected will be consulted and participate in the RCAP preparation. In this regard, monthly meetings will be held with stakeholders including affected groups to discuss potential project impact issues.

Social and Economic Baseline Census

The affected community members and other interested parties will be involved in the planning and implementation of social and economic studies needed for the preparation of the RCAPs.

Socio-Economic Environment

Population

Lusaka is the most populated Province of all the ten provinces of Zambia. The population of Lusaka increased from 1,391,329 in 2000 to 2,198,996 in 2010. This means that the annual average population growth rate for the province was at 4.7% in

the 2000-2010 inter - censal period. Lusaka had the highest provincial population growth rate in the country. Kafue and Lusaka districts had the highest annual average growth rate at 4.9 percent each. Chongwe district grew at a rate of 3.2 percent while Luangwa and Chibombo districts had the lowest growth rate of 2.9 and 2.0 percent, respectively. Refer to table 5 below for the population distribution.

The high rate of growth of the population in the Province could be attributed to the high rates of migration from other provinces in the country. The low economic activities in the mining sector, especially on the Copperbelt Province, led to the shrink in employment opportunities, hence the migration in search of jobs.

Table 1 Population Size and Growth Rates of Lusaka province by District, 2000 - 2010

District	Population						Growth Rate
	2000			2010			
	Male	Female	Total	Male	Female	Total	
Chibombo	121,948	119,664	241,612	145,438	148,327	293,765	2.0
Chongwe	70,211	67,250	137,461	93,934	94,035	187,969	3.2
Kafue	77,001	73,216	150,217	121,321	121,433	242,754	4.9
Luangwa	9,546	9,402	18,948	12,309	12,985	25,294	2.9
Lusaka	549,020	535,683	1,084,703	852,588	890,391	1,742,979	4.9
Total	827,726	805,215	1,632,941	1,225,590	1,267,171	2,492,761	3.6

Source: Central Statistics Office (CSO), 2010 Census of Population and Housing, Preliminary Report, February, 2011

Lusaka, being the capital city of Zambia dominates the country's urban system and accounts for 32 percent of the total urban population in the country. Lusaka's central location, in addition to its capital city status, gives it strategic importance as it is easily accessible from all parts of the country. The high rate of growth of the population could be attributed to the migration trends of people from other parts of the country as well as natural increase arising from high birth rates. Lusaka also has a direct link between income levels and the population density. Higher residential densities are located on the outskirts of the city and lower densities are located in the inner city.

Settlement Pattern and Traditional Authority

The project area has both urban and peri-urban settlements. Towns in the urban areas are planned and zoned into residential, industrial and commercial areas by the City council. Houses are built in designated residential areas. Urban settlements are sparsely populated whilst peri-urban settlements are densely populated.

Some of the land is state owned, under the jurisdiction of the Lusaka City Council, whereas other parts of the project area fall under the custody of Senior Chieftainess Nkomeshya Mukamambo II and Chieftainess Mungule.

Local Economy

Lusaka provides among other services, administrative functions to Zambia as a whole. It plays a significant role in the country's manufacturing sector. Though the economy of the city is more diversified than that of the country, it is quite weak, as

most of the sectors are underdeveloped. The basic manufacturing activities, such as food and beverages processing, textiles and leather goods dominate the manufacturing activities.

Lusaka District is the second largest economic Centre in Zambia after the Copperbelt, and is notable for its substantial diversification in the production of goods and services. With respect to Central and Southern Provinces, Lusaka is economically very significant since it provides the market for the absorption of agriculture products from these areas. Manufacturing industry, transport and financial sector, and Small and Medium Enterprises (SMEs), are the most significant economic activities in Lusaka. It is estimated that only 9 percent of the city's population is engaged in formal employment. A major reason for this is that the local economy has been drifting towards the private sector and self-employment since the liberalization of the economy in the early 1990s.

Lusaka plays a significant role in the socio-economic status of adjoining rural and urban areas and thereby provides a ready market for agricultural and other goods. The overwhelming majority of the economic establishments in the city fall within the wholesale and retail trade categories, which together represent the largest formal employer in Lusaka after the government.

One of the biggest challenges faced in Lusaka and the country as a whole, is poverty. The poverty level has been steadily increasing over the last two to three decades mainly due to the high levels of population growth (refer to Table 6). Other causes of poverty would include the social exclusion of the vast majority. It is generally accepted that there can be no poverty reduction without growth in the economy. Unfortunately the economy of Lusaka has not been measured as a stand-alone.

Table 2 Incidence of Poverty by Province, 1991-2006

Provinces	1991	1993	1996	1998	2004	2006
	Incidence of poverty	Incidence of poverty	Incidence of poverty	Incidence of poverty	Incidence of poverty	incidence of poverty
Central	70	81	74	77	76	72
Copperbelt	61	49	56	65	56	42
Eastern	85	91	82	79	70	79
Luapula	84	88	78	82	79	73
Lusaka	31	39	38	53	48	29
Northern	84	86	84	81	74	78
North Western	75	88	80	77	76	72
Southern	79	87	76	75	69	73
Western	84	91	84	89	83	84

Source: CSO website, <http://www.zamstats.gov.zm/lcm.php> (accessed January 2013)

Land Tenure

There are several Acts governing the administration of land, vis-à-vis; Cap 292, 289, 288 for the allocation and alienation of land, Land Acquisition Act which provides for the compulsory acquisition of land and the Local Government Act (No. 22 of 1991) which provides for control of land by Local Authorities. Under the Land Act, land has been demarcated into categories, namely state, local authority and traditional land. The traditional authorities (Chiefs) have rights over the traditional land, with a mandate to recommend to Government lease to those who want to acquire land.

Land is currently scarce because of the vast growing population and unplanned settlements. Most of the land in the project area is state owned land under the Ministry of Lands, Natural Resources and Environmental Protection and the Lusaka City Council.

Land Use

The area along the proposed route is mainly residential whereas, some portions have been turned into trading centres, especially the area between the Coventry and Waterworks substations. Other land uses in the area include subsistence farming and both small and large scale quarrying. The common land use in the outskirts of Lusaka is commercial farming, especially around Leopards Hill and Lusaka West substations.

Agriculture

Commercial and subsistence farming is practiced in the project area. The major crops grown include maize, sweet potatoes, wheat and groundnuts.

Livestock reared in in some parts of the project area include cattle, sheep, goats and pigs. Poultry rearing and fish farming are also practiced.

Mining

It is important to note that there are no major mining activities within the project area. However, quarrying is the most significant mining activity in Lusaka. Oriental Quarries, United Quarries, Lions Group Quarry, Tati, Raubex and Kafue Quarries are among the largest producers of aggregates and quarry dust for construction purposes.

Tourism

Lusaka has few tourist attractions. The main sources of attraction to the province are the Freedom Statue, house of the first President Dr. Kenneth Kaunda, the Lusaka Museum, and the Presidential burial site. The opening up of the Lusaka National Park in Lusaka South will provide an added avenue for tourism.

Employment

According to the 2010 national employment statistics from the Central Statistical Office (CSO) website:

- The proportion of the unemployed among persons aged 12 years and above for the nation was 14 percent.
- Looking at sex differentials at national level, 13 percent of the males and 15 percent of the females were unemployed.
- Urban areas recorded higher unemployment rates (32 percent) than rural areas (5 percent).
- Copperbelt and Lusaka provinces recorded higher unemployment rates than the other provinces with 31 percent each.
- The highest unemployment rates for females were recorded in Lusaka Province at 41 percent followed by Copperbelt with 40 percent.

Lusaka offers a wide range of economic activities offering employment to various occupational groups. Almost half of the people of Zambia in the manufacturing industry are employed in Lusaka with the figure of 29,012 out of the total 70,560. However, there are currently approximately 120,233 people in formal employment in Lusaka. This represents 9.02 percent of the total population, or 16.85 percent of the economically active. In other words the unemployment rate is about 83 percent, notwithstanding informal employment.

Public Health

Health is key to the economy of Lusaka, as productivity is severely hampered when disease prevalence is high. There are number of challenges in health provision in the city among them; access to health facilities and the incidence of some diseases whose occurrence is driven by the state of the environment. In Lusaka, more than 1,000,000 residents have access to a health Centre within 1.5 km and less than 200,000 have to travel more than 1.5 km to access a health facility.

Lusaka has 34 government health institutions and about 134 registered private clinics and health centers. The two main hospitals in Lusaka are the University Teaching Hospital, which is the designated national referral health facility, and the newly built Levy Mwanawasa General Hospital.

The most common diseases in the project area are malaria, diarrhoea, respiratory, eye, and skin infections, sexually transmitted infections (STIs), and Tuberculosis.

The prevalence of HIV/AIDS and STIs in the project area is very high according to the statistics from the urban and rural health centers. Various HIV/AIDS and STIs programmes have been initiated by the Government and some NGOs. For the infected people, there are programmes that have been introduced by NGOs such as Home Based Care.

Voluntary Counseling and Testing (VCT) and Anti-Retroviral Therapy (ART) services are provided. Refer to Table 7 for statistics on HIV/AIDS for Zambia.

