E4636 V2

The Republic of Uganda
Ministry of Energy and Mineral Development
RURAL ELECTRIFICATION AGENCY

Environmental Project Brief for the proposed Ruhumba - Kashwa electricity distribution line with the associated low voltage networks

November 2014

Table of Contents

List of Tables

List of Figures

List of Plates

ABBREVIATIONS AND ACRONYMS

BP	Bank Policies (World Bank)
DWD	Directorate of Water Development
EAPMPS	East African Power Master Plan Study
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ERA	Electricity Regulatory Authority
ERT	Energy for Rural Transformation
EPB	Environmental Project Brief
GEF	Global Environment Facility
GoU	Government of Uganda
GWh	giga watt hours
ICT's	Information Communication Technologies
IDA	International Development Agency
IPP	Independent Power Producers
kV	kilo volt
MDG	Millennium Development Goals
MEMD	Ministry of Energy and Mineral Development
MV	medium voltage
MVA	mega volt amperes
MW	mega Watt
NBI	Nile Basin Initiative
NEMA	National Environment Management Authority
NEMP	The National Environment Management Policy
NORAD	Norwegian Agency for Development Cooperation
NWP	National Water Policy
OP	Operational Policies (World Bank)
OECD	Organisation for Economic Co-operation and Development
PPE	Personal Protective Equipment
PSIP	Power Sector Investment Plan
PV	Photo Voltaic
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RE	Rural Electrification
REA	Rural Electrification Agency
REB	Rural Electrification Board
RESP	Rural Electrification Strategy and Plan
RoW	Right of Way
UEB	Uganda Electricity Board
UEDCL	Uganda Electricity Distribution Company Limited
UEGCL	Uganda Electricity Generation Company Limited
UETCL	Uganda Electricity Transmission Company Limited
UIA	Uganda Investment Authority
US	Uganda Standard

THE EXECUTIVE SUMMARY

The Rural Electrification Board/Agency of the Ministry of Energy and Mineral Development of the Government of Uganda has commenced the preparation of the third phase of the World Bank funded Energy for Rural Transformation Project (ERT III). Ruhumba – Kashwa with tee- off at Rwebishuri electricity distribution lines is one of the proposed projects to be funded under ERT III. Its feasibility study was conducted in accordance with the Proposed Rural Electrification Strategy and Plan, 2013-2022.

An Environmental Assessment of the areas is a pre-requisite to construction of all power extension and distribution lines. The Rural Electrification Agency (**REA**), commissioned an Environment Assessment for the proposed construction of a 33kV electricity power extension and distribution line (the "**Project**") of Ruhumba – Kashwa with tee-off at Rwebishuri, in Mbarara and Kiruhura Districts and Environs in western Uganda.

REA carried out a detailed feasibility study which was used as the basis for evaluating the environmental condition of the project. The Resettlement Action Plan (**RAP**) has been prepared concurrently with the environmental assessment, and has been presented in a separate cover. This report presents the findings of the environmental screening, scoping, field visit, public consultation, in-depth interviews, impact identification and mitigation, and environmental management plan and monitoring.

Project Objective and Justification

The proposed project is the construction of a 33kV electricity extension line of bare conductor overhead lines and a distribution system at selected load centres along the line of Ruhumba – Kashwa with tee tee-off at Rwebishuri, in Mbarara and Kiruhura Districts. The overall objective of the Project Brief of this project was to conduct an Environmental Assessment (EA), identify and evaluate potential impacts. The study also aimed at identifying, evaluating and proposing practical mitigation measures for the impacts.

It is expected that the project will stimulate several economic activities within these areas and beyond. The beneficiaries are expected to develop agro-based and small as well as medium scale industries, including electricity supply to institutions and households. Mobile telecommunication masts in the area, which are powered by diesel generators, will also get electricity from the national grid through the project.

Project Activities

The main project activities include fixing of 10m, 12m and 14m high eucalyptus creosote-treated poles, 2m into the ground, spacing them at 100m on dry terrestrial land, with 150-200m spacing in wetland areas using metallic drums and murrum in soggy areas, installation of the 100mm Aluminium Conductor Steel Reinforced (ACSR), 300 amps bare conductors overhead lines and installation of transformers.

Positive Impacts

The Rapid Impact Assessment Matrix showed that the project had overall positive significant impacts on the project area. These include but not limited to the following: -

- Electricity supply in the rural areas

- Employment opportunities
- Sale of construction materials
- Improved medical services
- Promotion of industrialization
- Improvement of education
- Improvement of telecommunication
- Improvement in security
- Improvement of the standard of living
- Improvement of banking services
- Alternative power source hence reducing deforestation
- Decrease global warming
- Provision of pumped water supply

Negative impacts and mitigation

The Rapid Impact Assessment Matrix showed that the project had low negative impacts on the project area. These low negative impacts can be easily mitigated. These include but are not limited to the following: -

- Soil compaction and pollution
- Noise and vibrations
- Increase in dust pollution
- Habitat destruction and loss of vegetation cover
- Fire outbreaks
- Generation of construction solid waste
- Occupational health and safety
- Visual impacts and landscape
- Impact on flora
- Impacts on Fauna
- Electrocution and electric shocks

- Electromagnetic fields
- Influx of skill and unskilled labour in the project area
- HIV/AIDS
- Impact on cultural sites
- Impacts on Crop Production
- Land uptake
- Impacts of Access roads
- Impacts on residential areas

An environmental and Social Management Plan to guide in mitigating and monitoring the above listed impacts has been prepared and it will cost about One Hundred and Ninety Two Million (192,000,000) Uganda Shillings.

Conclusion and Recommendations

The anticipated low negative environmental impacts for the grid extension from Ruhumba – Kashwa with tee-off at Rwebishuri, in Mbarara and Kiruhura Districts and surrounding environs are generally minor localised and of short term nature which can easily be managed during construction, operational and decommission phases.

According to World Bank OP 4.01, this project is ranked as Category B where a detailed EIA is not needed or Category I under The Environment Act where only a project brief is required. Overall, key impacts were identified as those related to occupational health and safety. These are localised, site specific and can be handled by either using appropriate engineering or provision of appropriate personal protective equipment.

The project area is generally flat with seasonal wetlands and loose soils. Metallic drums will be used in soggy areas and filled with murrum, forming bunds at pole sites in wetlands. In areas where the line passes through heavy populated and built up areas, which may result in a lot of land uptake leading to destruction of property, it is recommended that the line is relocated where compensation will be minimal. In permanent wetlands it is recommended that M/H-member structures are used to avoid poles being put directly in the wetlands.

The Contractor shall have an Environmental Specialist to give on-spot guidance on the environmental aspects such as emergency issues, traffic management, solid waste and wastewater management, occupational health and safety issues.

The Contractor should give equal employment opportunities to women as well as men within the project skills requirements; and to maximize the procurement of local products and services. There should be a deliberate policy to employ local people from the project area.

The District Environment Officers, REA, ERA and NEMA should monitor the project particularly during the construction phase.

Since nearly all the negative impacts are low and can be easily mitigated, it is recommended that environmental aspects of the project be approved by NEMA.

1 INTRODUCTION

1.1 Background

The Government of Uganda with funding support from the World Bank (the IDA) is currently in the process of implementing Rural Electrification projects in Priority Areas under the Energy for Rural Transformation Project.

An Environmental Assessment of the projects is a prerequisite for construction of power lines. The Rural Electrification Agency (REA), the Client, therefore proposed a project for the construction of a 33kV electricity power extension and distribution line (the "Project") in Ruhumba – Kashwa with tee off at Rwebishuri in Mbarara and Kiruhura Districts and environs in western Uganda.

REA carried out a detailed feasibility study which was used as the basis for evaluating the environmental condition of the project. Savimaxx Limited (the "Consultant") was contracted by the Client to provide consultancy services for the preparation of an Environmental Project Brief.

This report presents the findings of the environmental screening, scoping, field visit, community consultation and in-depth interviews, impact identification and mitigation, environmental management and monitoring plan.

1.2 Objectives and scope of the Project Brief/EIA

The overall objective of the Project Brief was to conduct an Environmental Assessment (EA) and propose mitigation measures identify. The study also aimed at identifying, evaluating and proposing practical mitigation measures for the impacts, and preparing a Project Brief detailing the potential impacts of the project and their mitigation measures.

The study focussed on construction activities of the 33kv lines and associated low voltage networks and activities in Mbarara and Kiruhura districts along Ruhumba-Kaswa. The assessment was for mainly 15m (on both sides) following distance along the proposed distribution lines.

This Project Brief meets the requirements of the National Environment Act Cap 153, REA's Environmental and Social Management Framework and REA's Construction Guidelines for Rural Electrification Projects, which guide all environmental and social management issues in the Energy for Rural Transformation (ERT III) project (REA, 2014a, b and c).

1.3 Structure of the Report

The Report is structured as follows:

- Chapter 1 is the Introduction;
- Chapter 2 provides an overview of the Uganda power sector, Policies, Legal and Institutional framework;
- Chapter 3 describes the detailed baseline conditions of the project area;
- Chapter 4 outlines the project description;

- Chapter 5 contains public consultations and disclosure results;
- Chapter 6 presents analysis of project impacts and mitigations
- Chapter 7 provides analysis of the project alternatives
- Chapter 8 presents the proposed environmental management and monitoring plan
- Chapter 9 contains conclusions and recommendations
- Chapter 10 is references
- Chapter 11 presents the appendices

1.4 EIA Methodology

1.4.1 EIA team

The EIA team comprised of the following professionals: -

1. Samuel Vivian Matagi, Registered Environmental Practitioner/Team Leader;
2. Esther Nanfuka, Registered Environmental Practitioner/Sociologist;
3. Eng. Dr. Moses Kiiza Musaazi, Electrical Engineer;
4. Fred Lali, GIS Specialist
5. David Ekuma, Assistant GIS Specialist

1.4.2 Literature Review

Literature was reviewed to obtain background information on environment and energy sector and specifically in the project areas as well as relevant policies, legal and institutional framework. The documents referred to are given in references.

1.4.3 Initial environmental screening

Environmental issues and/or impacts that were likely to arise from the project at the construction, operation and decommission phases were identified. Activities that were likely to affect the environment were documented for further evaluation using environmental scoping as recommended by Guidelines for Environmental Impact Assessment in Uganda (1997). This process continued in the field. From the screening undertaken, it was confirmed that the proposed project is of low impact and the mitigation measures are readily identified and implemented. It was therefore confirmed that a Project Brief would suffice for the required Environmental Assessment.

1.4.4 Inception Report

The Consultant prepared an Inception Report outlining the issues so far encountered during the assignment, the work plan, interpretation of the ToR, assessment of the timeframe, staffing,

methodology to be used during the assessment, identification of the key institutions and stakeholders consulted, and key areas considered during compilation of the project brief. The Inception Report was presented to the Client for review. Pertinent issues, approach and related issues were discussed and the final Inception Report submitted after incorporation of the Client's comments.

1.4.5 Scoping for Environmental Impacts

The likely environmental impacts were identified in the initial environment screening at inception and were subjected to further analysis using the environmental scoping method as recommended by the Guidelines for Environmental Impact Assessment in Uganda (1997).

1.4.6 Field Visit

The Project area was visited from 13th July 2014 to 17th July 2014. The Consultants met the local community, Mbarara and Kiruhura district local governments' officials as well as residents in the trading centres of Rwanyangwe, Kashongi, Byanamira, Kyenshama and Kitura trading centres. Field observations on the project layout, the physical environment and the human environment were made as the team travelled along the road since the project is proposed to be constructed along the road reserve.

1.4.7 Stakeholder Consultations

The Environmental Assessment (EA) was done at the stage when design consultants had finished the feasibility study and detailed designs. Consultation meetings were held with individuals of Local Government Authorities and Central Government. Focus Group Discussions (FGD) were held with Local Communities. The aim of these meetings was to identify environmental and social issues at an early stage, most especially community concerns so as to incorporate their mitigations in the implementation phase of the project. Project alternative options were also discussed and evaluated. The findings of these consultative meetings are included in the minutes of the meetings in Appendix D.

1.4.8 Research Methods

Qualitative methods of research using direct observation, in-depth interviews and focus group discussions were used to obtain information on neighbourhood issues and facilitate public participation in the proposed project area as recommended by the National Environmental Act Cap.153, the Environmental Impact Assessment Regulations 1998 and the National Environment (Conduct and Certification of Environmental Practitioners) Regulations 2003, and EIA Guidelines for Uganda. Professional expertise was used to arrive at mitigation measures to be undertaken during construction, operational and maintenance phases of the project. Quality Assurance for the EIA study and report preparation was done as recommended by Good Practices for Environmental Impact Assessment of Development Projects (OECD, 1992).

1.4.9 Physical Environment

Using a checklist from Guidelines of Environmental Impact Assessment for Uganda (NEMA, 1997) an inventory of the existing physical environment was analysed. This included but was not limited to the following: - topography and landscape, soil, geology and geomorphology, hydrology and water resources, and climate. Meteorological data like wind speed, ambient temperatures and flooding potential activities that are likely to impact the project were got from District Environment Profile Reports.