Table 3 HIV/AIDS Statistics in Zambia

Estimated adult HIV prevalence rate (aged 15–49), 2009	13.5
Estimated number of people (all ages) living with HIV, 2009 (thousands), low estimate	980

Estimated number of people (all ages) living with HIV, 2009 (thousands), low estimate	1000
Estimated number of people (all ages) living with HIV, 2009 (thousands), high estimate	1100
Mother-to-child transmission, Estimated number of women (aged 15+) living with HIV, 2009 (thousands)	149
Paediatric infections, Estimated number of children (aged 0–14) living with HIV, 2009 (thousands)	120
Prevention among young people,(aged 15-24), HIV prevalence among young people (%) 2009, total	6.6
Prevention among young people (aged 15-24), HIV prevalence among young people (%) 2009, male	4.2
Prevention among young people,(aged 15-24) HIV prevalence among young people, (%) 2009, female	8.9
Prevention among young people,(aged 15-24), % who have comprehensive knowledge of HIV, 2005–2010*, male	41
Prevention among young people,(aged 15-24), % who have comprehensive knowledge of HIV, 2005-2010*, female	38
Prevention among young people,(aged 15-24), % who used condom at last higher-risk sex, 2005–2010*, male	39
Prevention among young people,(aged 15-24), % who used condom at last high-risk sex, 2005-2010*, female	33
Orphans, Children (aged 0–17) orphaned by AIDS, 2009, estimate (thousands)	690
Orphans, Children (aged 0–17) orphaned due to all causes, 2009, estimate (thousands)	1300
Orphans, Orphan school attendance ratio, 2005–2010*	93

Source: UNICEF 2010, http://www.unicef.org/infobycountry/zambia_statistics.html#66

Transport and Communication

The geographical, commercial and governance centrality of Lusaka has made it a major destination. As a result, Lusaka has a superior transport system compared to other urban Centres around the country.

Lusaka is connected to four major truck roads; the Great East, Great North, Kafue and Mumbwa roads. The Great North road forms the backbone of the network, serving both local and transitory movements. The Great East Road and Mumbwa Road to the west of the city centre, together with the Great North Road form the intersection of the national transportation axes within Lusaka. Lusaka has witnessed an increase in the number of motor vehicles and this development is not commensurate to the expansion of the road network.

The railway network through Lusaka goes to the Copperbelt, Northern and Southern provinces, and on to the Democratic Republic of Congo and Tanzania.

KKIA located 22.2 km east of Lusaka handles both local and international flights. Among the notable international carriers include British Airways, Ethiopian Airways, South African Airways, KLM and Kenyan Airways.

There are various telecommunications service providers, providing a wide range of digital and analogue solutions. Among them are Zamtel, MTN and Airtel, ZNBC, Muvi TV, ZAMNET Communication Systems, Coppernet Solutions, Micro link Technologies and UUNET.

Water Supply and Sanitation

Lusaka relies on both surface and ground water as sources of raw water. Lusaka Water and Sewerage Company (LWSC) is the utility that provides water and sanitation services in the project area. Other sources of water include private boreholes and shallow wells.

Three major types of sanitation services are utilized in Lusaka, namely, waterborne sewer systems, septic tanks, and pit latrines. Only about 30 percent of the city supplied with water by LWSC is serviced by a sewer network. The areas without sewer reticulation systems utilize septic tanks or pit latrines for sanitation services.

Education

Lusaka is the Centre of the national educational and cultural establishments and thus plays an important role in the education of the Zambian population. Pre-primary, primary, secondary and tertiary education institutions are found in Lusaka. One of the public universities in the country, the University of Zambia Great East Road Campus is in Lusaka. Other notable higher educational institutions in Lusaka are the Evelyn Hone College, the National Institute for Public Administration and Zambia Center for Accountancy Studies Lusaka University and Cavendish University. The city has about 95 lower basic, middle basic, upper basic and secondary schools. Lusaka also has a number of community schools and skills training Centres.

Existing educational facilities are unable to cater for the growing demand in the city. Hence there is need for schools to be built in the city as the population is growing at a fast rate.

Planned Development Activities

There are many developments that have been planned in the project area. There are plans to improve the quality of life for the majority of the population by focusing on developmental strategies that address poverty by ensuring that minimum requirements including provision to health, education, water and sanitation and access roads are in place. There are plans to improve the provision of basic services and investment in key economic infrastructure such as roads and access to electricity.

Infrastructure development serves as the central delivery mechanism in the generation of quality socio-economic advancement.

Social Services and Amenities

Recreation facilities in the project area include sports facilities, play parks, restaurants, casinos, cinemas and night clubs. In the outskirts and peri-urban areas, recreation is provided through localized celebrations, games (especially football), beer drinking, and other ceremonies.

Physical Cultural Resources

Ancient, cultural and natural heritage, relics and other objects of aesthetic, historical, pre-historical, archaeological or scientific interest are protected under the National Heritage Conservation Commission (NHCC) Act (Cap 173), No. 23 of 1989 (amended 1994). Under this Act, Physical Cultural Resources (PCR) are objects of historical, scientific, anthropological, archaeological, aesthetic or cultural value made or used in Zambia before 1st January, 1924.

In order to ascertain the heritage resources present in the project areas, the National Heritage Conservation Commission Register and the local people were consulted. The transmission and the distribution components of the project do not traverse any sites declared as national monuments. Preliminary on-site consultations with local communities revealed that no PCR exist in servitude for the transmission and distribution network.

Preparation and Implementation of Resettlement and Compensation Action Plans

In the process of preparing and implementing the RCAPs, representatives of the affected people will input their concerns in the processes through discussions on the potential costs of implementing the planned activities, enforcing the RPF provisions, mitigating impacts, rescheduling of project activities where necessary, and timing of RCAP activities.

Stakeholder Engagement Process

Effective stakeholder engagement is a key aspect to the success of the ESIA and RCAP processes and subsequent environmental and social management of projects. A scoping meeting, in addition to other public consultations, was held with stakeholders, prior to the preparation of this ESIA and RPF (See Appendix 2). The aim of the scoping meeting was to (i) disclose the proposed TDRP; (ii) make known the possible impacts, both positive and negative, that would arise from the proposed project; and (iii) Obtain concerns and contributions relevant to the project from the various PAPs. Minutes of the scoping meeting held are attached. Present at this scoping meeting were representatives from the community, private sector, traditional leaders, regulatory bodies, Ward Development Committees, Members of Parliament, governmental institutions, the media, and other interested and affected parties.

Some of the concerns raised in past consultations include:

- i. Load management and power disruptions during the project construction phase;
- ii. Encroachment of wayleave;
- iii. Compensation of PAPs;
- iv. Severity of negative and positive impacts that may arise from the project; and

- v. Employment opportunities during the construction phase.

During project implementation and preparation of any RCAPs, a public meeting will be held on a monthly basis in order to receive input from impacted communities. People directly impacted by the project will also be consulted during census data collection. Also, ZESCO will seek to involve relevant NGOs, community based organizations, and government representatives to ensure effective consultation and participation.

V: RCAP IMPLEMENTATION SCHEDULE

For successful implementation ZESCO will work with affected persons such that minimal damage is done to assets, such as implementing works after crop harvest. The RCAP will include:

- Time-frames for transfer of completed civil works to ZESCO,
- Target dates for starting and completion of civil works
- Dates for possession of land which the PAPs are using, after payment of compensation and other necessary assistance and before any resettlement activity commences; and
- Linkages between overall activities and implementation.

Due to the nature of this project, it is unlikely that physical relocation will be necessary. Most impacts will involve impact on crops and trees, as well as some vending operations. These impacts can be easily identified and mitigated.

Possible mitigation measures include waiting for crops to be first harvested prior to implement project upgrades in order to avoid impacts. Where possible, damage to productive trees would be avoided. In cases where trees must be removed in order to avoid impacting transmission and distribution lines, tree owners would be identified and compensation paid according to age and lost productivity. In areas where informal venders establish daily markets, ZESCO can work with venders, and their representatives, in determining available preferred options. One mitigation measure may be to allow vending activities to continue in adjacent areas. In this way, venders would not lose their customer base. Mitigation measures would, however, be established through consulting directly with venders present at the time the project prepares to implement upgrades.

VI. ELIGIBILITY CRITERIA

Upon identification of the need for land acquisition, or impact on assets, during project activities, ZESCO will carry out a census to identify the persons who will be affected by the project. This will help the project to determine who will be eligible for assistance early enough in the project cycle. It will also help to prevent an inflow of ineligible people living outside the project area of impact but who might want to take advantage and claim for assistance.

The completion of the census will mark the cut off-date for eligibility for compensation. Those who come into the area after the cut-off date will not be eligible for compensation. For purposes of determining eligibility criteria, persons

may be classified in one of the following three groups, depending on the type of right they have to the land they occupy:

1 Any person(s) with formal legal rights to land. According to Zambia's land tenure system; this group consists of two types of people. Firstly, there are those with a 99-year renewable leasehold of state land. These have title deeds and the land they own has legally recognizable commercial value. Secondly, there are those who occupy land under the customary land tenure system. This land is controlled and allocated to them by traditional authorities (chiefs). The owners do not have title deeds but they have a 'customary' legal claim to it. They may not involve themselves in land transactions without the consent of the chief.

2 Any person(s) who do not have formal legal rights to land at the time the census begins but have a claim to such land or assets as they have bought land or other immovable property but have not yet completed the process of acquiring title deeds. The other group consists of those in legally established voluntary resettlement areas who have not yet reached the retirement age at which point they become eligible for title deeds.

3. Those who have no recognizable legal right or claim to the land they are occupying should be provided resettlement assistance in lieu of compensation for the land they occupy, and other assistance, as necessary, if they occupy the project area prior to a cut-off date established by the project proponent and acceptable to ZESCO and the World Bank. Resettlement assistance may consist of land, other assets, cash, employment, and so on, as appropriate (WB OP 4.12).

The category to be affected has not been identified as the final route and substation sites are yet to be established. However, some generalizations have been identified about the project area. Generally, much of the wayleave has been encroached by agricultural and vending activities. People engaged in the said activities form the majority of the Project Affected Parties (PAPs), and are approximately 1000 in total. To this effect, the project will entail temporal displacement and resettlement of the PAPs prior to the construction works commencing. The activities of the vendors will be temporarily restricted to the areas adjacent to the wayleave. In consultation with the local authority, alternative land shall be sought for PAPs whose agricultural activities shall be temporarily disrupted. Where the above is not feasible, adequate compensation shall be awarded for the loss of livelihood. The RCAP to be developed shall explicitly state how the categories of the PAPs shall be compensated.

Population and Settlement Patterns

During construction, there shall be an influx of people in the project area in search of employment. During implementation of the project, the contractor will build temporary camps in different places along the proposed route of the Lusaka ring. This could add pressure on the existing social amenities and may also exacerbate social conflicts.

However, there shall be no significant impact on settlement patterns in the project areas as works will be limited to the existing footprint of the wayleave.

Local Economy

Some people in the project area shall be employed during construction and this shall lead to an increase in their disposable income and improve their standard of living.

In addition, some materials for construction shall be sourced locally, thereby benefiting the local economy.

Type of Impact: This is a positive, direct, short term, reversible impact of high significance

Upon completion of the proposed project, provision of firm and reliable power will lead to the development of the project area and the nation as a whole.

Land Tenure and Land Use

There are no anticipated impacts on land tenure, as the works will be carried out in the existing wayleave.

Utilization of the land within the wayleave will be restricted during the construction phase. However, growing of low lying crops such as groundnuts, beans, sweet potatoes and maize would be permitted.

Education

Upon completion of the project, the availability of firm and reliable supply of power to schools and other learning institutions will enhance the education services such as the use of computers and laboratories.

Occupational Health and Safety

Most occupational health and safety issues during the reinforcement, operation, maintenance and decommissioning of the Lusaka transmission Ring will include, among others, exposure to physical hazards from use of heavy equipment and cranes; trip and fall hazards; exposure to dust and noise; falling objects; work in confined spaces; exposure to hazardous materials; and exposure to electrical hazards from the use of tools and machinery.

Community Health and Safety

Community health and safety impacts during the reinforcement and decommissioning of the transmission Ring will include, among others, dust, noise, and vibration from construction vehicle transit, and communicable diseases such as HIV/AIDS and STIs associated with the influx of temporary construction labour.

VII. LEGAL FRAMEWORK

Land acquisition

The power infrastructure on the project such as substations and access roads may require extra land in some cases. In this instance as a matter of both policy and practice, ZESCO will seek unoccupied, available land, either vacant government or traditional land, or undeveloped land held by a willing seller. ZESCO's practice is to always obtain consent and negotiate with landowners for extra land or user rights as the case may be. It is very rare that ZESCO would directly and immediately resort to compulsory acquisition of land for power infrastructure development as provided for in the Land Acquisition and the Electricity Act through the Office of the President.

There are various modalities that have been put in place over the years that ZESCO as a public utility has been following. However, these have been improved over the years to reflect the changes in economic liberalisation and other national changes. For instance in assessing the value of affected infrastructure on the project (in the way-leave route or at substations), the following are taken into account;

- Statutory Provisions of the Electricity Act No. 15 of 1995 and the **Land Acquisition Act** Cap 296 of the Laws of Zambia. Part III of the Electricity Act No. 15 of 1995 provides procedural guidelines for the acquisition of land and rights over land. Pursuant to these provisions, ZESCO Ltd serves Notices of Intention to enter the land for the purposes of surveying the route of the power line or marking out the required land for power infrastructure development. However, the Act is not clear on the principles of assessing compensation where way-leave over land is created but no land taken. Section 14 of the Electricity Act however, makes reference to the Lands Acquisition Act Cap 296. The Act deals with compulsory acquisition of land. Under this Act, the principles of assessing the amount of compensation for **land taken** are contained in Part III (Section 12).
- **Way-leave creation:** it is always assumed that agreements are reached with the affected people regarding way-leave creation before project implementation. That is by creation of a right of way with a Restrictive Covenant where no land *per se* is taken and any applicable payment of a lump sum in full and final settlement for all building structures and other infrastructure such as fences etc on the affected land is made based on valuation report by an independent and registered property valuator or Government Valuation Department. The engaged valuator should take into consideration during the process of determining the amount of compensation to be paid to the affected persons, the following; *Replacement Cost*; Amount that can enable the affected person to build *better structures*; *Inconvenience* caused by relocation and the *commercial value* of the affected infrastructure. Capital valuation of the affected structures is required for a lump sum payment in full and final settlement. Under the Restrictive Covenant, it should be understood to mean that the affected people will still have access to the use of the subject land. However, their use of the land and agricultural operations will be restricted by the covenant in that construction of buildings under the power line is prohibited but growing of normal height crops and cattle grazing is permissible. Accordingly, the principles of assessing the amount of compensation under the Electricity Act will apply.
- **Other Considerations:** Generally disturbance arising from project implementation should also take into consideration issues of severance, injurious affection and disturbance, betterment or worsened conditions of the affected people.

Therefore, the basis of any physical infrastructure valuation should generally be in accordance with ZESCO's normal practices of compensation, the provisions of the Electricity Act No.15 of 1995 and the Land Acquisition Act Cap 296 and other relevant Laws of Zambia. Valuation aspects could include; Market Value (*...the value of the property shall be subject as herein provided, be the amount which the property might be expected to realize if sold in the open market by a willing seller at the time of publication under Section 7 of the notice to yield up possession*) taking into account; the replacement cost of a substitute structure to be erected upon relocation to a new site which is assumed not to be far away from the present site (such replacement costs should take account of market values for structures and materials); the likely residual value of some building materials; disturbance

payments for relocation expenses, demolition costs of existing structures and new site clearance and Equivalent Reinstatement Value. Any project activity requiring permanent or temporary land acquisition will first prepare a Resettlement and Compensation Action Plan, seek clearance from the World Bank and provide compensation prior to implementing civil works which would cause impact on people's assets.

Plantation and crop compensation

Guided by the Zambia Electricity Act, ZESCO ensures that power infrastructure development is carried out in an acceptable manner. It is a requirement that all developments that involve access to private, public or traditional land are communicated to the affected people through appropriate notices and or permits. In the event that the project implementation schedule coincides with a cropping season or affects plants/trees and or crops, appropriate compensation is arranged. Such compensation is always based on valuation reports by a competent arm of Government such as the Department of Agriculture, Department of Forest and others.

The basis of valuation would normally take into consideration the following;

- Crop/plant type or species
- Yield or product yield (like timber)
- Market value of the yield
- Life span of the plant or fruit tree

OVERLAPS AND GAPS BETWEEN THE ZAMBIAN LEGISLATION AND WORLD BANK POLICY 4.12 INVOLUNTARY RESETTEMENT POLICY

Table 4 Legal and Institutional Outline

Legal Instrument	Main Provisions	Responsible Institutions	Relevance to the Project
Environment and Natural Resources Management			
Environmental Management Act No.12 of 2011	To protect the environment and control pollution, so as to provide for the health and welfare of persons, animals, plants and the environment. The Act covers water, air, waste, pesticides and toxic substances, noise, ionizing radiation and natural resources, etc	Zambia Environmental Management Agency , Ministry of Lands, Natural Resources and Environmental Protection	EIA approval decision letter necessary for project implementation Environmental monitoring to continue throughout the project phases

Legal Instrument	Main Provisions	Responsible Institutions	Relevance to the Project
Natural Resources Conservation Act, Cap 315, 1970	Conservation and improvement of natural resources and control of bush fires.	Ministry of Lands, Natural Resources and Environmental Protection	Monitoring of natural resource conservation and utilization aspects
Town and Country Planning Act, Cap 283, 1962	Provides for the appointment of planning authorities, the preparation approval and revocation of development plans, and the control of development and subdivision of land	Local Councils, Ministry of Local Government and Housing	Approvals of construction and area plans
Water Resources Development and Management			
The Zambezi River Authority Act No. 17 of the Laws of Zambia	To provide for control and use of water	Zambezi River Authority	Regulation of abstraction of water from the Zambezi River
Water Supply and Sanitation			
The Water Supply and Sanitation Act No. 28 of 1997	Framework for providing and regulating water and sanitation services to all areas. Creates the Council (i.e. NWASCO) which administers the Act	Ministry of Local Government & Housing;	Regulation of water supply and sanitation aspects
Forestry resources management			
The Forest Act No. 7, 1999	Control, manage, conserve and administer National and Local forests; Participation of local communities, traditional institutions, and NGOs; Conservation and sustainable use of forests and trees; and, Implementation of International Instruments. Creates Forestry Commission	Zambia Forestry Commission (yet to be formulated) / currently by the Department of Forestry	Coordination and management of the surrounding forest areas

Legal Instrument	Main Provisions	Responsible Institutions	Relevance to the Project
Wildlife resources management			
The Zambia Wildlife Act, No. 12 of 1998	To control and manage national parks, GMAs and bird sanctuaries for the purposes of conserving and enhancing wildlife eco-systems.	Zambia Wildlife Authority, Ministry of Arts and Tourism	To protect both wildlife and forest resources especially in the GMA
Fisheries resources Management			
Fisheries Act, Cap 200, 1974	Provides for development of commercial fishing and the registration of fishermen and their boats and the protection of endangered fish species	Ministry of Agriculture and Fisheries	Assessing types of fish species suitable for various water bodies
Mining activities			
Mines and Minerals Act, No. 31 of 1995	Regulates the law relating to mines and minerals	Ministry of Mines, Energy and Water Development	To preserve the area if minerals are found
Agriculture			
Agriculture (Fertilizer and Feed) Act, No. 226 of 1990	Regulates and controls the manufacture, processing and importation and sale of agricultural fertilizers and feed, and establishes minimum standards and purity	Ministry of Agriculture and Fisheries	Soil conservation around the reservoir and protection of fish species in the reservoir.
Cultural Aspects			
National Heritage Conservation Act No. 23 of 1989	Protection of heritage sites, archaeological sites and artifacts.	National Heritage Conservation Commission	Monitoring and management of all identified cultural and archaeological sites in the area
Electricity industry			
Energy Regulation Act	Regulates prices for electricity, petroleum products and other energy related products	Energy Regulation Board	License for energy generation required before commencement of development.
Electricity Act	Generate, transmit and distribute	Ministry of Energy and Water	It is the governing Act for the operations

Legal Instrument	Main Provisions	Responsible Institutions	Relevance to the Project
	electricity in Zambia	Development Energy Regulation Board	of the Power station
Lands management			
The Lands Act	Controls the alienation of land for various uses by developers.	Ministry of Lands, Natural Resources and Environmental Protection	Governs the acquisition of the land to be used for the development of the Power Station infrastructure

In addition to the national environmental legal framework, this RPF takes into consideration World Bank Safeguards Policies that could be potentially triggered by the project. The table below gives some of the Environmental and Social Safeguard Policies that are triggered by the transmission line project:

The table below lists of some of the World Bank Environmental and Social Safeguard Policies relating to power line projects.