1.4.10 Biological Environment

Using a checklist from Guidelines of Environmental Impact Assessment for Uganda (NEMA, 1997), an inventory of the existing biological environment was analysed. This included but was not limited to the following: - wildlife, vegetation, biodiversity, and the integrity of surrounding ecosystems protected habitats.

1.4.11 Human Environment

Using secondary data from the population census, background demographic information from the project areas was obtained and integrated into the project brief. Information included population, socio-economic issues and ethnic composition.

1.4.12 Identification of environmental impacts

Identified impacts were analysed for their significance. The impact of project activities like excavation of pits for poles, cutting of trees and construction of equipment storage areas were analysed.

1.4.13 Identification of mitigation measures and Impact Ranking

Mitigation measures for each impact were identified, ranked and the best feasible alternative recommended. Mitigation measures were based on the expert analysis and experience, best practices and opinions of the stakeholders.

Identified impacts were analysed for their significance. They were ranked according to Rapid Impact Assessment Matrix developed by Christopher M. R. Pastakia of VKI, Horsholm, Denmark (Pastakia, 2004). The Ranks range from of -5 to +5 (Table 1.1).

Table 1.1 Impact Ranking according to the Rapid Impact Assessment Matrix

No.	Impact Rank	Rank	Description of the Rank
1	+5	Major positive change/impact	A 'major change' will occur at a point when the condition extends to a regional/national boundary and is of major importance. Such a change would also be permanent, irreversible, though it could be non-cumulative.
2	+4	Significant positive change/impact	The lower limits of 'significant change' can be taken as the point when a condition is outside local boundaries but is of major importance, yet is temporary, reversible and non-cumulative.
3	+3	Moderate positive change/impact	A condition of moderate change will lie between the limits of 'change' and 'significant change'.
4	+2	Positive change/impact	A condition of 'change' will occur up to a condition of local importance with significant magnitude, which is permanent, irreversible and cumulative.
5	+1	Slightly positive change/impact	A condition that is local in importance and a slight change from the status quo, yet is permanent, irreversible and cumulative, represents the upper limit of the 'slight change' condition.

6	0	No change/status quo	Conditions that have neither importance nor magnitude will score a zero, and can be banded together. Any condition in this band is either of no importance, or represents the status quo, or a no change situation.
7	-1	Slightly negative change/impact	A condition that is local in importance, and a slight change from the status quo, yet is permanent, irreversible and cumulative, represents the upper limit of the 'slight change' condition.
8	-2	Negative change/impact	A condition of 'change' will occur up to a condition of local importance with significant magnitude that is permanent, irreversible and cumulative.
9	-3	Moderate negative Change/impact	A condition of moderate change will lie between the limits of change' and 'significant change'.
10	-4	Significant negative change/impact	The lower limits of 'significant change' can be taken as the point when a condition is outside local boundaries but is of major importance, yet is temporary, reversible and non-cumulative.
11	-5	Major negative change/impact	A 'major change' will occur at a point when the condition extends to a regional/national boundary and is of major importance. Such a change would also be permanent, irreversible, though it could be non-cumulative.

2 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

This section presents an overview of the Uganda power sector and its structure in respect of the policy, legislative and institutional framework.

2.1 Policy framework

In 1997, the Government of Uganda formulated a comprehensive plan for transforming the Energy Sector into a financially viable industry. Since then, there have been significant reforms in policy and legislative frameworks, which are briefly outlined below: -

The Energy Policy for Uganda, 2002

In 2002, the GoU developed a comprehensive policy on energy. The goal of the policy is to meet the energy needs of Uganda's population for social and economic development in an environmentally sustainable manner.

This project implements this policy because it will enable the people of Mbarara and Kiruhura districts, who up now have never been on the national grid, to get electricity, which will supplement their energy needs.

Renewable Energy Policy for Uganda, 2007

The overall goal of the Renewable Energy Policy is to increase the use of modern renewable energy, so that its proportionate use increases from the current 3.8% to 61% of the total energy consumption by the year 2016.

Electricity to be supplied will be hydropower. Therefore, this project will support this policy since hydropower is a renewable energy. Furthermore, the project augments the policy by increasing coverage of usage of renewable energy in the country.

The National Environment Management Policy

Cabinet adopted the National Environment Management Policy (NEMP) in 1994. Its overall goal is the promotion of sustainable economic and social development that enhances environmental quality without compromising the ability of future generations to meet their needs.

The people in the project area rely 90% of their energy needs on fuel wood. This has the consequence of deforestation and its associated ills. Additionally they have been using petroleum products as a source of energy, which have a carbon footprint. The project will bring electricity into the area and it is anticipated the environment will be conserved.

The National Industrial Policy

The National Industrial Policy that was developed in February 2008 is a framework for Uganda's "transformation, competitiveness and prosperity" The economic transformation of Uganda critically depends on industrialization, the application of science and technology and innovation.

The region has potential for the development of a beef industry, diary and agro-processing industry etc. The supply of electricity will enable these industries commence. Therefore the project strongly supports the industry policy.

National Water Policy
The National Water Policy (NWP), adopted in 1999, provides the overall policy framework for the water sector. The National Water Policy promotes the principles of integrated water resources management as a means to ensuring sustainable management and utilization of Uganda's water resources.

The project will take electricity into the area, which will be used to pump ground water and treatment of surface water in water treatment works. Hence the project fully compliments the policy objective of increasing portable water supply in Uganda.

The National Policy for the Conservation and Management of Wetlands, 1995
The overall aim of this policy is to promote and ensure long-term conservation, wise use and protection of wetlands and their resources for the ecological and common good of all citizens.

This project will run along seasonal and permanent wetlands. The policy recommends that for any activity that is inconsistent with the wetland environment, an Environmental Impact Assessment should be done. This Environmental Project Brief has been designed to ensure that all identified environmental impacts are eliminated, mitigated or minimised. Modification and restoration measures in wetlands have been recommended.

The National Employment Policy
The National Employment Policy provides a number of policy interventions in the various fields of labour and employment. Regarding labour administration, the policy has committed government in the adoption of strategies such as implementing labour laws, regulations and the fundamental principles and rights at work; developing a comprehensive and sustainable labour administration and employment services system; strengthening of labour administration institutions such as the Industrial Court, the Labour Advisory Board, the Minimum Wages Advisory Board and wages Councils, the Medical Arbitration Board and the Occupational Safety and Health Board; and strengthening of departments responsible for labour, employment as well as occupational safety and health.

The project has attracted Direct Foreign Investment into Uganda. Therefore the project will implement the national employment policy by giving employment to Ugandans at the design, construction, operation and decommission phases.

The Second National Health Policy 2010 - 2019
The second National Health Policy operationalizes the constitutional obligation of the Government of Uganda to provide basic health care and proper nutrition to its people. The vision of the policy is to have a healthy and productive population that will contribute to economic growth and national development.

The project will support Government's commitment to providing basic health care to its' citizenry. Electricity will be supplied to health centres in the project area, which up to now have either no electricity or use generators/solar.

The National Policy of HIV/AIDS

The National Policy of HIV/AIDS, which has largely been developed along the lines of the International Labour Organization (ILO) Code of Practice on HIV/AIDS and the World of Work provides policy guidance and implementation strategies for HIV and AIDS interventions at the workplace.

The influx of immigrate labour to implement the project, plus the movement of people into the project area for employment opportunities will increase the spread of HIV/AIDS in the area. This Environmental Project Brief streamlines the policy objectives into the project and without forgetting the communities where it will be implemented.

The Uganda Gender Policy

The Uganda Gender Policy is an integral part of the national development policies. It is a framework for redressing gender imbalances as well as a guide to all development practitioners. The aim of this policy is to guide all levels of planning, resource allocation and implementation of development programmes with a gender perspective. The emphasis on gender is based on the recognition that "gender" is a development concept useful in identifying and understanding the social roles and relations of women and men of all ages, and how these impact on development.

The policy gives a clear mandate to the Ministry of Gender, Labour and Social Development and other Line Ministries to mainstream gender in all sectors. It sets priority areas of action at the National, Sectoral, District and Community levels. The ultimate objective of this policy is to evolve a society that is both informed and conscious of gender and development issues and concerns. Indeed sustainable development calls for maximum and equal participation of both men and women in economic, political and social cultural development.

REA as an Agency has mainstreamed gender dimensions into its activities, plans and policies. Furthermore, this Environmental Project Brief (EPB) makes recommendations of how employers should mainstream gender issues at the workplace. The implementation of gender issues in this project will mean the implementation of the national gender policy.

Plan for Modernisation of Agriculture (PMA)

The overarching goal of the Plan for Modernisation of Agriculture (PMA) is poverty eradication. Modernizing agriculture is another way to eradicate poverty through increased production thus, ensuring that there is enough food for all the people at all times. The majority of the population lives in rural areas and is engaged in subsistence agriculture. Therefore, the intervention of rural electrification will seek to increase the productivity of factors of production in agriculture, to ensure food security, to create gainful employment, to increase incomes, and to improve the quality of life of those engaged in the agriculture sector and to promote agro-processing through value addition.

Given that the project area is predominated by agriculture (mainly subsistence but with some commercial) as a source of livelihood, this project is relevant for PMA as availability of electricity in these areas will result in value addition leading to increased incomes.

National Development Plan (NDP) (2010/2011-2014/2015)

The National Development Plan of Uganda aims to address structural bottlenecks in the economy to accelerate socioeconomic transformation and bring a portion of the third of the population out of poverty. The plan outlines the development priorities and implementation strategies to help achieve this. Among these, energy and specifically rural electrification is acknowledged as an enabling sector that will require integration with other sectors of the economy for successful socioeconomic transformation.

This plan has been put in place with the vision "A transformed Ugandan society from a peasant to a modern and prosperous country within 30 Years" and theme; "Growth, Employment and Socio-Economic Transformation for Prosperity". Chapter 3.2 section 120 of the NDP sets out objectives including; increasing household incomes and promoting equity, improving stock and quality of economic infrastructure, increasing access to quality social services, and promoting science, technology, innovation and ICT to enhance competitiveness.

The above objectives are directly linked to the project because electricity distribution and use will form an important part in achieving them in the project areas.

Vision 2040

The vision underlines that Energy and in particular electricity is a driver of socio-economic transformation of Uganda. For Uganda to shift from a peasantry to an industrialized and largely urban society, it must be propelled by electricity as a form of modern energy. It is estimated that Uganda will require 41,738 MW by 2040 thus increasing its electricity per capita consumption to 3,668 kWh. Furthermore the access to the national grid must significantly increase to 80 per cent. To improve access and availability of electricity to the rural and urban areas, especially to economic zones and other productive areas, new transmission lines to evacuate power will be built and rural electrification programmes accelerated. Government will provide incentives to lower the cost of electricity infrastructure, facilities and equipment. In this Vision government is emphatic on expanding the rural electrification programmes to cover the whole country.

The proposed electricity grid extension in Mbarara and Kiruhura districts is part of this vision framework.

2.2 Legislative Framework

This section presents the structure of environmental management in respect of the policy, legislative and institutional framework in the energy sector.

The Constitution of the Republic of Uganda, 1995

The Constitution of the Republic of Uganda is the main framework on which all legislation in Uganda is based. The Constitution provides for, among other things, matters pertaining to land Chapter 15, Article 237; the environment Chapter 15, Article 245, National Objective and Directive Principle of State Policy Chapter XII Protection of natural resources such as land, water, wetlands, oil minerals, fauna and flora; Chapter XXI Clean and Safe water and Chapter XXVII The Environment. Article 245 of The Constitution stipulates that it is the duty of each citizen, individual or corporate to protect and preserve the environment from abuse, pollution and degradation, and also to provide measures intended to manage the environment for development in a sustainable manner by promoting environmental awareness. Furthermore, Article 39 states that, "Every Ugandan has a right to Clean and Healthy Environment."

REA has an Environmental and Social Management Framework ESMF (REA, 2014b) for rural electrification projects. Its objective is to provide guidance for environmental screening and assessment of proposed projects and thus implement the constitutional requirement of observing environmental requirements while planning new projects especially in the protection of natural resources such as land, water, wetlands, oil minerals, fauna and flora. This Environmental Project Brief (EPB) compliments both the constitution and ESMF by making practicable recommendations for environmental protection during the implementation of the project.

The Electricity Act, 1999

The Electricity Act, 1999 aims at bringing about an enabling environment for the transformation of the electricity sector. The main objective of the Act is to provide a framework for regulation of the generation, transmission, distribution, sale, export, import and distribution of electrical energy in Uganda.

Part VII, Article 63 of the Act stipulates that Government shall promote, support and provide rural electrification programmes, while Articles 64 and 65 require the Minister responsible for electricity to prepare and implement a Rural Electrification Strategy and Rural Electrification Fund.

This project operationalizes the Act by enabling government extend electricity in remote rural districts of Mbarara and Kiruhura. The Project is consistent with the Act as it provides power to rural community.

The National Environmental Act, Cap 153

This is the law making operational the Constitutional Article of everybody having a right to live in a clean and healthy environment (Article 39 of the Constitution). This Act is currently the most significant law on the environment and the management of chemicals. It prohibits the discharge of hazardous substances into any part of the environment except with the guidelines of the National Environment Management Authority. Furthermore, it is the National Environment Act Cap. 153 that requires planned projects listed in its third Schedule to be subjected to EIA and the on-going ones to be monitored and subjected to periodic Environmental Audits.

This report is a fulfilment of the Environmental Act, where an environmental assessment is needed for projects/activities that are out of character with the environmental surroundings. The implementation of this project is based on the REA (2014b) Environmental and Social Management Framework (ESMF). The ESMF in turn is principally premised on the National Environmental Act Cap 153 and World Bank Safeguard Policies. This Environmental Project Brief further enforces both the Act and ESMF by identifying environmental impacts and recommending mitigation measures.

The Employment Act, 2006

The Employment Act 2006 is the governing legal statutory instrument for the recruitment, contracting, deployment, remuneration, management and compensation of workers. The Employment Act 2006 is based on the provisions of Article 40 of The Constitution of Uganda. The Act's main object is to ensure good working conditions of workers.

The Employment Act operationalizes the Employment Policy. The project is consistent with the Act as it will give employment to Ugandans at the design, construction, and operation and decommission phases of the project.

Workers' Compensation Act (2000)

The Workers Compensation Act, 2000 provides for the provision of financial compensation for work related injury or illness. Section 28 of The Workers' Compensation Act (2000) states that, *"Where a medical practitioner grants a certificate that a worker is suffering from a scheduled disease causing disablement or that the death of a workman was caused by any scheduled disease; and the disease was due to the nature of the worker's employment and was contracted within the twenty-four months immediately previous to the date of such disablement or death, the worker or, if he or she is deceased, his or her dependants shall be entitled to claims and to receive compensation under this Act as if such disablement or death had been caused by an accident arising out of and in the course of his or her employment."*

The act further stipulates, *"If on the hearing of an application for compensation in terms of subsection (I) of this Section the court is satisfied on the evidence that the allegations in the certificate are correct, the workman or his dependants, as the case may be, shall be entitled to compensation under this Act as if the contracting of disease were an injury by accident arising out of and in the course of the workman's employment."* The provision of personal protective equipment (PPE) to employees which minimizes accidents and injuries is emphasised.

The project will give employment to people. But unfortunately there are work related hazards, which the employers should ensure are eliminated, mitigated, minimised or avoided. This EPB re-enforces the provisions of the Act into the project.

The Local Governments Act, 1997

The Act establishes a form of Government based on the District as the main unit of Administration. Section (34-45) of the Act gives legislative and planning powers to the Districts. Districts are also enjoined to plan for the conservation of the environment within their local areas, and the District Environment Committees established under Section 15 of the National Environment Act Cap. 153 are supposed to guide the District authorities in that regard.

The implementers of the entire life cycle of the project should work with the local authorities particularly the lower Local Councils (LCs) to ensure the timely delivery of services.

Land Act, 1998
Article 45 of The Land Act gives power to the Government or Local Government to hold land in trust for the people and protect natural lakes, rivers, ground water, natural ponds, natural streams, wetlands, forest reserves, national parks and any other land reserved for ecological and touristic purposes for the common good of the citizens of Uganda.

Article 74 stipulates, "Where it is necessary to execute public works on any land, an authorised undertaker shall enter into mutual agreement with occupier or owner of the land in accordance with this Act, and where no agreement is reached, the Minister may, compulsorily acquire land in accordance with section 43 of this Act."

Article 43 refers land acquisition by Government to Article 26 and clause (2) of Article 237 of the Constitution. Article 26 of The Constitution states that, "(1) Every person has a right to own property either individually or in association with others (2) No person shall be compulsory deprived of property or any interest or right over property of any description except where the following conditions are satisfied. (a) Public use, in the interest of defence, public safety, public order, public health (b) prompt payment of fair and adequate compensation. Clause 2 Article 237 of the Constitution is the same as Article 45 of the Land Act quoted above.

Requires the developer of an energy project to enter into mutual agreement with the owner/occupier of any land required for project construction, and the payment of fair compensation to such owners/ occupier. Section 78 establishes principles for compensation.

It is anticipated that in some cases limited land uptake may occur along the entire route of the power line, although it is expected that power lines should be as much as possible be restricted to the road reserve. This project may require compensating project affected persons (PAP's) as per this Act and as recommended in the Resettlement Action Plan prepared in parallel to this Environmental Project Brief.

Land Acquisition Act, 1965
Provides for the expropriation of land needed for public purposes, but requires the payment of compensation for any damage suffered due to such works.

The provisions of the Act are meant to ensure that the process of land acquisition in this project is in compliance with existing laws and that the affected persons receive fair, timely, adequate compensation. Therefore, where land take is anticipated, these provisions will guide the process of compensation. Dispute arising from the compensation to be paid should be referred to the court for decision in the event of failure of the Grievance Redress Committees and Land Tribunal to handle the dispute.

The Investment Code Cap. 92
Section 19 thereof provides that an Investment License may also contain an undertaking by the investor to take necessary steps to ensure that the operations of their business enterprise do not

cause injury to the ecology or environment. The Uganda Investment Authority from which the investment licence was obtained enforces the Code.

This project is consistent with the Code by making Uganda a favourite investment destination. The Direct Foreign Investment is from the World Bank Group.

The Occupational Safety and Health Act No. 9, 2006

The Occupational Safety and Health Act of 2006 consolidates, harmonizes and updates the law relating to occupational safety and health in Uganda. The Act repealed the Factories Act of 1964. Section 45-55 of the Act makes provisions for the health, safety, welfare and appropriate training of persons employed in work places. Management of workplaces have to ensure safety and health of employees and equipment through provision of safety and health measures, appropriate machine guarding, and personal protective equipment (PPE) like respirators, overalls and gloves. The Act emphasises work place managers to compel all workers to comply and use the PPE in order to fulfil the provisions of this Act. Section 46 of the Act requires that every workplace be kept in a clean state, including floors, walls, workrooms and ceiling or top of rooms. Furthermore, Section 47 (2) states that a factory shall not, while work is carried out, be so overcrowded so as to cause risk of injury. Section 47(4) provides for ventilation and circulation of fresh air in each workroom.

This EPB compels all employers to enforce this Act at the work place.

The Control of Agricultural Chemicals Act No. 1, 2007

This Act is enacted to control and regulate the manufacture, storage, distribution and trade in, use, importation and exportation of agricultural chemical and other related matters. It requires competent packaging, labelling and advertisement of agricultural chemicals.

The project is at the end of the chain in that it will not treat poles but it will utilise poles that have been treated by the chemicals. However, it is important that the project ensures that the suppliers meet the recommended standards.

The Water Act Cap 152

This Act provides for and regulates supply of water to the public. It seeks to protect the water as a resource. Under Section 34, any person who pollutes, or causes risk of pollution by any foul liquid, gas or other noxious matter to enter into a waterworks shall be liable on conviction to a fine. The Act is enforced by a number of agencies in the Ministry of Water and Environment.

Provisions of this Act are emphasized in this EPB. There are clear linkages of prevention of water pollution through oil spills, working in wetlands, storage and erection of creosote treated poles.

Historical Monument Act, 1967

The Act provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest. Section 10(2) requires that any person who discovers any such object takes such measures as may be reasonable for its protection.

This EPB compliments the Act to address the procedures in addressing possible encounters of any cultural and archaeological resources during project implementation through provision of a Chance Finds Procedure.

The Public Health Act Cap. 269

Section 7 of the Act provides local authorities with administrative powers to take all lawful, necessary and reasonable practical measures for preventing the occurrence of, or for dealing with any outbreak or prevalence of any infectious, communicable or preventable disease to safeguard and promote public health; and to exercise the powers and perform the duties in respect of public health conferred or imposed by this Act or other relevant laws.

Section 56 prohibits any person from causing a nuisance.
Section 57 of the some Act authorizes the Local Authorities to cause the abatement of a nuisance.
Section 103 permits the local authorities to take measures to prevent any pollution dangerous to health of any water supply, which the public has a right to use for drinking or any other domestic purposes.

In the spirit of this Act, this EPB enforces cleanness, prevention of a nuisance, and prevention of use of unsuitable dwellings or houses, spread of venereal diseases, sanitation and drainage.

The Roads Act (1964)

The Roads Act of 1964 is a critical piece of legislation with respect to road development projects. It defines a road reserve as that area bounded by imaginary lines parallel to and not more than fifty feet distant from the centerline of any road. The Act prohibits erection of buildings or planting permanent crops within a road reserve.

This Act is the single most important piece of legislation as far as the project is concerned. This is because the project is supposed to restrict itself along the road reserve as much as possible. This EPB emphasises provisions of the Act. But there is a leeway to avoid expensive compensation of assets, which may be found in road reserves.

The Access to Roads Act (1965)
This Act seeks that a private landowner who has no reasonable means of access to public highway may apply for leave to construct a road of access to a public highway. This law also establishes a mechanism of applying for such access. It also establishes a legal regime to ensure the safety of the neighbouring environment.

The Act permits an owner of land who is unable through negotiations to obtain leave from adjoining land owners to construct a road of access to the public highway, to apply to a magistrate for leave to construct a road of access over any land lying between his land and the public highway. This law also provides for means by which an order for the construction of an access road can be revoked. The Act further provides for maintenance of the access road in a good and efficient state of repair, and for payment of compensation in respect of the use of the land, the destruction of crops of trees and such other property.

In very rare circumstances the project may need an Access Road. REA will under this Act, have the right to apply for an Access Road in order for the project to be implemented.

2.3 Regulations

Environmental Regulations related to project

National Environment (Noise Standards & Control Regulations) 2003
The regulation provides standards for:

- The maximum permissible noise levels to which a person may be exposed from a facility or activity;

- Control of noise and for mitigating measures for the reduction of noise levels; and giving effect to the provisions of Section 28 of the National Environment Act, Cap. 153.

Section 7(1): No person shall emit or engage in any activity that emits or likely to emit noise above a maximum permissible level specified in regulation 5 of these Regulations, unless permitted to do so by these Regulations.

Section 7 (2) Any person who emits or engages in any activity that emits or likely to emit noise above a maximum permissible level specified in this sub regulation (1) commits an offence.

Section 8(1) - Duty to control noise. It shall be the duty of the owner or occupier of a facility or premise or machinery to use the best practicable means of ensuring that the emission of noise from those premises does not exceed the standards and limitations set in these regulations.

Sub-section (3): A person or occupier of a premise or facility or machinery or plant generating noise who fails to comply with this regulation commits an offence.

Under Sections 23 and 107 of the Environment Act these regulations are aimed at ensuring the maintenance of a healthy environment for all people in Uganda, the tranquillity of their surroundings and their psychological wellbeing by regulating noise levels. This is done through prescribing the maximum permissible noise levels from a facility or activity to which a person may be exposed, and the provision for control of noise and for mitigating measures for the reduction of

noise. Under Regulation 8, it is the duty of the owner of a facility or premises to use the best practicable means to ensure that the emission of noise from his/her premises does not exceed the permissible noise levels. The Table below outlines permissible levels of noise at a factory or workshop.

*Table 2.1: Maximum permissible noise levels from a factory/workshop**

Column 1	**Column 2**	**Column 3**
85	8 hours	40 hours
88	4 hours	20 hours
91	2 hours	10 hours
94	1 hours	5 hours
97	30 minutes	2.5 hours
100	15 minutes	1.25 hours
103	7.5 minutes	37.5 minutes
106	3.75 minutes	18.75 minutes
109	1.875 minutes	9.375 minutes

** The National Environment (noise standards and control) Regulations, 2003.First Schedule, Part II.*

Construction equipment like motorised drills, concrete mixtures and stone crushers make noise during operation. Noise is also made during construction activities like bursting stone/rock for aggregates, excavation of murram and hammering. The noise levels should be within permissible limits as described by this Regulation and workers should have appropriate PPE.

The project is obliged to observe these Regulations by instituting measures for minimizing noise in the project area. Such measures include proper maintenance of equipment and providing workers with PPEs.

The National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, No. 5 of 1999

The standard for effluents or wastewater before they are discharged into water is prescribed in the schedule to these Regulations. Every industry or establishment shall install at its premises, anti-pollution equipment for the treatment of effluent or chemical discharge emanating from the industry or establishment.

Accidental spillage of transformer oil, used engine oil from construction equipment and vehicles, creosote from the treated electrical poles and human excreta from the construction labour force may end up on both land and water leading to contamination. This EPB re-enforces the need to keep the environment clean.

National Environment (Waste Management) Regulations No. 52 of 1999

The Regulations made in accordance with Section 52 of the National Environment Act CAP 153, are meant for management of waste that NEMA may consider necessary. These regulations provide for the management of waste. Regulation 4 describes the sorting and disposal of domestic waste and provides that the generator of domestic waste may, without a license issued under these regulations, dispose of non-hazardous waste in an environmentally sound manner in accordance with by-laws made by a competent local authority.

Under Regulation 5(1), a person who owns or controls a facility or premises which generate waste shall minimize the waste generated by adopting the following cleaner production methods: -

- Conserving raw materials and energy;
- Eliminating the use of toxic materials;
- Reducing toxic emissions and waste;
- Monitoring the production cycle from beginning to end;
- Identifying and eliminating potential negative impacts of the product;
- Enabling the recovery and reuse of the by-product where possible;
- Reclamation and recycling;
- Incorporating environmental concerns in the design and disposal of a product.