Table 5 World Bank Environmental and Social Safeguard Policies

No.	Safeguard Policy	Objective
4.01.	Environmental Assessment	<ul style="list-style-type: none"> To help ensure the environmental and social soundness and sustainability of investment projects To support integration of environmental and social aspects of projects into the decision making process
4.04	Natural Habitats	<ul style="list-style-type: none"> To promote environmentally sustainable development by supporting the protection, conservation, maintenance, and rehabilitation of natural habitats and their functions.
4.12	Involuntary Resettlement	<ul style="list-style-type: none"> To avoid or minimize involuntary resettlement and, where this is not feasible, to assist impacted persons in improving or at least restoring their livelihoods and standards of living in real terms relative to pre-project levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
4.11	Physical Cultural Resources	<ul style="list-style-type: none"> To assist in preserving physical cultural resources and avoiding their destruction or damage. PCR includes resources of archaeological, paleontological, historical, architectural, and religious (including graveyards and burial sites), aesthetic, or other cultural significance.

Overlaps

There are many similarities between the Zambian law and the World Bank's OP 4.12 resettlement policy the overlaps include:-

- The requirement to pay compensation in advance where land is compulsorily acquired
- Compensation based on full market value or through grant of another plot of land or building of equal quality, size and value.
- Avoidance wherever possible, impacts on forest reserves, national parks and other fragile ecosystems,
- The requirement to compensate for losses whether temporary or permanent in production or damage to productive assets and crops; and
- Provision for the rights of appeal and other judicial avenues for resolution of disputes.

Gaps

The following gaps exist between the World Bank Op 4.12 Involuntary Resettlement policy provisions and the Zambian legislation:

- Comprehensive resettlement planning. There is no requirement under the Zambian law for the preparation of a comprehensive formal resettlement compensation and action plan (RCAP) including carrying out a census, social economic survey, consultations with project affected people, monitoring, reporting, etc. The Town and Country Planning legislation which deals with issues of human settlements and development in Zambia does not refer to involuntary settlement but only to the removal of squatters on state lands needed for urban expansion and development.
- Compensation eligibility in Zambia. Under the Zambian law, only people and entities with title deeds are entitled to compensation e.g. those with registered third party rights or those who have legally obtained the right to register but have not yet completed registration.
- Under World Bank's OP 4.12 involuntary resettlement policy illegal land users without title to the land are entitled to compensation for land use and affected structures on it (but not compensated for land). In some cases of illegal development, compensation is provided on discretionary basis on case by case basis.
- Compensation and resettlement assistance. The current Zambian law provides for the payment of compensation at market value for losses of land, buildings, crops and other damages arising from the acquisition of land for project activities. Under the Zambian law, moving costs or rehabilitation support to restore previous levels of livelihoods or living standard are not recognized, and there is no government agency charged with that responsibility.
- Property measurement. Under the Zambian law, compensation is equal to the market value of the property without reference to depreciation. On the contrary, under the World Bank Safeguard resettlement policy compensation for lost properties will be calculated on the basis of full replacement cost i.e. equal to what

enables the project affected people (PAP) to restore their livelihoods at the level prior to project implementation.

□ Income restoration. The current Zambian law does not recognize compensation for lost income contrary to the World Bank's OP 4.12 resettlement policy provision which requires that lost income due to project activity should be compensated.

The following are proposed measures to close the GAPS:

□ streamlining the compensation review process under the Zambian law to ensure that approvals are consistent with those required by the World Bank for timely project approval and implementation.

□ ZESCO has developed a valuation and compensation procedure that allows the delegation of authority and decision making to the local level in the case of project activities that have minimal resettlement impacts.

□ ZESCO as the Government of the Republic of Zambia implementing Agency for the TDRP has to formally agree to implement the policy principles of this RPF as stated and consistent with World Bank OP 4.12 resettlement policy. Harmonization of the two legal provisions is a cardinal measure as the primary aim of this RPF is to improve the livelihoods of the PAPs beyond the original status of their economic, social and cultural well-being as provided for under WB's OP 4.12 resettlement policy on compensation.

It should be noted that where the National legislation conflicts with World Bank, Environmental and Social Safeguard Policies the World Bank policies shall supersede.

VIII. METHODS FOR VALUING ASSETS

ZESCO has prepared a Compensation Policy which is currently in draft and is awaiting approval from ZESCO Board in order to be finalized. Once finalized the Compensation Policy provides guidelines on consulting and notifying impacted persons as well as valuation and compensation procedures. According to ZESCO procedures, a registered independent valuer is engaged by ZESCO to value the affected property – both land and structures. Market values for land, structures, and materials will need to be taken into account comply with the requirements of OP 4.12. Crop and fruit tree valuation is done by District Agricultural Coordinators. Fruit tree values will factor in age and lost productivity.

IX. DELIVERY OF ENTITLEMENTS

ZESCO's Environment and Social Affairs Department is the body responsible for the oversight and implementation of the compensation process. ZESCO's compensation policy and this RPF, in preparation of a RCAP, will serve as a guideline for compensation procedure.

X. SOURCES OF FUNDING

Since detailed inventories and compensation costing are undertaken in a phased manner matching project phases, an overall budget for the RCAP has not been determined. The RCAP budget and budgeting process is guided by the following principles:

- RCAP will be included up-front in the project implementation budget.

However, ZESCO is responsible for all compensation payments that will be due as a result of the project. Compensation moneys are released within a period of two weeks after submission of valuation reports

XI. COMPENSATION

In Zambian law, the basic principle with respect to compensation is that the sum awarded should, as far as possible, place the claimant in the same financial position as they would have been, had there been no question of the land being compulsorily acquired. All compensation will be equal to, or greater than, the replacement cost. Per the requirements of OP 4.12, such compensation will not allow for the depreciation of land and assets.

Compensation Guidelines

Compensation rates will beat market rates as at the date and time that there placement is to be provided. The current prices of cash crops would have to be determined. Compensation would be based on valuation at or before the entitlement cut off date. Compensation for land is intended to provide the affected person whose land is acquired and used for project purposes with compensation for land, labour and crop loss.

Where land acquired has a standing crop, the farmer will be compensated in full for the expected market value of the crop plus the loss of investment of labour and purchased inputs for the production year/ season in question.

Types of Compensation

The types of Compensation recommended for use in the implementation of RCAPs include cash payment and in-kind compensation.

- a. Cash payment:** Cash payment compensation will be calculated and paid in Zambian Kwacha (ZMK). Rates will be based on market value of land, which will be equal to or greater than the replacement value, when known or estimated when unknown plus compensation of the value of standing crops. Under the TDRP this category will be used.
- b. In-kind compensation:** In-kind compensation may include items such as land, houses, and other buildings, building materials, seedlings agricultural inputs and financial credit for equipment, while assistance to affected persons would include moving allowances, transportation and labour.

It is recommended that cash payments to beneficiaries be provided through financial institutions like banks in order to reduce chances of theft and loss of livelihoods.