It is anticipated a lot of solid waste will be generated during the construction phase of the project. Waste handling should be done as per these regulations. The Regulations oblige the Developer to put in place measures for proper management of waste.

National Environment (Audit) Regulations No. 12 of 2006

The Audit Regulations operationalize Section 3 (3) c of the Environment Act in which it is a requirement for on-going activities, which are likely to have environmental impacts, to be subjected to an environmental audit in accordance with Section 22 of the Act. The regulation also operationalizes some sections of the National Environment (Impact Assessment) Regulation, in which it is a requirement to follow up projects that carried out an EIA with an Audit at least in 12 months and utmost within three years after the commencement of the project.

The proposed project will be subjected to environmental monitoring, reporting and periodic environmental auditing in compliance with sections 22 and 23 of the National Environment Act.

The National Environment (Wetlands, River Banks and Lake Shores Management) Regulations, 2000

Under regulation 12, a developer carrying out a project, which may have significant impact on a wetland, river bank or lake shore shall be required to apply for a permit from the Executive Director of NEMA. In this project a wetland permit will not be required because the electric wooden poles treated with creosote will be put in metallic drums dotted in the wetland, which will not impair the wetland ecosystem.

This EPB provides measures for best practices of implementing the project across wetland areas that are likely to be traversed by the project amongst other requirements.

The Water (Discharge) Resources Regulation No. 32 of 1998

These Regulations (Section 4) prohibit and regulate the discharge of effluent or wastewater on land or into the aquatic environment. Section 16 requires that in case there is an accidental discharge

into a water body, the person responsible should report the matter to the Director of the Directorate of Water Resources Management Development (DWRM) within 24 hours.

It is anticipated that transformer oil, used engine oil and human excreta may end in water bodies. The onus is on the developer, the contractor and later the system operator to make sure this does not happen. Otherwise, any defaulter should be penalised according to Sections 40 and 104 of the Water Act. Section 40 of the Water Act states that anybody who meets an offence is liable to a term of imprisonment of not more than five years or a fine of not more than six million Uganda shillings.

The Electricity (Primary Grid Code) Regulation 2003

Sections 1 and 2 of the Code contains rules and procedures for the efficient management (generation, transmission and distribution) of the electric supply industry in Uganda, taking into account a wide range of operational conditions that are likely to be encountered under normal and exceptional circumstances.

REA as the Developer will ensure it will adhere to installation of the electricity line as per Section 2.5 Uganda Standards and Codes of Practice of the regulation. The system operator to whom REA will hand over the line should also operate the electricity line based on this section in order to meet both national and international standards.

The Electricity (Tariff Code) Regulations, 2003

The major goal of the Code is to fairly regulate electricity tariffs in Uganda. Section 4, strives to protect all stakeholders i.e. consumers, generators, transmitters and distributors of electricity. It lays the principles of cost fairness in the sector.

Section 6 requires the licensee to justify that any costs or investments included in the formulation of tariffs is reasonable in the circumstances. ERA may challenge such costs or investments, and where necessary reject them if the Authority considers them to be unreasonable or imprudent.

ERA should make sure that the cost of investment of this electricity is realistic so as to keep the tariffs within the payment reach of consumers.

2.4 Occupational Safety and Health Standard US 534:2008

The Occupational Safety and Health Management Systems US 534:2008 is a national standard set by the Uganda National Bureau of Standards. The objective of the standard is to promote the safety, health and welfare of people engaged in work or employment. As a secondary effect, it also protects co-workers, family members, employers, customers, suppliers, nearby communities and other members of the public who are impacted by the workplace environment. The standard sets out the policy, legal and the implementation framework of how an organization may establish, implement and maintain the standard.

2.5 The World Bank Safe Guard Policies

This project triggers the following World Bank Safe Guard Policies: -

Environmental Assessment OP/BP 4.01

This Project will impact the environment. However the Environmental and Social Management Framework, ERT III (REA, 2014b) gives the procedures of how to make check lists of impacts, their sources, screening and forecasting the main potential impacts. The Project will be constructed along an already built up environment i.e. along the road reserves. This is likely to have minimal or no adverse environmental impacts and is ranked as Category B according of OP/BP 4.01. In comparison with GoU Laws and Regulations this project is classified as Category I where a detailed EIA is not needed. A project brief is sufficient for NEMA to give it a certificate for the project to proceed as is.

Natural Habitats OP/BP 4.04

The project is most unlikely to adversely impact on the natural ecosystems because it runs mostly along the main road. However, the project is located in two Districts where seasonal wetlands or permanent wetlands have been converted into pastoral or cultivated land.

Involuntary Resettlement (OP/BP 4.12)

Since the project will be constructed along the road reserve it is anticipated there will be minimal or no displacement of local communities. A Resettlement Policy Framework **(RPF)** for ERT III has been designed (REA 2014c). A Resettlement Action Plan has been prepared concurrently with this Project Brief to address issues of compensation

Physical Cultural Resources (OP/BP 4.11)

Physical Cultural Resources include sites having archaeological (prehistoric), paleontological historical, religious, and unique natural significance. The Bank will normally decline to finance a subproject that will significantly damage irreplaceable cultural property, and will assist only those subprojects that are sited or designed so as to prevent such damage. There were no cultural sites found along the proposed line. However, there may be some chance finds during pit excavations. These will be handled in accordance with the Chance Finds Procedures as detailed down in section 6.4.17 below.

Forests (OP/BP 4.36)

This policy was triggered because of the possibility of the power distribution line having to pass through a forested area because along the proposed power distribution, there are few privately owned plantation forests. Any likely impacts have been assessed as part and parcel of this PB and appropriate mitigation measures included in the ESMP developed.

2.6 Institutional framework

Ministry of Energy and Mineral Development (MEMD)

The Ministry of Energy and Mineral Development (MEMD) is the lead agency for all energy projects in Uganda and is the PCU for ERT-III Project. However, its interests are represented in different capacities by the Electricity Regulatory Authority (ERA) which issues licenses, and by the Rural Electrification Agency (REA), which was established to initiate and bring ERT projects to fruition. The ministry has an Environmental Specialist for the project.

The Electricity Regulatory Authority (ERA)

The Electricity Regulatory Authority is a corporate body established to oversee the implementation of the electricity Act 1999. Under the Act, ERA is mandated to review proposed investments in the energy sector and guide the promoters through implementation. ERA will ensure that, the operations costing of energy from the planned line project will be in accordance with its set standards and tariffs. The Authority has an Environmental Specialist responsible for ensuring that environmental aspects are addressing during the licensing process.

Rural Electrification Agency

REA was established as a semi-autonomous Agency by the Ministry of Energy and Mineral Development through Statutory Instrument 2001 No. 75, to operationalize Government's rural electrification function under a public-private partnership. It functions as the secretariat of the Rural Electrification Board which carries out the Ministry's rural electrification responsibilities, as defined in the Electricity Act of 1999. REA is the project implementer and is therefore responsible for the general compliance of the project with all the environmental requirements. The Agency has an Environmental Unit responsible for ensuring that all project activities are in line with the national environmental requirements and development partner' safeguards requirements.

National Environment Management Authority (NEMA):

NEMA is responsible for regulating the impact of all projects, programmes and activities that are likely to have adverse impacts on the environment. It gets its mandate from the National Environment Act Cap 153. NEMA uses a number of instruments to manage the environment. These are enshrined in the Constitution, Environmental Law Cap 153, Regulations and Guidelines. The most Important Regulation for this project is The Environmental Impact Assessment Regulations of 1998. The project will have to undergo an Environmental Audit as per the Environmental Audit Regulations after 12-36 months of operation. The Authority has adequate technical capacity to monitor the environmental aspects of the project. However, in terms of numbers of technical personnel, it is lacking, but because environmental management in Uganda is partly decentralised, NEMA works closely with the respective District Environment Officers. Therefore, lack of adequate numbers of technical personnel at NEMA shall be off-set by the respective District Environment Officers in implementing and monitoring the project's ESMP.

Directorate of Water Resources Management (DWRM):

DWRM is responsible for developing and maintaining national water laws, policies and regulations; managing, monitoring and regulation of water resources through issuing water use, abstraction and wastewater discharge permits; Integrated Water Resources Management (IWRM) activities; coordinating Uganda's participation in joint management of trans-boundary waters resources and peaceful cooperation with Nile Basin riparian countries. The Directorate comprises

Rural Electrification Agency

three departments namely Water Resources Monitoring and Assessments, Water Resources Regulation and Water Quality Management. *This project traverses numerous streams and rivers that are under the mandate of the Directorate.* The Directorate has regional offices with adequate technical staff that carry out field monitoring.

Wetlands Management Department (WMD)

WMD is mandated to manage wetland resources and its goal is to sustain the biophysical and socio-economic values of the wetlands in Uganda for present and future generations. Wetlands are under a lot of pressure from conversion for industrial development, settlements, agriculture, sand and clay mining. Most of these degrading activities are perceived to be of greater importance than wetland conservation itself. This project traverses numerous seasonal and permanent wetlands that are under the mandate of the Directorate. The Department has adequate technical capacity both at the centre and regional level. In addition, the department works closely with the District Wetlands officers at the local government level. Therefore, the Departments' monitoring and implementation of this project's EMP is well covered.

Local Government Administration Structures

District and Local Council administration in districts of Mbarara and Kiruhura will be vital in implementation of the project by mobilizing political goodwill and sensitizing communities. During the study, some of the local leaders had taken up the sensitization and mobilization of the communities to embrace the project. Further, the affected districts have Environment Officers, Wetlands officers and Community Development Officers. Further, at the sub-county level, there are Community Development Officers. Therefore the respective district local governments have adequate technical capacity to monitor the implementation of project's ESMP.

3 BASELINE ENVIRONMENT CONDITIONS

3.1 General Physical Environment

3.1.1 Location

Mbarara and Kiruhura Districts are located in south-western Uganda. Mbarara Town, the only Municipality in Mbarara District, is 295km south west of Kampala the capital city of Uganda, while Kiruhura Town Board is about 247km from Kampala (Wikipedia a and b, 2014).

Mbarara District is one of the oldest districts, originally called Ankole District that made the former Ankole Kingdom. In 1974, Bushenyi District was curved out of Mbarara and later in 1993, Ntungamo District (NEMA, 1997). In the recent past more districts have been created from Mbarara District and these include Buhweju, Bushenyi, Ibanda, Isingiro, Mitooma, Ntungamo, Rubirizi, Kiruhura and Sheema (Wikipedia b, 2014).

3.1.2 Topography and land use

The two districts have a plateau with flat undulating plains with laterised flat hills (NEMA, 1997). The plateau is separated by the valleys, which have seasonal wetlands (MDLG, 2013). The landscape is under intensive agriculture (the valleys) and livestock (cattle, sheep and goat) husbandry. (Plates 3.1 to 3.12).

3.1.3 Climate

Mbarara District receives an average rainfall of 1200 mm with two rainy seasons February – May, and September - December. The rainfall distribution is given in Fig 3.2. Temperature ranges between 17 – 30 °C, with a humidity range of 80 – 90% (MDLG, 2013). In Kiruhura District, the rainfall is as low as 750 mm while the temperature is as high as 33 ^{0}C and the lowest is 8 ^{0}C (NEMA, 1997). The evaporation in the two districts is high with a mean annual of 1450mm while the highest is 1500mm. The annual relative humidity (RH) ranges from 56% to 85%, which is highest in the morning and lowest at noon. The monthly variation in relative humidity is minimal. RH is high in the rainy season and low in the dry season (NEMA, 1997).