Table 6 Broad Summary of Entitlements and Responsible Authority

Type of loss	Category of PAP	Proposed entitlement	Responsibility/ authority
Agricultural land	Land owner	Affected households to be compensated according to the Land Acquisition Act and World Bank policy on Involuntary Resettlement.	ZESCO Project Management
		As the compensation under this framework will have to be at replacement cost, an additional allowance will be provided to cover the gap between market value and actual reparations given under the Land Acquisition Act.	ZESCO Project Management – and ZESCO social specialists
Agricultural crops (perennial/ annual crops)	Land owner, tenant	Give advance notice, allow harvesting if possible	Local Land Owner, ZESCO Project Office including ZESCO social specialists and the Lusaka Municipal Council
		Compensation as per the agreement between user's organizations and PAP or the relevant council committee	
		Rehabilitation support to non-title holders using relevant NGO's and Council.	ZESCO Project Office, and ZESCO Social Specialists using relevant NGO's and Councils.
Occupied land	Encroachers	Encroachers/ squatters are not legally entitled to compensation, but are entitled to assistance to move to a place where they can settle legally to restore / retain their livelihoods, taking into account their vulnerability.	Local Project Office/ District Council
Public land	Squatters		MMEWD, Project Office with Council and NGO's

Type of loss	Category of PAP	Proposed entitlement	Responsibility/ authority
House or other Property (although highly unlikely for upgrade of Transmission Line)	Property owner, Non- title holder (squatter/ encroaches)	<ul style="list-style-type: none"> - Compensation at replacement cost, taking into account market values for structures and materials, or as settled by the users, organizations and PAP or committee under the relevant council. - Non- title holders (squatters) will not be entitled to any compensation for their affected unauthorised/ illegal extensions over public land but will be provided with cost compensation to structures at replacement value without depreciation deduction and taking into account market values for structures and materials. - Resettlement assistance will be provided to the most vulnerable groups to restore their livelihoods to pre-displacement levels. 	ZESCO Project Office using relevant NGO's and Lusaka City Council.
Business / commercial establishment, shops,	Title-holders	Compensation for re-establishment / transition allowance in consultation with affected families.	ZESCO Project Office
Temporary losses	Title holders (affected families)	Cash compensation/ transit allowance.	ZESCO.
Demolition of structures (although highly unlikely for upgrade of transmission line and substations)	Residential houses	Alternative in-kind shelter to be provided.	ZESCO provide alternative shelter with sufficient infrastructure supply to PAPs.
Income	PAP losing income resulting	Facilitation to have alternative job training and other incentives	All PAPs should benefit from some kind of income (restoration

Type of loss	Category of PAP	Proposed entitlement	Responsibility/ authority
	from sub- project activities.		to at least pre-project levels). ZESCO will work with Marketeers Association of Zambia, Lusaka City Council, and Lusaka District Council to ensure impacts on economic activities are avoided or dramatically minimized

XII. COMPENSATION COMPUTATION

This RPF recommends the following compensation rates for land, crops, labour, buildings and structures, and fruit trees. For each payment, compensation will be calculated in Zambian Kwacha currency adjusted for inflation.

Compensation for Land

Compensation for land is aimed at providing for loss of land or crops and the labour used to cultivate the crops, and will cover the market value of the land, the cost of the labour invested as well as their placement cost of crops lost.

Crop Compensation Rates

Prevailing prices for cash crops would have to be determined. Each type of crop is to be paid for, using the same rate, incorporating the value of the crop and that of the labour to be invested in preparing new land. The valuation of the said crops shall be undertaken independently by the office of the Lusaka District Agriculture Coordinator, Ministry of Agriculture and Livestock.

Compensation Rates for Buildings and Structures

Compensation for structure sand buildings will be paid at replacement cost of labour and construction materials for these structures including fences, water and sanitation facilities, etc. The applicable replacement cost of construction materials will be used to calculate compensation value, where part of the compensation is to be paid in cash.

Alternatively, compensation will be paid in-kind at replacement cost without depreciation of the structure.

Fruit Trees

Fruit trees will be compensated at replacement value based on historical production statistics given their significance to the local economy. The valuation of the said crops shall be undertaken independently by the office of the Lusaka District Agriculture Coordinator, Ministry of Agriculture and Livestock.

Compensation Payment Principles

Payment of compensation and other entitlements and assistance will be made to PAPs according to the following principles:

- Compensation shall be paid prior to project impacting asset;

- Compensation will be at least full replacement value and the compensation policy and its processes shall be perceived by the PAPs as being full, fair and prompt;
- Preference of in-kind compensation will be given to persons whose livelihoods are land based;
- Acquisition of land and related assets may take place only after compensation has been provided;
- In addition to these entitlements, households who are found to be in difficult situations, and are at greater risk of impoverishment such as widow/ widower headed households, households without employment, single parent households, child-headed households, etc. As identified by the census, will be provided with appropriate assistance by the project;
- Assistance may be in the form of food, temporary accommodation, medical assistance, employment referrals, education assistance, or priority employment in project activities. This assistance is meant to help PAPs cope with the impact caused by the project; and
- Compensation and other assistance should be provided prior to project impact.

Compensation Procedures

Both the ZESCO compensation policy and WB Safeguards establish clearly the right to compensation for property that is acquired in public interest. Although the ZESCO's compensation policy recognizes both statutory and customary land tenure, and that people who lose their assets receive the same indemnification as those few who had formal title.

This RPF also spells out the following valuation and compensation procedures which will be followed for any resettlement related operations that may take place under the TDRP activities in regards to land, agricultural fields, Residential and business structures; Crops, Trees and fruit trees in Lusaka.

XIII: INSTITUTIONAL RESPONSIBILITIES

The planning, implementation and management of any compensation activity on the project shall be conducted by a range of project authorities including decision-makers, departments and district Government authorities in close collaboration with ZESCO Limited.

External Monitoring Agencies

The Zambia Environmental Management Agency (ZEMA) monitors implementation of the environmental management plans on approved projects including compensation aspects.

Any funding agency or interested Agency/party could monitor the compensation activities in close consultation with the project staff (especially the Site Manager and the Environmental Coordinator).

Monitoring of the RCAP shall involve ZESCO project team and other stake holders such as Government officials, Area Members of Parliament and NGOs.

ZESCO Limited

ZESCO Limited shall put in place a project team before the intended start period for the project. The primary objectives of appointing the project team shall include, but not limited to the following:

- Represent the company directly on the project.
- Liaison with affected parties (landowners, venders, hamlet residents and farmers) in all decision making relating to the resettlement planning, implementation and monitoring;
- Responsible for ensuring that compensation principles, policies, and procedures are followed.
- Liaise with the financing agencies in monitoring through incorporating directly affected parties' needs by recruiting from the communities and supporting some community development initiatives;
- Act as a team to deal with any grievance arising from compensation issues on the project.

Project team members shall be required to ensure that the project is implemented successfully and to provide progress reports to company management on project progress.

The Environmental Coordinator (ECO) shall be responsible for identifying and assessing all areas with compensation issues. The ECO in consultation with the project/site manager will also be responsible for conducting consultations with the local community on compensation matters.

The ECO will also ensure compliance with agreed mitigation measures in the EMP including contractor's movement on the line, construction schedule and land access schedules. The ECO shall ensure that compensation requirements are met before commencement of construction. And in liaison with communities and the contractor handle any grievance that could delay project implementation. The ECO will also be responsible for the effecting all compensations. The ECO shall prepare appropriate daily, weekly and monthly logistical and operational plans related to environmental management on the project in close co-ordination with project management, contractors and service providers on the project.

ZESCO on the other hand shall assist the project team including, the ECO, to follow on compensation matters by providing logistics and other management resources required

for the assignment. The Company shall also allocate and schedule resources to assist with implementation of all compensation payments.

ZESCO will also assist the project team with the administration and logistical control of the field activities including compensation budget.

Project Consultants and Contractors

The project consultants, contractors and suppliers/service providers on the project will:

- Assist the ECO in locating any affected persons that may be discovered during project implementation.
- Assist the ECO to follow up on compensation matters providing the relevant information required to effect compensation settlements.
- Provide description of skills that will be required for the locally sourced construction labour to evaluate which of the affected persons may qualify for employment.

XIV. GRIEVANCE MECHANISM

Impacts on infrastructure by the transmission line project could be inevitable and may give rise to grievances among affected people. This could vary from rates of valuation, compensation eligibility criteria and actual compensation payments. Timely redress or resolution of such grievances is vital to ensure successful implementation of the project. ZESCO Limited always puts in place procedures that allow affected people to lodge complaints or claims with the project team. The full time project team ensures that all such grievances are resolved within a reasonable time frame.

Description of Grievance Redress Mechanisms

Potential grievances and disputes that arise during the course of implementation of the resettlement and compensation program may be related to the following issues:

1. Inventory mistakes made during census survey as well as inadequate valuation of properties;
2. Mistakes related to identification and disagreements on boundaries between affected individual(s) and specifying their land parcels and associated development;
3. Disagreements on plot/asset valuation;
4. Divorces, successor and family issues resulting into ownership dispute or disputes shared between heirs or family;
5. Disputed ownership of a given assets (two or more affected individual(s) claim the same); and
6. Where affected individual(s) opt for are settlement based option, disagreement on their settlement package (the location of the resettlement site does not suit them).

Despite best efforts with regard to the public consultation and community relations, there will be times when the project sponsor and stakeholders disagree. Affected persons will

be informed of their rights to raise grievances via RCAP information sharing initiatives. Mechanisms have been put in place to ensure that grievances are recorded and considered fairly and appropriately.

These include:

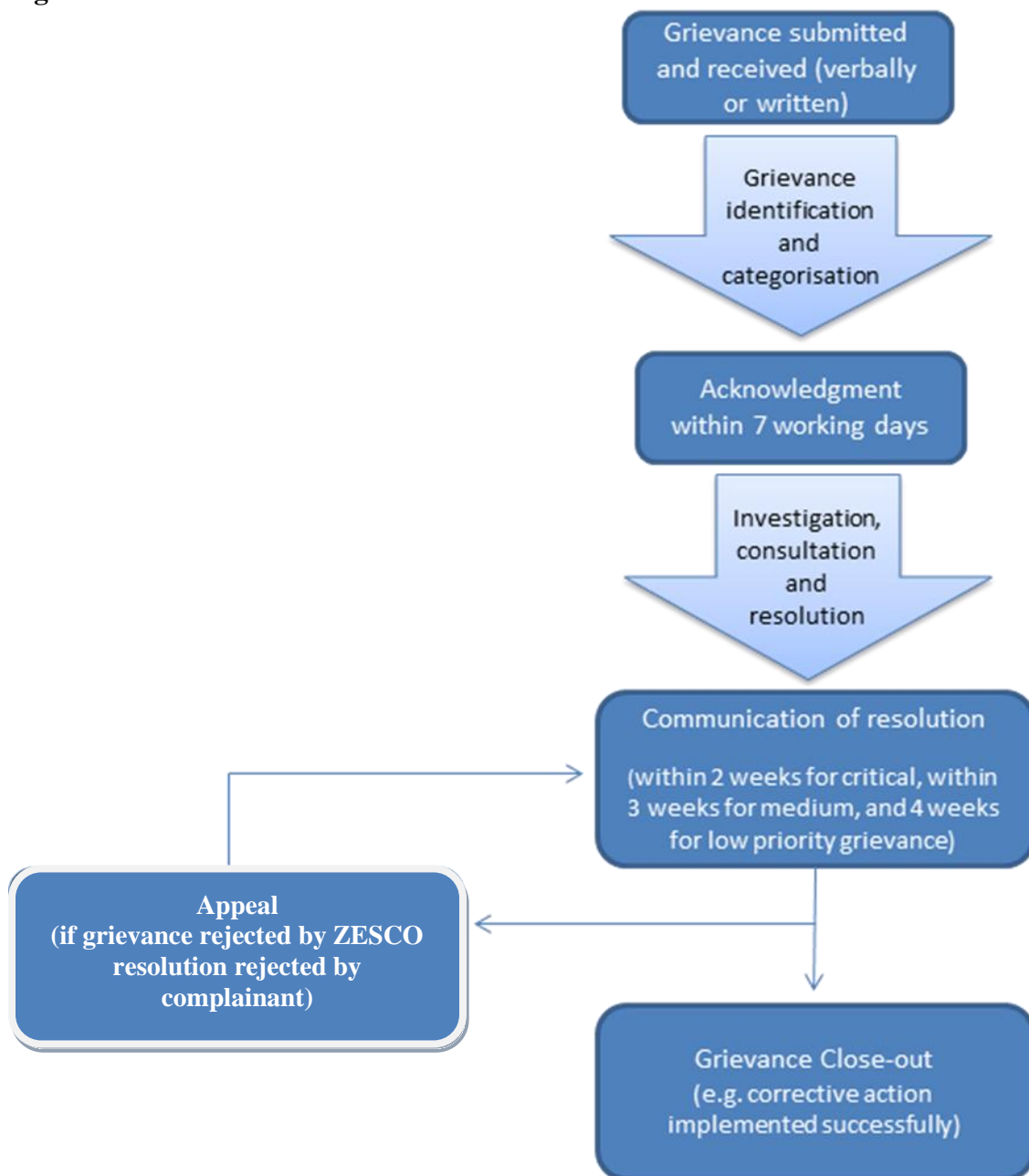
- i. A register of grievances which is held by the ECO or any appointed mechanism by ZESCO.
- ii. Receipt of grievances will be acknowledged as soon as possible, by letter or verbal means.
- iii. The grievance will be reviewed by Project Implementation Unit (PIU) and appropriate action will be implemented. The preferred course of action will be discussed with the person bringing the grievance. Wherever possible, grievances will be resolved at this level.
- iv. Relevant details of grievances, with outcomes, will be made available to the affected parties through personal notification.
- v. ZESCO has developed a communication strategy for grievances redress mechanism for the project which should include an explanation on the methods used in carrying out the project's activities and such compensation payments etc.

Unresolved Grievances and Disputes

Unresolved issues will be referred to the following:

1. ***Grievance Redress Committee:*** There shall be a grievance redress committee made up of representatives from the community, which is best represented by the Area Development Committee and the project implementers. The Area Development Committee (ADCs) consists of community members elected by the local residents to represent their interests. Through these ADCs, unresolved grievances/disputes are channeled to the District Development Committees for further consideration. This committee shall hear disputes regarding project impacts and cases shall only be referred to arbitration or courts of law when the grievance redress committee is unable to resolve an issue.
2. ***Arbitration:*** The Arbitration Act (chapter 40, Laws of Zambia) makes provisions for aggrieved parties to agree to settle disputes out of court through arbitration. In order to use arbitration in the settlement of disputes, the parties ought to make a written agreement to submit a present dispute, or future disputes to arbitration. The parties are at liberty whether or not to name an arbitrator in the agreement. Where an arbitrator is not named in the agreement, the agreement should designate a person who would appoint an arbitrator.
3. ***Courts of Law:*** It should be noted that arbitration only works where the parties to a dispute agree to resolve a difference through arbitration. Where there is no consent, then a court of jurisdiction may be used to resolve a dispute.

Figure 1 – The Grievance Procedure



XV: MONITORING ARRANGEMENTS

Internal Monitoring

Internal Monitoring will include

- Public meetings held,
- Compensation disbursed,
- Census surveys completed,
- Assets inventories and socio-economic studies completed,
- Income restoration and development activities initiated.

Impact Monitoring

Impact monitoring to be undertaken will provide assessments of the effectiveness of the RCAP strategies in meeting the affected populations' needs. Quantitative and qualitative indicators will be used to compare the effects of the RCAPs activities with the baseline conditions of the affected populations before and after the resettlement exercises. The satisfaction of the affected population with the resettlement initiatives will be assessed for their adequacy or deficiency, while the census assets inventories and socio-economic studies will constitute the baseline for the affected population, for the purpose of evaluating impact assessment.

Completion Report

Completion reports(s) shall be carried out after the completion of all RCAP inputs. The main aim of the completion report is to assess how far the project efforts have gone in the restoration of the living standards of the affected population; and also assess whether the strategies for the restoration for the living standards of the affected people have been properly conceived and implemented.

The following are some of the several issues which need to be verified in the completion monitoring and report:

- Delivery of services provided in the RCAPs
- The effects of Mitigation measures prescribed in the RCAPs
- The affected populations' social economic status after project activities measured against the baseline conditions reported during initial census.

Development of Verifiable Indicators

In order to ensure that monitoring the impacts of the compensation and resettlement activities for the project are done successfully, a number of objectively verifiable indicators (OVI's) shall be used. These indicators will be targeted at quantitatively measuring the physical and socio-economic status of the PAPs, to determine and guide improvement in their social well-being. Therefore, monitoring indicators to be used for the RCAP will have to be developed to respond to specific site conditions. As a general guide, the following table provides a set of indicators which can be use

Table 7 Types of Variable Indicators

MONITORING	EVALUATION
Outstanding compensation or resettlement contracts not completed before next agricultural season	Outstanding individual compensation or Resettlement contracts.
Grievances recognized as legitimate out of all complaints lodged	All legitimate grievances rectified
Pre- project production and income (year before land used) versus present production and income of impacted persons, off farm-income trainees, and users of improved techniques.	Affected individuals and/or households compensated in first year who have maintained their previous standard of living at final evaluation.
Pre- project production versus present production (crop for crop, land for land).	Equal or improved production per household.

Indicators to determine status of affected people

A number of indicators would be used in order to determine the status of affected people (land being used compared to before, standard of house compared to before, level of participation in project activities compared to before, how many kids in school compared to before, health standards, etc). Therefore, the resettlement and compensation plans will set two major socioeconomic goals by which to evaluate its success:

- Affected individuals, households, and communities are able to maintain their pre-project standard of living, and even improve on it; and
- The local communities remain supportive of the project.

Indicators to measure RCAP performances

In order to access whether these goals are met, the resettlement and compensation plans will indicate parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the monitoring activities.

The following parameters and verifiable indicators will be used to measure the resettlement and compensation plans performance:

- The Environmental Coordinator will maintain a complete database on every individual impacted by the project, land use requirements and compensation, land impacts or damages
- Number of individuals receiving cash or a combination of cash and in-kind compensation,
- Number of payments made in a month/ year.
- The number of contentious cases out of the total cases
- The number of grievances and time and quality of resolution
- Ability of individuals and families to re-establish their pre-project activities, land and crops or other alternative incomes
- Mining and agricultural productivity of new lands

- Number of impacted locals employed by the project activities

Indicators to monitor and evaluate implementation of RCAPs

Financial records will be maintained by the ZESCO – PIU to permit calculation of the final cost of resettlement and compensation per individual or household. Each individual receiving compensation will have a dossier containing;

- Individual socio-economic and bio-data information,
- Number of people s/he claims as household dependents
- Amount of land available to the individual or household when the dossier is opened.
- Level of income and of production
- Inventory of material assets and improvements in land, and Debts

With mitigation measures to reduce and avoid impacts, the cost for compensation can be significantly reduced. Utilizing land currently owned by ZESCO, or the government, will further reduce the need for purchase and compensation for land and assets. However, the estimated cost of compensation arising from the project is as indicated in the Table below.