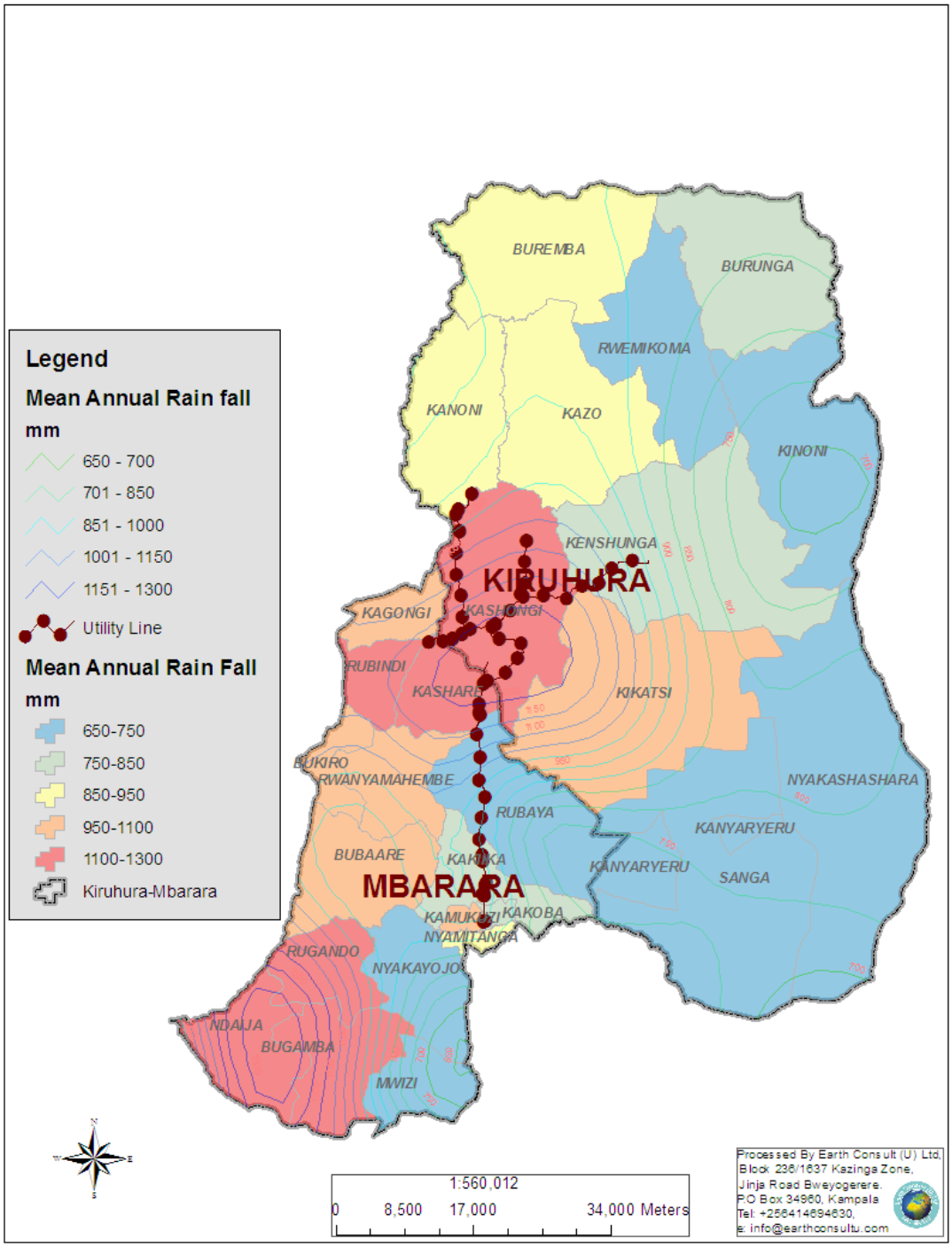


Figure 3.1: Rainfall Distribution in the project area.

3.1.4 Geology

The two districts are underlined by rocks of Precambrian age. The Buganda – Toro system forms the major geology which is estimated to be 1,800 million years old. The rocks include schist and gneisses. Nyabushozi County in Kiruhura District has a relatively soft laterite similar to that found in many of the tertiary periods (NEMA, 1997).

3.1.5 Soils Types

The soils in the project area range from medium to low productivity. The most common types are the laterite loams and sandy clays loams, which are mostly found on flat summits of hills of central Nyabushozi (NEMA, 1997).

The soils in Kiruhura District are of the Mawogola Catena Soils, which are derived from quartzite schists and phyllite rocks giving rise to slightly lateritic loams and sandy loams. For the mid slope, the pH, base saturation and CEC are low and available phosphorous is deficient. This catena has insufficient organic matter extent. The soil supports extensive grassland areas covering the largest part of Nyabushozi and Kashari Counties (NEMA, 1997).

3.1.6 Hydrology and water resources

The drainage in the project area is symptomatic of the recent up-warping and faulting along the western rift traverse (NEMA, 1997). It lies in the Lake Victoria catchment area and has only one lake, Lake Mburo. The hydrology shows that the valleys are linked to rivers with wetlands (Fig 3.2).

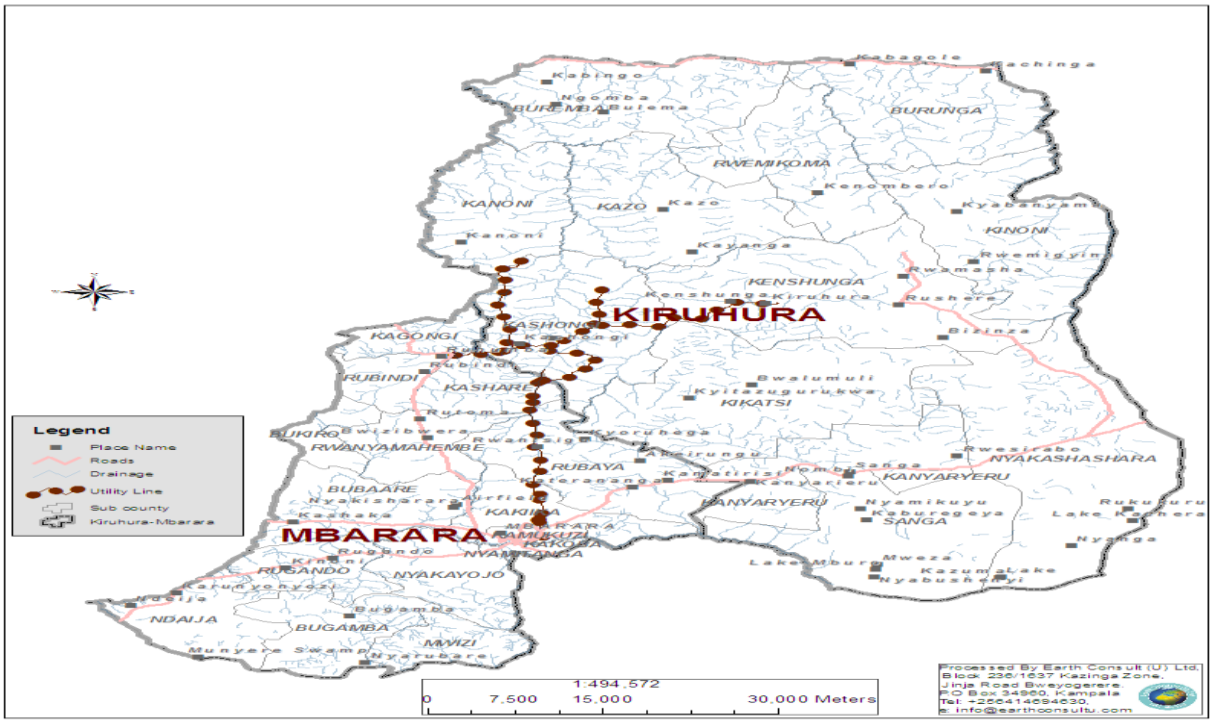


Figure 3.2: Hydrology and Drainage Map of the Project Area

3.2 Ecological components

3.2.1 Vegetation

Vegetation of the project area varies from: -

- Forests
- Wetlands with swamps,
- Acacia savannah and
- Savannah (NEMA, 1997).

The different types of vegetation in the project area are shown in Plates 3.1 to 3.6.

3.2.1.1 Forests

Forests in Uganda are either under Government Central Forest Reserves, which are managed by the National Forest Authority, or Local Forest Reverses, which are under District Local Governments, and private forests that are on private land. Mbarara District has the following forests listed in Table 3.2 (MDLG, 2013). It is estimated that land planted with trees annually is 300 acres and there are seven gazetted forest reserves (MDLG, 2013). There are about 250 households which are using fuel saving technologies like improved cooking stoves (MDLG, 2013).

Fortunately, the proposed project will not pass through any of these protected forest reserve in the project area, and hence the project will have no impact on the forest resources.

Plate 3.1 Acacia the dominant tree species in a ranch

Plate 3.2 Permanent wetland

Plate 3.3 Ruminates of a Savana thicket

Plate 3.4 Natural vegetation replaced with ranches

Plate 3.5 A ranch has modified Savana

Plate 3.6 Vegetation around a valley dam

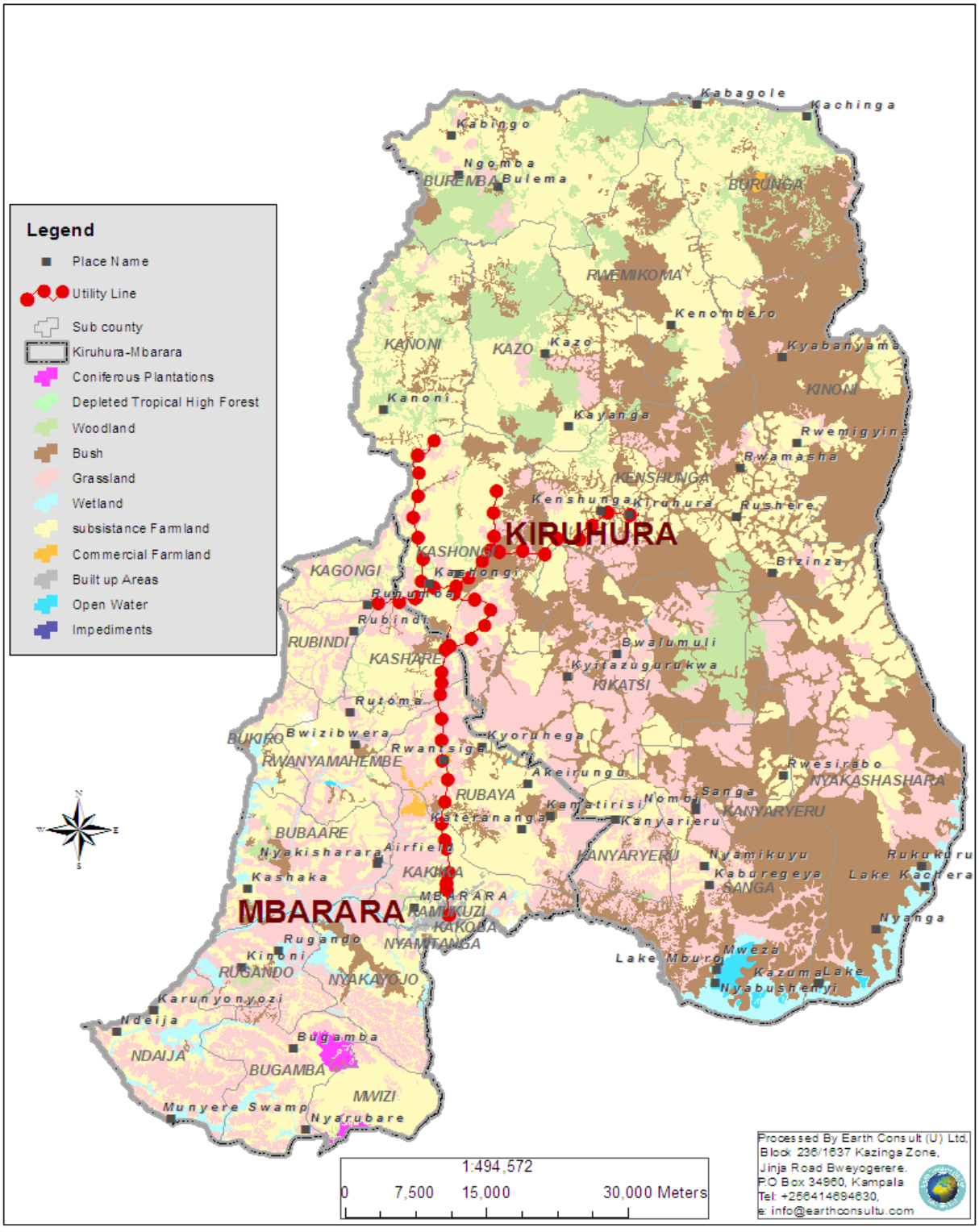


Figure 3.3 Vegetation and land use Map

Rural Electrification Agency

3.2.1.2 Wetlands

Wetlands in the project area are either permanent or seasonally Plates 3.2 and 3.6. In the permanent wetlands the common species is *Cyprus papyrus, C. latifolia* and C. *raphia* (NEMA, 1997). The common sedges are cyperacea and grasses like *Miscanthidium sp* and *Vossia sp*. In seasonal wetlands clay soils are common and support *Echinochochloa pyramidalis, C. latifolus* and *Leersia hexandra* (NEMA, 1997). These form the basis of the pasture in the project area that supports the country's animal husbandry industry. Unfortunately they are over grazed and annually are burnt in the dry season (NEMA, 1997).

3.2.1.3 Savannahs

The savannah is open mixtures of trees and shrubs standing in tall grass (Plate 3.1). The grass cover exceeds 80 cm in height if not grazed, and grasses are normally cauline – leafed perennials. The woody vegetation however, rarely exceeds 50% of the aerial cover (NEMA, 1997). There are two types of savannah in the project area: -

(a) Acacia Savannah

Acacia savannah is the most common type of vegetation in Kiruhura District (Plate 3.5). The common vegetation is the *Acacia/Themeda* association dominated by *Acacia hockiii* found mainly on well drained hill sides and low lying hill tops. Poorly drained valley bottoms are characterised by grasses such as *Sporobolus pyrimidalis* and various sedges. The rocky hillsides with poor, shallow soils are dominated by *Loudetia kagerensis* (NEMA, 1997).

(b) Grass Savannah

Grassland savannah is the most common vegetation in the project area especially in Kashari County, Mbarara district. It is dominated by *Hyperrhania* species like *Hyperhenia diplandra*. Other common grasses include *Cymbopogon afronardus* and *Brachiaria decumberis* (NEMA, 1997).