Table 8 Estimated RAP Budget

No.	Description of Property to be Affected	Cost of Compensation (USD)
1.	Fruit trees and crops	34,700.00
2.	Structures and other auxiliaries	659,300.00
	SUB TOTAL	694,000.00
3.	Awareness Campaigns	100,000.00
	GRAND TOTAL	794,000.00

APPENDIX 1: GRIEVANCE FORM**Grievance Form**

Lusaka 132kV Transmission Ring Reinforcement Project			
Section 1: Complainant Details			
Grievance Reference Number:	Date received:	Submitted by:	Name of person recording the grievance:
		<input type="checkbox"/> Person submitting grievance <input type="checkbox"/> Other (please specify who)	
Name of Complainant / Organisation registering complaint (or write Anonymous):			
Address:	Telephone Number:	Email address:	How was the grievance lodged:
			<input type="checkbox"/> In person <input type="checkbox"/> By Phone <input type="checkbox"/> At Community Meeting <input type="checkbox"/> By Mail <input type="checkbox"/> By Email
Signature of Complainant:	of	Confirm that the Grievance has been acknowledged and a copy of this form provided to the complainant?	
		<input type="checkbox"/> Yes	Date:
Section 2: Details about the Grievance			
Description of Grievance:			
Section 3: Action Taken / Required			
Acknowledgement of grievance sent to Complainant? (Y/N)	Date when Acknowledgment provided:	Date set for resolution of Complaint:	Date logged in Grievance Log by Environmental Coordination Officer:
Grievance classification:	Reason(s) why:		Department Manager responsible for addressing grievance:
<input type="checkbox"/> Critical priority <input type="checkbox"/> Medium priority <input type="checkbox"/> Low priority			

Description of action required (to be updated as needed):		
Action carried out by:	Date of Completion:	Method of feedback to Complainant:
Stakeholder response to action:		
Section 4: Effectiveness Review		
Status of Grievance:	Date:	
To what extent has the grievance been addressed to the satisfaction of the complainant?		
Grievance Closed:	Date:	Signed off: Environmental Coordination Officer Senior Manager

APPENDIX 2: MINUTES OF THE STAKEHOLDERS MEETING

MINUTES OF THE ENVIRONMENTAL and SOCIAL SCOPING MEETING FOR THE LUSAKA RING 132kV TRANSMISSION LINE PROJECT HELD AT THE MULUNGUSHI INTERNATIONAL CONFERENCE CENTRE ON 29TH JANUARY, 2013

ATTENDANCE

The Scoping meeting was attended by 125 people, and the list of attendees is attached as an appendix to these minutes.

AGENDA

The agenda of the meeting was as follows:

1. National Anthem
2. Opening Prayer
3. Introductory Remarks by ZESCO Managing Director
4. Welcoming Remarks by ZESCO Board Chairperson
5. Remarks by Lusaka Province Provincial Minister
6. Official Opening by Minister of Mines, Energy, and Water Development
7. Presentation of the Project by Director – Transmission
8. Question and Answer Session
9. Closing Remarks by ZESCO Managing Director
10. Closing Prayer
11. National Anthem

1.0 INTRODUCTORY REMARKS BY ZESCO MANAGING DIRECTOR

The meeting was opened with the National Anthem, which was followed by a prayer.

The meeting was called to order by Mr. Cyprian Chitundu, ZESCO Managing Director, at 09:50 Hours. Mr. Chitundu recognised the presence of the Minister of Mines, Energy and Water Development Lusaka Provincial Minister, ZESCO Board Members and Management Team, Members of Parliament, District Commissioners, Royal Highnesses, Councillors, and the Media. He welcomed everyone to the meeting and urged all to be attentive to the presentations and deliberations; and further, to seek clarification over whatever concerns they may have, during the question and answer session.

Mr. Chitundu mentioned that ZESCO Limited intended to improve the transmission and distribution system in Lusaka Province by upgrading its infrastructure. This would be achieved through the implementation of the Lusaka Ring 132 kV Reinforcement project. The aim of the project was to improve the quality and reliability of electricity supply within the power distribution and supply network in line with the Government's efforts to increase access to electricity. Mr. Chitundu informed the meeting that the Lusaka Ring mainly supplying power at 33kV had reached its thermal limit, resulting in power supply failures in Matero, Lusaka West and Chalala areas.

He noted that the Scoping meeting was part of the Environmental and Social Impact Assessment (ESIA) process and was a statutory requirement under the Environmental Management Act (EMA) No. 12 of 2011. In this vein he stated that the aim of the meeting was to inform the public of the project, its benefits, and the impacts, both negative and positive, that would arise during implementation. In addition, the meeting will provide various stakeholders an opportunity to air their views and concerns related to the development and implementation of the proposed Project. These views and concerns would then be incorporated in the ESIA study and aid in the preparation of the project Environmental Impact Statement (EIS) report that would be submitted to the Zambia Environmental Management Agency (ZEMA) for consideration.

Mr. Chitundu then called upon the ZESCO Board Chairperson, Fr. Frank Bwalya, to give his welcoming remarks.

2.0 WELCOMING REMARKS BY ZESCO BOARD CHAIRPERSON

Fr. Frank Bwalya, the ZESCO Board Chairperson, reiterated the ZESCO Managing Director's remarks and stated that he hoped the meeting would be fruitful. Fr. Bwalya stated that ZESCO anticipated an unprecedented growth in load demand for Lusaka in the next 15 years, hence the need to start addressing the challenges early, before they become unmanageable.

He further indicated that Lusaka currently used 40% of the non-mining load generated by the utility. As such, to avoid unnecessary crisis of inadequate supply of power, which would retard development, there was need to plan adequately. He stressed that development was not possible in the absence of adequate and reliable energy, electricity in particular. Fr. Bwalya informed the meeting that in order to stabilize the power situation in Lusaka, the proposed Lusaka Ring 132kV reinforcement project was being planned and would be implemented soon. He assured the public that ZESCO was doing its best to improve the power situation in the country.

Fr. Bwalya then welcomed Mr. Freedom Sikazwe, Lusaka Provincial Minister, to give his remarks, and invite the Minister of Mines, Energy and Water Development to give the official opening speech.

3.0 REMARKS BY LUSAKA PROVINCIAL MINISTER

Mr. Freedom Sikazwe, Lusaka Provincial Minister expressed happiness at the proposed undertaking by ZESCO. He welcomed the project stating that it would improve the power situation in Lusaka, and the country as a whole. He offered his support to ZESCO throughout the project implementation and asked the public to be patient during this process, as it was meant for their own good, and the development of the country as a whole.

Mr. Sikazwe called upon and introduced the Minister of Mines, Energy, and Water Development, Honourable Yamfwa Mukanga, to give the official opening speech.

4.0 REMARKS BY MINISTER OF MINES, ENERGY, AND WATER DEVELOPMENT

The Minister of Mines, Energy, and Water Development, Honourable. Yamfwa Mukanga officially welcomed everyone to the meeting, noting that their input into the deliberations would enhance and fine-tune the successful implementation of the project.

Honorable Mukanga described the population of Lusaka City and the surrounding districts to be growing at a rapid rate of close to 6% per annum. This population is exerting pressure on the social and economic areas of the society. Honourable Mukanga stated that government had developed a number of policy development plans aimed at fostering sustainable social economic development to the country. One such plan is the Lusaka Master Plan, which proposes modern infrastructure such as urban housing, professional drainages and ring roads.

He further recognised the fact that energy was an important driver for social and economic development without which the above plans would not be achieved. He reminded the stakeholders in the meeting of the importance of the gathering, stating that their views on the project were very important as it would help foster collaboration and ownership of this project.

Honourable Mukanga mentioned that the scoping meeting for the proposed Lusaka 132kV ring reinforcement project was in line with the Environmental Management Act (EMA) No. 12 of 2011. He stated that once implemented, Lusaka City would have power system infrastructure that will have the capacity to handle 850 MW of power as compared to the current 450MW. The Honourable Minister expressed gladness at the proposed project as once completed, it would mitigate the power deficits that the country has been experiencing. He however warned that the public should desist from acts of vandalism and encroachment on such infrastructure as this would be a drawback to progress already made.

He urged all the stakeholders present to cooperate fully with the ZESCO team and the project consultants as they worked on the project. In conclusion, the Minister commended ZESCO for the initiative that would impact positively on the provision of goods and services in Lusaka City and surrounding areas. In closing, Honourable Mukanga encouraged all the stakeholders present to be at liberty during the deliberations and contribute to the process for the benefit of everyone.

5.0 PRESENTATION BY DIRECTOR TRANSMISSION

The Director in charge of Transmission, Mr. Christopher Mubemba, gave a presentation on the Lusaka ring 132kV transmission reinforcement project.

The Director Transmission stated that there had been a rapid increase in power demand in the country due to factors such as increased mining and industrial activities, increased

agricultural sector investments, and the rise in domestic loads. He however, regretted that delayed investment in generation plants in the country had not matched the load growth, resulting in deficit in power generation capacity of about 70 Mega Watts. This delay in investment had also affected the transmission and distribution systems, thereby depleting power transmission and distribution capacity.

The meeting was informed that ZESCO's strategic direction was focussed on completing the Power Rehabilitation Project, building new generation plants, expanding the transmission network, upgrade of the transmission and distribution systems in all four (4) of ZESCO's operational divisions (Lusaka, Copperbelt, Northern and Southern), Implementation of demand side management, and proactive engagement with stakeholders and clients. The Director informed the meeting that ZESCO was hoping to reduce power demand by up to ten percent (10%) through effective demand side management, and that the upgrade of the transmission and distribution systems were going to start with Lusaka Division as forty percent (40%) of the country's non-mining loads are concentrated in the area.

Owing to the above, the meeting was informed that ZESCO had embarked on a number of generation and transmission projects to meet the power demand. This was through the building of new generation plants and transmission networks, and upgrading the transmission and distribution systems throughout the country. Among the generation projects were the Kariba North Bank power station rehabilitation and upgrade, Kariba North Bank Extension project, the Kafue Gorge Lower Hydro power station, Itzhi-Tezhi power station and upgrade of four small hydro power stations.

Among the notable transmission line projects being implemented were the connection of North-western Province to the national grid, Pensulo Kasama and Pensulo Chipata 330kV transmission line projects, Kariba North Bank Extension power evacuation project, and the Lusaka 132kV ring transmission line reinforcement project, for which this scoping meeting was called.

He noted that the aim of this project was to increase the capacity of the sub transmission and distribution system in Lusaka, thereby meeting the increased demand which has outstripped system capacity. In doing so, load shedding, which was as a result of depleted infrastructure capacity, was expected to reduce. He then presented a satellite image of the study area for the project as well as a schematic layout of the development plan for the Lusaka transmission network.