3.2.2 Biodiversity

The project area in the past used to host wildlife of the savannah grassland like in Serengetti and Tarangire National Parks in Tanzania (NEMA, 1997). Due to rise in population, the landscape has been intensively deforested, the grassland replaced with ranches, and the valleys encroached up on for agriculture (Plates 3.7 to 3.12). Only Lake Mburo National Park has preserved the former game which includes but not limited to elephants, the giant forest hog and lions. Other species include zebra, wart hogs, oribis and impala (NEMA, 1997). The birds include Ground Hornbill, Red faced Barbet, Black Collared Barbet, Papyrus Yellow Warbler, Tabora and Cisticola (NEMA, 1997).

3.3 Human and economic components

3.3.1 Population

The 2002 national census estimated the district population at about 361,500, with an estimated growth rate of about 2.2%. Of these, 51% were female and 49% were male. 55% of the district

population are aged between 0 and 18 years. In 2012, the district population was estimated at approximately 436,400 (Wikipedia b, 2014).

In Kiruhura District the indigenous people are called Banyankole. The 2002 national census estimated the population of Kiruhura District to be about 212,220, with an estimated annual growth rate of 3%. In 2012, the district population was estimated at about 300,800 (Wikipedia a, 2014).

3.3.2 Economy

Mbarara District consists of 14 sub-counties, 3 divisions, 83 parishes and 757 villages. About 78.6 percent of the district land is under subsistence agriculture, 16 percent under commercial agriculture and 5.4 under forest reserves. The population projection for Mbarara district stands at 436,400 by 2011 compared to 2002, which was 361,477. Mbarara District hosts 4 hospitals, 4 HC IV, 13 HC III and 29 HC II. The immunization coverage was at 82 percent; safe water coverage at 62 by 2010; latrine coverage at 92.4 percent but malaria has remained a common disease with the 60 percent of the total disease burden.

Agriculture is the mainstay of the economy of Mbarara District. Both crops are grown and livestock reared in the district, primarily on a subsistence level, but several commercial farms are located in the district. The major cash crops grown are Banana Plantain (locally called matooke), which is a food crop sold locally, and coffee for export. Livestock include Ankole cattle, exotic cattle, hybrid cattle, goats and sheep.

Kiruhura District is a farming district. Livestock forms the backbone of economic activity in the district. The animals reared include:

- Ankole cattle
- Exotic cattle breeds
- Hybrid cattle - mixtures of exotic and Ankole breeds
- African Goats
- Boer goats
- Hybrid goats - mixtures of Boer goats and African goats

Milk and meat are important products produced in the district. In 2006, it was estimated that the district produced in excess of 100,000 liters of milk daily. The produce is sold locally and also marketed to Kampala, Uganda's capital. Amos Dairy (Uganda) Limited, a subsidiary of Amos Diary of India, is in the process of setting up a milk-processing plant at Akageti in Kiruhura District, with capacity to process in excess of 2 million litres of milk annually.

	
Plate 3.7 Eucalyptus plantation in a wetland in Rweshubiri	*Plate 3.8 Cultivation of maize and matoke in the Road Reserve*
	
Plate 3.9 Brick laying to support sprouting rural growth centres	*Plate 3.10 The load capacity of livestock has made the hills bare*
	
Plate 3.11 Wetland encroachment	*Plate 3.12 Fire wood that is driving*

4 PROJECT DESCRIPTION

4.1 Description of the Project

The project is located in western Uganda in the Districts of Kiruhura and Mbarara. The proposed grid-extension covers approximately 113 km of 33 kV overhead lines, 60 km of low voltage networks and 41 distribution transformers with a total installed capacity of 1,875 kVA serving at least forty three (43) villages/trading centres. A geographical map of the project area is shown in Figure 4.1 and Plates 4.1 to 4.6. The line starts from Ruhumba on the Ibanda – Mbarara Road up to Kashwa, a Division of Kiruhura Town. There are three tee offs at Rwebishuri in Mbarara Municipal Council, Rwobuhura and Rwanyangwe in Kiruhura District.

4.1.1 Materials and Specifications

The 33kV line shall be constructed using mainly 12m high wooden poles, creosote treated, with an average spacing of 100m. The wooden poles will have foundations consisting of 0.35m diameter and 2.3m depth. The foundations of the poles that will be erected in wetland areas shall be prepared using gravel material as backfill. The steel wire of gauge 7/4.00 shall be used for stays, T-offs and terminal structures shall be anchored by stay blocks buried at a depth of 2.0m. The stay blocks, 1.0m long, shall be made out of creosote treated wood or made of concrete and of dimension 0.3m x 0.3m x 0.3m. The H-type section poles shall be erected 2.0m apart but installed every 1.5km, and each shall have a 4-stay wire set installed along each corridor. At large angles, the stay wire shall be installed at 45 degrees from the pole.

The pole height will be 9m at selected low voltage (LV) centres and the pole span will average 50m. The LV poles shall be erected into foundations of 0.6m diameter and 1.6m depth. The steel wire stays (size 7/2.64) shall be erected at appropriate angles, T-offs and terminal structures anchored by stay blocks buried 1.6m deep. The stay blocks shall be creosote treated timber of 1m length or concrete of size 0.3m cube. In as far as possible some materials, such as wooden poles, shall be obtained locally (provided they meet the specifications). A Right of the way (RoW) corridor of about 10m shall be reserved throughout the entire line system. The minimum distances of 13.0m from a house and 4.0m from the road edge for both LV and HV shall be observed. The 33kV lines shall be erected with a minimum clearance from the ground or highest water level will be 6.0m or 2.0m from the highest point.

The other accessories for the project i.e. pole line hardware, insulators, conductor hardware and transformers shall be availed as per project document.

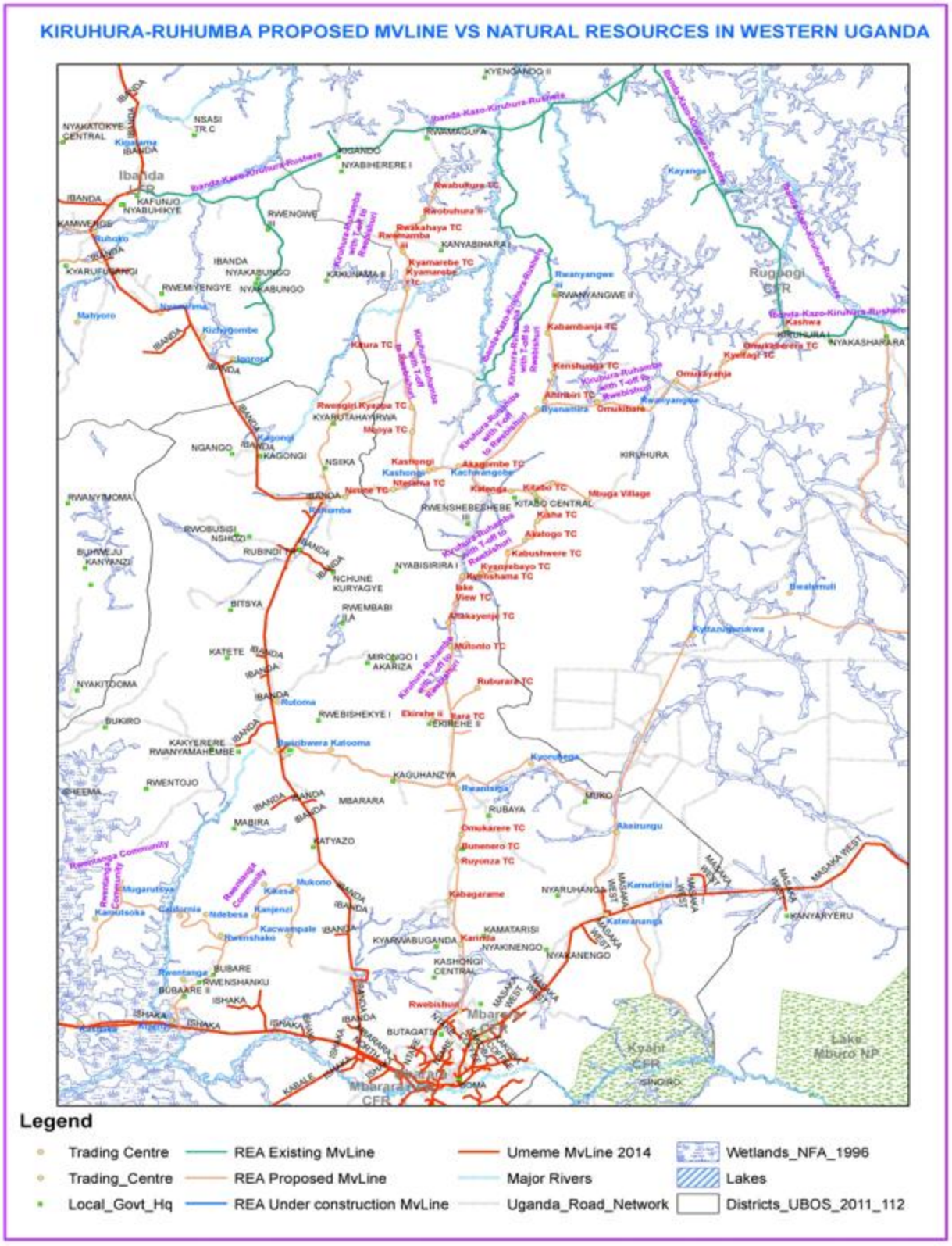


Figure 4.1: Map of Project Area

Rural Electrification Agency

Plate 4.1: The Project Area Ruhumba

Plate 4.2: Kashwa a Division in Kiruhura

Plate 4.3:Tee off at Rwebishuri in Mbarara

Plate 4.4: Rubaya Health Centre III

Plate 4.5: Kitura Sub Countu Head quarter

Plate 4.6: Keirungi Farm Breeders of live

4.2 Description of Project Activities

The project activities shall include design, construction, operation and maintenance and decommissioning of the power lines as outlined below: -

4.2.1 Design Stage

This involved the survey, in detail, of the proposed power line so as to establish the centre line. Subsequently, a 10m corridor will be cleared, with the centre line as guide, for the entire route. The clearance will include cutting down trees and trimming all vegetation inside the corridor. In addition, all trees in the falling distance of the poles will be cut down or trimmed accordingly. Pole location was done and the appropriate line drawings produced.

4.2.2 Construction Stage

The construction shall be carried out by one main contractor and where necessary assisted by subcontractors. The human resource shall consist of 20 skilled personnel. The main contractor shall arrange for equipment storage area or hired, preferably on the project areas, where materials will be stored, and for coordination of the project activities. No workers' camps shall be established since all the work force is expected to reside in hired accommodation.

4.2.3 Pole hole digging

The pole holes shall be dug, mostly manually except in rocky areas where a pneumatic hammer may have to be used, to a depth 1.5-2.0m. In waterlogged areas or at river crossings, a bucket excavator may have to be employed. Soils are sandy lose therefore extract, refill and compacting is required.

4.2.4 Pole framing, erection and installation of stay lines

The poles will be drilled and dressed with the appropriate hardware. The poles shall be erected manually. They shall be plumbed with the aid of ropes. The steel wire stays shall be fixed at appropriate angles, T-offs and terminal structures shall be anchored by stay blocks. All conductor configurations shall be installed either with line post insulators or suspension insulators. The distribution system shall be 11kV, 3-phase 4-wire.

The poles shall be made from treated eucalyptus wood and will be of height 35 feet (11m) for the tangent structures standing with 30 feet (9m) above ground, spaced 100-120m apart on the line segments where "Rabbit" conductors are used or 100-105m apart where "Dog" conductors are used. Poles of 40 feet (12m) shall be used where slight angles are required while 45 feet (14m) poles shall be used at vertical corners. The 30- feet (9m) poles shall be used for all secondary lift poles. The 8-feet (2.4m) galvanized cross-arms with cross-arm braces and polymer pin-type insulators shall be employed on tangent structures.

4.2.5 Conductor

Most of the lines shall be built with 100 mm^2 ACCR ("Dog") type conductors whose rated current is 300 amps. The smaller lines and minor taps shall be built with 50 mm^2 ACCR ("Rabbit") type

conductors whose rated capacity is 200 amps. Conventional means shall be used for stringing and the wires will afterwards be tensioned on the guyed structures while using pull lifts.

4.2.6 Transformers

The transformers shall be fitted with gas detectors, oil temperature, winding temperature, pressure release and oil level relay devices, as well as current differential protection and restricted earth fault on at least two windings where applicable, as a main protection measure. In order to provide backup protection, all transformers shall be fitted with non-directional over-current protection and restricted earth faults on all windings. The Transformers to be used shall have no PCBs or POPs materials and shall be environmentally acceptable. REA will procure transformers filled to the required level with new, unused, clean, standard mineral oil in compliance with IEC 296 and free from all traces of polychlorinated biphenyl (PCB) compounds. REA will procure and ensure delivery and use of transformers using the following specifications: "The transformers procured shall conform to latest edition of appropriate EC specifications and/or other recognized International Standards in particular: IEC 60060, IEC60071, IEC60076, IEC, IEC 60137, IEC 60156, IEC 60126, IEC60354, IEC 60529, IEC60551, IEC60606, IEC60616, IEC60722, IEC60733, B.S. 148 and BS5493. The specifications cover oil immersed, naturally air cooled (type ONAN), outdoor type, three phase, 50Hz, 33/0.433 KV step down distribution transformers of all capacities".