The director informed the meeting that the composition of the load for Lusaka is spread across three (3) power demand categories, namely; residential, commercial and industrial. The residential demand is spread in various directions of the city, stretching to the outskirts as well. He stated that the bulk of demand in the commercial category was from the city centre (i.e. Central Business District), which was currently being supplied through Coventry Substation. He stated that the industrial area, currently located west of Lusaka City was also being supplied through Coventry Substation.

The Director explained that Lusaka transmission/distribution supply network was currently being supplied through two (2) substations at 330kV. The two are Leopards Hill and Lusaka West substation in the east and west of the city, respectively. He further stated that the two substations supply three (3) main Bulk Supply Points (BSPs), which are Waterworks at 88kV as well as Roma and Coventry, both at 132kV. In turn, these BSPs supply more than twenty (20) distribution substations at 33kV, which then supply the 11kV distribution networks.

In his presentation, the Director indicated that the 132kV and 88kV transmission lines were rather old, providing a thermal limit of 86MVA and 57MVA, respectively. Due to this limited transmission capacity, the existing network was being operated close to thermal capacity, resulting in periodic outages. He further stated that the infrastructure was overloaded and was being pushed beyond safe operating capacity, hence the need to reinforce the transmission ring through this project. He went on to add that with an annual progression rate of six percent (6%), the power demand for Lusaka is projected to increase from 450MVA in 2011 to almost 1150MVA in 2030. Therefore, to counter the demand, ZESCO was planning to add nine (9) additional BSPs and install twenty four (24) new 132kVA circuits.

The scope of the works will include upgrading of 52km of the existing 132kV network with monopole structures for double circuit lines on the transmission ring, and installation of new transformers and related equipment at all the BSPs. The Director further stated that about 22km of 88kV lines between Leopards Hill Substation and Waterworks BSP will be upgraded to 132kV, in order to increase the current line capacity from 57MVA to a thermal capacity of approximately 200MVA. The scope will also include installation of the 132/11kV BSPs with 3X30MVA transformers in Avondale, Bauleni, Matero, Liverpool (Mungwi Road), and Makeni. The Director informed the meeting that about 62km of new 132kV lines will also be installed to connect the aforementioned 132/11kV BSPS to the network. He further stated that a new substation will be built between Coventry BSP and Lusaka West Substation, at a location to be determined. Overloaded distribution transformers located at different existing distribution substations, and some of the existing 33kV overhead lines and/or underground 33kV and 11kV cables will also be upgraded, including some of the switchgear on an as needed basis.

The Director stated that ZESCO was currently facing challenges in improving its service delivery, and the challenges included encroachments, unsynchronised planning between Lusaka City planners and ZESCO planners, vandalism, and availability of the required substantial financial resources. He informed the meeting that ZESCO was holding the scoping meeting in order to fulfil the legal requirements of Zambian law and its obligations as mandated by financiers of the proposed project, and the meeting was an important avenue to inform and consult various stakeholders on the intention to implement the project. He further stated that the purpose of the meeting was to bring out and highlight in advance key issues of concerns such as encroachments so as to ensure successful implementation of the project, as per EIA Regulations Statutory Instrument No. 28 of 1997.

The meeting was informed that benefits of implementing the project would include reduced power distribution losses by establishing the power injection points closer to the load centres, and distribution of the loads on transmission and distribution sub-networks. Increasing capacity of the Lusaka power system would satisfy long-term demand growth. The Director further stated that increased reliability of the distribution system would lead to reduced frequency of power supply interruption.

In conclusion, the Director stated that minimised load shedding, increased reliability of supply, additional capacity for new loads/ demand would lead to alleviation of poverty levels for the citizenry, and more money in people's pockets. He ended the presentation after showing some pictures of encroachments on wayleave for ZESCO power lines on the proposed project.

6.0 QUESTION AND ANSWER

The stakeholders present at the meeting were then allowed an opportunity to make their comments on the proposed project, as well as ask questions on various aspects on the project and its interaction with the environment.

ISSUE/COMMENT/QUESTION	NAME AND ORGANISATION	RESPONSE
1. Why is it that power supply to Matero is affected during events such as televised soccer games? 2. I would like to thank ZESCO for inviting me to this important meeting. As government we are also happy that this project, which is partially being funded through funds raised through the US\$750m Eurobond, is earmarked to start off.	Honorable. Miles Sampa, Member of Parliament for Matero Constituency/ Deputy Minister of Finance	ZESCO- The problems being experienced are due to localized constraints. The Matero Substation has only 2x20MVA transformers and it supplies Matero, Kabanana, Chunga and Lilanda. Furthermore, the line supplying Matero is only able to carry about 86MW of power but demand is close to 150MW; therefore the supply in the area is affected tremendously when the load peaks (i.e. during nationally televised soccer matches). We would like our customers to "switch and save" during peak demand hours. Furthermore, the section of the Lusaka 132kV transmission ring that supplies Matero would be the first to be worked on. The Matero Substation is being upgraded and the current power

ISSUE/COMMENT/QUESTION	NAME AND ORGANISATION	RESPONSE
		transformation infrastructure there has been replaced with new 2x40MVA transformers, and site handover is slated for next week. The Kabangwe Substation has also been constructed and a substation will also be commissioned in Kabanana to reduce the load on the Matero Substation.
<p>3. The project is long overdue and I commend ZESCO for taking this step towards implementation of the project. However, what are the negative impacts of the project on the environment?</p> <p>4. There is lack of synchronization between ZESCO and the local planning authority. I urge ZESCO to coordinate its work with the planning authorities so as to reduce incidences of encroachment and provision of power to illegally built properties.</p>	<p>Honorable. Given Lubinda, Member of Parliament for Kabwata Constituency/ Minister of Foreign Affairs</p>	<p>The negative impacts of the project will include involuntary resettlement of people that have encroached in the wayleave, loss of income and livelihood for people engaged in trading under the line and within the wayleave, likely spread of communicable diseases from interaction of construction workers and community will be some of the challenges during implementation of the project.</p>
<p>5. How can ZESCO further engage the private sector in saving power?</p>	<p>Dr. Angelika Huwiler MD Foxdale Court</p>	<p>ZESCO – We have been making efforts to engage the private sector through energy audits, which we conduct free of charge. The audits, which are done by our Demand Side Management team, help our clients have better information on how to manage their power consumption levels without affecting their businesses. However, very few consumer entities have approached us on this matter and even those that we have been audited rarely implement the recommendations we make. We would encourage your</p>

ISSUE/COMMENT/QUESTION	NAME AND ORGANISATION	RESPONSE
		<p>organization and several others to improve the power factor through use of good power factor correction equipment. The duty on such equipment has been waived, so it's a step you should definitely take. We also provide CFLs so that our clients can still have good lighting and save power.</p>
<p>6. What is ZESCO doing to safeguard wayleaves that have been encroached?</p> <p>7. Why is it that ZESCO treats its clients differently, according to social or financial status?</p> <p>8. I wish to reiterate HonourableLubinda's question: What are the negative impacts of the project?</p>	<p>David Rossi, Garden House Motel</p>	<p>ZESCO- We intend to fence off the Carousel – Mumbwa Road section of the Lusaka transmission ring as this is the area which is severely encroached.</p> <p>ZESCO does not practice discrimination in dealing with all its clients. Some areas experience more load shedding than others because the power demand in such areas is significantly higher than what we can manage to supply. We also have infrastructure challenges with our distribution system but we are making huge investments in such critical structures. Note also that certain installations, particularly hospitals and high security premises, are dealt with more expediently for obvious reasons.</p> <p>The negative impacts of the project will include disposal of solid wastes, relocation of people, disturbance of livelihoods and outages. Management of the load will be a serious challenge during implementation of the project. We are also aware that the interaction of contractors'</p>

ISSUE/COMMENT/QUESTION	NAME AND ORGANISATION	RESPONSE
		personnel with member so of the community might lead to increases in certain disease(s) occurrences.
9. What ideas does government have to improve renewable energy?	Given Mulenga, Alternative Energy	Minister of Mines, Energy and water development: As government and as outlined in the energy policy, we are looking at promoting all alternative sources of energy such as Solar energy and biofuel. We all must change our attitude towards these sources of energy.
10. I want to commend ZESCO for undertaking the project and on behalf of Kalingalinga ward Development Committee pledge to support ZESCO curb vandalism	Mr. Wafika Mtonga: Kalingalinga Ward Development Committee	ZESCO- We acknowledge thank you for the support pledged to help the cooperation curb vandalism
11. ZESCO needs to engage her Royal Highness Chieftainess Mungule on getting alternative land for the Kabangwe Substation as the current substation is on the road reserve	Headman Mupwaya: Mungule Royal Establishment	ZESCO: we thank you and acknowledge Her Royal Highness for the gesture to engage in alternate land negotiations for Kabangwe substation. We will approach her on the suggestion

7.0 CLOSING REMARKS

The Managing Director thanked all who were present for taking time out of their busy schedules to attend the scoping meeting. He informed the meeting that ZESCO had a tight schedule for the project and that if they had any issues to feel free to present them to the corporation. He further informed the meeting that it was ZESCO's intention to implement the project with minimum disturbances to the public and the environment. The meeting was officially closed at 12:20 hours after singing the national anthem and a prayer.

Chairperson

Secretary

Name: Hon Mr. Yamfwa_Mukanga_ Name: Mr. C. Mubemba_____

Signature _____ Signature _____

Date _____ Date _____

**LIST OF ATTENDANTS OF THE ENVIRONMENTAL SCOPING MEETING
FOR THE LUSAKA RING 132kV TRANSMISSION LINE PROJECT HELD AT
MULUNGUSHI CONFERENCE CENTRE ON 29TH JANUARY, 2013**

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