4.2.7 Line hardware

Using REA specifications, the framing of the structures and obtaining the actual hardware (bolts, insulators, etc.) shall be carried out. It is noted that the specifications were chosen as the most economical and appropriate to rural electrical systems. We are borrowing a leaf from their use elsewhere like the United States where they have been in use for over 65 years with remarkable durability and safety.

4.2.8 Services Drops

The residential service drops shall average 15-20m in length with a maximum length of 40m. The cable size shall be 16mm^2, copper duplex (#6 AWG). All energy (kWh) meters will be socket-based type so as to prevent meter tampering. For the larger industrial consumers, the service drops shall be of size 25 or 50mm^{2}and made of covered multiplex type conductors.

4.2.9 Metering points sectionalising equipment

The cost of each primary metering point shall include; the primary meter with associated CTs and VTs, zigzag configured grounding bank with primary fuses, a voltage regulator and a solid-state re-closure. The re-closure shall have a microprocessor-based control system so as to operate at any fault within its zone of responsibility. Maintenance of the re-closure shall be minimized because of the solid-state design. The line shall be sectionalised so that a minimalistic scheme, which will be economical to build and operate, will cause adequate level of service when needed. It has been recommended to install the re-closures at the metering points and fuses for T-offs of the main line as well as transformer installations. Air Break Switches shall be installed at various strategic points so as to facilitate sectionalizing.

4.2.10 Post Construction Clean up

All the excess and waste material shall be removed from the Right of the Way (RoW) and properly disposed of at designated areas. All the equipment storage area/s shall be properly cleaned up and the leftovers removed.

4.2.11 Operation and Maintenance

The 33kV line shall be protected as much as possible. This means that the system shall be equipped with switching devices including auto-reclose switches, air-break switches, and fuse dropouts. There will be routine maintenance of the line every year or whenever deemed necessary by the system operator. The activities shall include, but not limited to, line clearance along RoW, repair of damaged structures, conductors, and cracked or broken insulators. In addition, there will be selected tree trimming and bush clearance as may be observed necessary. A 2metre radius weeding shall be done around each pole as protection against bush fires. There will be emergency maintenance prompted by technical breakdowns due to faults or after wind or lightning storms. The poles, conductor and insulators will be inspected and those found damaged shall be repaired/replaced.

4.2.12 Decommissioning

The process of decommissioning will involve the deconstruction of distribution lines in a reverse order from their construction, using similar equipment and techniques (REA, 2014b). The conductors and shield wires will then be lowered to the ground, and all cables would be spooled and removed from the right-of-way for salvage. The poles will then be dismantled and removed from the right-of-way for salvage. It is further proposed that, the contractor undertakes to decommission the site by: -

a. Relocating all un-used equipment to their central stores outside the site preferably to other sites where the contractor could be doing similar projects;

b. Any equipment that has gone into waste should be treated as waste and disposed of in appropriate ways through best acceptable international practices;

c. Demolishing any additional structures that could have been constructed/installed by the contractor. The site should be levelled and additional structures may be left onsite after securing a written request to do so from the landlord;

d. Dispose of all the generated waste in accordance with the waste management plan and waste management regulations;

e. Clean up the site; and Handover the site to the Landlord and demobilize/withdraw all personnel that had been posted to the yard including the security personnel. Handover acknowledgement should be written/ documented.

4.2.13 Human Resources

In as far and in as much activity as possible, human resource shall be sourced from the local communities with the help of those in local authority. For example, digging holes and the stringing process, the local people should be given the first priority. Women and the youth should be given priority in the recruitment of the work force. The Contractor and Operator should have a policy to involve the youth, elderly and vulnerable groups.

5 PUBLIC CONSULTATIONS AND DISCLOSURE

The World Bank safeguard policies such as OP/BP 4.01 on environmental assessment, the National Environmental Act, CAP 153, the National Environment(Impact Assessment) 1998, National Environment (Certification and Professional Conduct of Environmental Practitioners) Regulations (2003) and Guidelines for EIA in Uganda require that individuals, groups and entities with a stake in any proposed project should not only be informed about the project but also consulted for their views about the likely impacts and any other concerns about the proposed project.

In conformance with the above requirements, the Key Stakeholders in the proposed project were identified and involved in the EIA process. Both primary and secondary stakeholders were consulted. A field trip was made to the project areas from the 13th to 17th of July 2014. The local communities, local authorities and technocrats from the Districts of Mbarara and Kiruhura were all consulted. The consultations were conducted within the qualitative approach framework, which gave the EIA team the necessary flexibility to gain deep insights into the views of the various stakeholders. The main methods that were employed to collect data were key informant interviews and community meetings. The details of the field findings are provided in this Chapter and plates 5.1 to 5.6.

5.1 Local Communities

The EIA team identified the affected villages from the map and drew a detailed program indicating the specific dates when each of them would be visited. The visits and interactions with the authorities at local level enabled the EIA team to build rapport with these entities, win their trust and engage them to mobilise the community members for meetings or FGDs on the programmed days. The purpose of the consultations and awareness activities at community level was to stimulate participatory information, gathering and sharing to help avoid potential conflicts as well as raise awareness. The main purpose of the community meetings that were held with the communities along the proposed power route was to enhance their participation in the EIA process and to ensure that locality specific issues were identified, and where possible addressed or mitigated. The consultation process focused on providing information about the proposed project in a manner that would ease its comprehension by the potential beneficiaries and affected communities. During the consultation process, the EIA team always sought comments on key issues and concerns, attempted to source accurate information, identified the potential impact of the proposed project and availed the affected communities an ample opportunity to identify alternatives or raise objections, where applicable. The following community meetings were held throughout the process.

- Five community consultation meetings were held with the residents of Kabagarame, Ruyonza, Itara, Mitonto, and Kyenshema villages in Mbarara District within the Trading Centres of the five (5) Villages on 14th July 2014.
- Five community consultation meetings were held with the residents of Akatogo, Kyeitagi, Kachwangobe, Ncune, Rwobuhura and Rwanyangwe trading centres in Kiruhura District on 15th July 2014.
- A total of ten (10) meetings were held with community members in the various districts. All of the community meetings were held at venues within the respective Trading Centres.
- On the 15th of July a community meeting was held with a group of residents, councillors and a few technocrats from Kashari Sub County. The meeting was held at Kyenshema trading centre.

- On the 16th of July 2014, a meeting was held with selected residents of Rwanyangwe Trading Centre in the presence of the Parish Chief of Rwanyangwe at Rwanyangwe Trading centre. Plates 5.1 to 5.6 depict the proceedings of these community meetings.

Detailed recordings of these proceedings are attached in Appendix D.

5.2 Local Government

Several key informant interviews were held with both technocrats at the District and Sub-county levels. Key Informant interviews were held as summarized below: -

- The Consultants had in-depth interviews with the Deputy Chief Administrative officers of Mbarara and Kiruhura districts on the 14th and 15th of July 2014 respectively
- The District Natural Resources Officer, Staff surveyor and senior cartographer of Mbarara on 14th July, 2014 also provided in depth interviews to the EIA team.
- In-depth interviews were also held with the District Environment Officer of Kiruhura at the district headquarters at Rushere on the 15th of July 2014.
- Another in-depth interview was held with the District Surveyor and District Planner of Kiruhura on the 15th of July 2014 at Kiruhura district headquarters.

The proceedings of these in-depth interviews are in Appendix D.

	
Plate 5.1 Interview with Mbarara District Natural Resources officer	*Plate 5.2 Community consultation at Ruyooza, Trading Centre*
	
Plate 5.3 Consultation with Kyeshama Trading Centre LC I	*Plate 5.4 Community Consultation, Akatogo Trading Centre*
	
Plate 5.5 Consultation at Kyaitagi Trading	*Plate 5.6 Consultation Rwenyangwe Trading*

5.3 Key Issues arising from the Consultation Process

Through the stakeholder consultation meetings, there is a relatively good awareness level about the project among higher level stakeholders. The local communities got to know about the proposed project and showed overwhelming support for it. However, the local communities still need in depth sensitization about the use of electricity, especially on safety issues during the operation phase.

Much as all the government officials at the various levels in the local councils were enthusiastic about the project, several key informants cited the lower LC 1 Chairpersons as the more reliable entities to deal with during the construction of the project.

According to one key informant, 'LC V councillors may not be the best to deal with. I have had an experience with them. They like politicising everything. The LC 1 Chairpersons are more reliable. They are positive minded, closer to their people and therefore the best to deal with.'

Winning the support and cooperation of all the lower local government authorities is thus critical to the successful completion of the project. All the teams working on the project have to build enough rapport with LC III Chairpersons, Sub-county Chiefs and L.C.1 Chairpersons within the project area for the smooth flow of the work.

Local opinion leaders and district staff of Mbarara and Kiruhura Districts noted that the land issue in the Ankole Sub region is not so sensitive. People are very supportive of any government project, as they perceive them as the only way to development. According to one key informant, 'the people of this region support government projects very much. The only issue with these people will be that of the road reserve which can be sorted out with sensitization'.

The experience of the EIA team during the assessment process also attests to the positive attitude of the communities in the western sub-region. In one case while the EIA team was conducting a community consultation with the people of Rwanyangwe at the Trading Centre, the chairperson LC1 said that people in that region cannot resist government projects and that they can do whatever it takes to allow such projects take course. One community member in Kiruhura District indicated that the people of Ankole are more development oriented than primitive. He explained that they do not cling on to tradition at the expense of development.

All the stakeholders throughout the project area similarly emphasised the need to build extensive rapport with the local people before implementing any activity. Several Key informants also considered it necessary for the survey and RAP teams to notify both the local leaders and the entire community about their impending movements. The recommended medium of communication in all the two districts is the radio. One key informant noted, 'People here listen to the radio a lot. Even those who don't own radios always get information from others. Radios are always used to disseminate information on development and environmental concern. And they are effective.'

These strategies are considered key to the aversion of the scepticism about government projects that afflict some of the communities in the project area.

It emerged that majority of the local residents along the proposed power route lack sufficient information about the road reserve policy and its implementation. Many of the questions that were raised during community meetings rotated around the road reserve and the implications of its

abuse. Transects through the project area indicated that a considerable number of them may be affected by the Road Reserve Act. Transects through the project area indicated that people have constructed houses and planted crops and trees within the road reserve especially the trading centres. Not many easily identifiable graves were observed within the road reserve. It is imperative that the communities are continuously sensitised about the Road Reserve Act and its implications throughout the project activities. This will enhance the successful accomplishment of the project activities.

The communities in the area do not clearly understand the difference between UMEME and REA and the mandate of each of them. As such, those who espoused negative views about the efficiency and effectiveness of UMEME embraced the project idea with similar attitudes because they confused REA with UMEME. In addition, interactions with the community members revealed that many of them lacked awareness about the process of power extension to their houses, payment and management of power bills and usage of electricity, including its hazards. One of the adverse impacts that stood out in both districts was the fear of electrocution due to lack of awareness about the usage of electricity.

A few complaints about the lack of compensation for assets lost during a preceding project emerged in both Districts. The concern was that the Ibanda-Kazo line had been kicked off without the compensation of the affected individuals. This has left them in a state of uncertainty. One of the key informants implored that the compensation process should be prioritised ahead of the construction process.

The issue of the multiple tenure systems also emerged as critical. There were fears that titles would be demanded for proof of land ownership, yet the predominant tenure system is customary. The involvement of the respective LC.I Chairpersons during the compilation of the RAP will help in identifying the land owners whose property may be affected by the project.

In general, the population of the two (2) districts anticipate several direct and indirect benefits from the power project. The project is perceived as an opportunity for the targeted communities to reap benefits such as employment arising from the growth of industries and business opportunities of small, medium and large scale industries; security, easy access to photocopying and computer services; and boosted operation of the existing health centres and schools, among others. No resistance to the erection of poles was observed or detected from any of the affected communities throughout the two districts.

However, several considerable effects were also envisaged. These include, inter-alia, the loss of vegetation, crops and trees during the clearance of the route; land uptake; electrocution of children and adults; the influx of new people who may increase the spread of STIs in the area; power blackouts due to load shedding and the failure to access the national grid due to prohibitive costs and impoverishment due to lack of compensation for lost assets.

The proposed mitigation measures include; the prompt and appropriate compensation of affected persons; sensitisation of the local communities about electricity usage with emphasis on how to prevent its hazards; implementation of strategies to instil a spirit of ownership amongst the targeted communities to prevent cases of vandalism; compensation of trees in form of both money and seedlings for planting and the involvement of local leaders and technocrats in the process to avert suspicion of the communities compensation of the affected individuals on the basis of realistic

rates; provision of a considerate grace period to households that will be required to relocate, among others.

From the consultations and in-depth interviews it became clear that: -

1. Given that the project activities to some extent relate to the issue of land (road reserve) that is critical to the livelihoods and survival of the communities in the two districts whose economies thrive on agriculture; an epitome level of transparency about all the project steps and stages is imperative. For instance, an effective awareness creation exercise needs to be initiated to inform all stakeholders about the project and its implementation arrangements along the road reserves and avert suspicions of possible land grabbing. The use of all possible media, especially radio and word of mouth, to disseminate information is important. It is equally important that the local political and opinion leaders are involved in the various stages of the project so that the confidence of the communities in the nobility of the project activities can be inspired. The security organs especially the police in the area should also be informed and involved in the processes.

2. Sensitisation on key topics notably, road reserve, survey, valuation and compensation is also important. There is a general lack of information about the dynamics involved in the two processes. Inappropriate sensitisation may spark off or even catalyse the emergence of conflicts and resistance from the community members towards the project activities.

3. The compensation agreements that will be reached should be clear and initiated from an informed point of view of the affected individuals. This will wade off subsequent complaints about delays in payment- as was noted in Kiruhura district about the Kazo line, and reinforce the communities' support for the project further.

4. The multiple tenure systems need to be taken into account during the RAP and valuation processes so that the requirements for the proof of ownership are tailored to the type of tenure. For the customary tenure, the elders or opinion leaders in the lineage have to be identified so that they can ascertain the true beneficiaries eligible for compensation. Furthermore, the involvement of the respective area LC I Chairpersons is key in identifying bonafide owners of property that may be affected.

5. Provision of seedlings on top of the monetary value of the trees that will be cut should be considered to mitigate deforestation and its effects. Mbarara and Kiruhura have limited tree coverage. As already indicated above, experience indicates that when people are given money they will hardly think about replacing the trees. This is compounding deforestation and its concomitant effects in the region. It is recommended that the respective District/ Sub-county Local Governments identify land belonging to government institutions and REA supplies seedlings and meets labour costs of land clearance, planting and first weeding. Thereafter, the plantation/woodlot would then be handed over to the respective Local Governments or institutions such as Schools.

6. It is imperative that REA designs a strategy for sensitising the whole population about its mandate and the scope of its activities. The confusion between REA and other actors

in the energy sector, especially UMEME initially evokes bias against the activities of REA, given the negative attitude that is generally held towards UMEME.

7. The administration of REA should liaise with UMEME to sensitise the proposed beneficiaries of this project about the hazards of electricity and the best practices with regard to its usage. For instance energy saving knowledge should be provided to the beneficiaries to enable them minimise the costs of electricity. Some of the community members were apprehensive that the electricity tariff would prohibit them from connecting and benefiting from the electricity. This and any other strategies that will increase the responsiveness of electricity as a service to the needs of the consumers should be implemented to maximise its optimum utilisation.

8. Both the communities consulted and the technical officers interviewed are aware of the development benefits of extending electricity to their localities mentioning that this may stimulate the establishment of small scale enterprises and industries that utilise electricity. However, aware of complaints regarding connection and expenses as witnessed in Kazo and other areas, a request has been made that the connection rates and electricity tariffs be subsidised to allow local people also benefit from the power line. It is also recommended that all potential applicants be given opportunity to be connected when this time comes.

6 PROJECT IMPACTS AND MITIGATIONS

6.1 Likely Positive Project Impacts/Enhancement

Positive impacts have been identified and ranked using Pastakia (2004) Rapid Impact Assessment Matrix (see Section 1.5.13) and are listed in Table 6.1.

Table 6.1: Positive impact ranking

No.	Impact	Rank
1	Electricity supply in a rural area	+ 5 Major positive change/impact
2	Create employment opportunities	+ 5 Major positive change/impact
3	Promote the sale of construction materials	+ 5 Major positive change/impact
4	Improve health service delivery	+ 5 Major positive change/impact
5	Promote value addition and industrialisation	+ 5 Major positive change/impact
6	Improvement of telecommunication	+ 5 Major positive change/impact
7	Improvement in education	+ 5 Major positive change/impact
8	Improvement of security	+ 5 Major positive change/impact
9	Improvement of standard of living	+ 5 Major positive change/impact
10	Improvement of banking	+ 5 Major positive change/impact
11	Alleviate deforestation	+ 5 Major positive change/impact
12	Reduction of greenhouse gases	+ 5 Major positive change/impact

6.2 Details of the positive impacts

6.2.1 Electricity supply in the rural areas

The most important positive impact of project is that it will take electricity to the rural areas. It is ranked as +5 (major positive impact). The importance of electricity cannot be over emphasized. It is a prerequisite for the development of a modern society. This part of the western region will have another source of reliable energy. The project is expected to have a cascade effect of employment, industrialization, improvement in education, health service delivery and telecommunications and banking services; it will accelerate economic development and help lift the people from extreme poverty. Upon commissioning, the project will supply electric power to households in the targeted areas and unlock the business potential of the project area. The use of hydroelectricity will reduce

the use of fossil fuels, hence reduce greenhouse gas emissions and decrease the rate of deforestation to the benefit of the global climate.

6.2.2 Employment opportunities

The power project will generate employment opportunities during design, construction, operation and decommissioning phases. At the design stage it has already employed electrical engineers, economists, financial analysts, sociologists, surveyors, valuers, environmentalists, ecologists, environmental engineers, and occupational health and safety specialists. After completion of construction the electricity will provide further employment opportunities in downstream industries especially in agro-processing, health services delivery, banking sector, education and artisanal activities like carpentry and welding.

At local level, communities will benefit from short-term employment opportunities during the construction phase. Positive implications of the project emanate from its potential to create short-term business and employment opportunities to both professional staff and unskilled workers during the construction phase.

6.2.3 Sale of construction materials

Traders will benefit from opportunities to supply construction materials, food, water and lodging to the contractors. Women in particular will participate in income generating activities like selling local products to workers on construction sites. These activities will benefit women who are very often the sole bread earners of their families.

6.2.4 Improved medical services

Medical services in the western region will be improved. Hospitals and health centres in the districts shall now be able to use electricity powered medical equipment like x–rays and ultrasound to facilitate diagnosis and treatment of patients. There will be reduced need for patients to be referred to Regional Referral Hospitals for unsophisticated medical services like blood transfusion, caesarean sections or minor surgery. Hopefully this will reduce maternal deaths in the rural areas. This will decongest Regional Hospitals hence allowing its medical staff to concentrate on more serious referral medical cases. With refrigeration, vaccines will be stored at the sub-county level, enhancing the prevention of diseases like polio.

6.2.5 Promote industrialization

The lack of power supply has been the limiting factor in the industrial development of the area. With the availability of electricity, this will unlock the industrial potential of the sub region. The most beneficiary will be the agro-processing industry like cooling and pasteurisation of milk, grain milling, and abattoirs. This may reduce rural-urban immigration.

6.2.6 Improvement of education

Education in the area has lagged behind partly because of lack of electricity. There are however a number of technical schools in the area. In most of these institutions, sciences and other practical subjects like physics, biology, chemistry, electrical engineering and carpentry are taught by theory. Furthermore, the reading time for pupils and students alike is done only during the day. At night candles and paraffin lanterns are used. Because of low illumination this affects their eyesight and

the inhalation of paraffin fumes affects their health. With the supply of electricity this will be an issue of the past.

6.2.7 Improvement of telecommunication

Telecommunication in the area is poor and not reliable. The few mobile telecommunication masts in the area use diesel powered generators. With electricity in the area more masts may be built. This will increase tele-density. Local people will be able to access the internet and related computer services. The digital divide will be reduced, enabling the people to enter the information age with its associated globalisation consequences.

6.2.8 Improvement in security

Electricity will be used for lighting streets and homes. This will help improve security. Electric fencing will reduce burglary and petty theft.

6.2.9 Improvement of the standard of living

Electricity will improve the standard of living of the communities. The first impact will be lighting. This will increase aesthetic value of the area at night. The use of household appliances like TV, radios, computers and electric ironing will increase. Refrigeration will be possible. Video and disco halls will increase hence raising the profile of the tourism, leisure and the hospitality industry.

6.2.10 Improvement of banking services

Banking services continue to elude the area because banking facilities require electricity. With the demise of the co-operative movement in Uganda, the only semblance of financial services in the rural area is "money / gift circles" and microfinance. The tragedy with these financial facilities is that the interest rates are very high (up to 36% per annum).

With improved power supply, large banks are expected to open branches in the areas and bring their services closer to the people. Electronic money transfer will be possible.

6.2.11 Reduce deforestation

The major source of energy in the area is fuel wood, which accounts for 99.9% of the energy consumption. There is an increase of felling trees to make charcoal for home consumption and sale. This has increased deforestation and accelerated climate change. It is anticipated electricity will give a better source of clean and renewable energy. This will reduce pressure on forests and trees.

6.2.12 Decrease global warming

Deforestation and the use of fossil fuels increase global warming. Electricity will reduce deforestation and the use of petroleum powered equipment. This will in turn reduce greenhouse gasses emissions that cause the greenhouse effect that lead to global warming, resulting in climate change.

6.2.13 Provision of pumped water supply

The introduction of electricity will enable water pumping stations and/or treatment works to be constructed in the area. This will reduce waterborne disease like cholera, diarrhoea, typhoid and dysentery. Wet industries like abattoirs and tanneries can be built in the area with reliable water supply.

6.3 Likely Negative Project Impacts

Negative impacts have been identified and ranked using Pastakia (2004) Rapid Impact Assessment Matrix (see Section 1.5.13) and are listed in Table 6.2.

Table 6.2: Negative impact ranking

No.	Impact	Rank
1	Hydrology and Water Quality	-1 Slightly negative change/impact
2	Geology and soils	-1 Slightly negative change/impact
3	Noise and vibrations	-1 Slightly negative change/impact
4	Increase in suspended particulate matter (dust)	-1 Slightly negative change/impact
5	Habitat destruction	-1 Slightly negative change/impact
6	Fire outbreaks	-4 Significant negative change/impact
7	Generation of construction solid waste	-1 Slightly negative change/impact
8	Generation of human excreta at the work place	-1 Slightly negative change/impact
9	Occupational health and safety	-1 Slightly negative change/impact
10	Visual impacts and landscape	-1 Slightly negative change/impact
11	Impact on flora	-1 Slightly negative change/impact
12	Impacts on Fauna	-1 Slightly negative change/impact
13	Equipment Storage Yard issues	-1 Slightly negative change/impact
14	Electrocution and electric shocks	-1 Slightly negative change/impact
15	Electromagnetic fields	-1 Slightly negative change/impact
16	Social Impacts and grievance redress mechanism	-2 Negative change/impact
17	HIV/AIDS	-1 Slightly negative change/impact
18	Impact on physical cultural sites	-1 Slightly negative change/impact
19	Impact on Property and Crop Production	-1 Slightly negative change/impact
20	Land uptake	-1 Slightly negative change/impact
21	Impacts of residential areas, the road users and safety of the general public	-1 Slightly negative change/impact
22	Discrimination against gender, youth, venerable groups and the elderly	-4 Significant negative change/impact
23	Disputes	-4 Significant negative change/impact

6.4 Details of the negative impacts

6.4.1 Hydrology and Water Quality

Water runoff will be minimal since there will only be minimal excavation and dumping of excess material. The line will cross two major wetlands. It is anticipated excavation of pits in these wetlands especially during wet conditions will not impact on water quality, alter stream flow and increase soil compaction. However, the poles are treated with creosote, which may be hazardous.

The holes of wooden poles will occupy a small area. The excavations will mainly be done manually including erection of poles. There will generally be limited compaction of the roads as a result of construction activities. Furthermore the power line will be accessed from existing roads, which are maintained by the districts.

There is potential for accidental spillages from transformer oil at any stage of project cycle. These can be a source of concern in the storage yard. However, transformer oil is not normally stored onsite, but transported to the sites for purposes of filling transformers that may have leaked their oil during transportation, storage, or installation (REA, 2014b). This impact is ranked as -1 slightly negative, because its effects will only be localised.

There is potential for soil erosion from digging pole pits and extraction of building materials. This impact is ranked as -1 slightly negative. Its effects will only be localised.

There is potential for open defecation, which may compromise water quality. This impact is also ranked as -1 slightly negative, because its effects will only be localised.

Mitigation: The impacts can be minimized by careful selection of the line routing to avoid introducing new access roads in the virgin areas. No loose soils from excavations or imported fill should be left at the sites. Furthermore, since most wetlands are seasonal, the timing of the construction activities should be in the dry season to minimize soil compaction and alteration to the drainage and water quality. Large spans of poles/or towers should be used to reduce disturbance to the swamps/wetland areas, by using the H and/or M member structures. Creosote treated poles will be less hazardous in wetlands because the poles should be put in metallic drums and backfilled with murram. Open defecation by construction workers should be prohibited as a policy. Human excreta should be disposed in mobile toilets. It is anticipated the impact on hydrology and water quality will be a slightly significant -1 and will be localised only where electricity poles will be placed.

It is suggested that, all transformers in the storage yard should be placed on wooden platforms laid in high-density polythene bags spread with sawdust to soak away and contain any oil leakage. Contractors shall also be required to develop and implement Standard Handling Procedures for Transformers to take care of any oil spillage during transportation, storage and installation (REA, 2014b).

6.4.2 Geology and soils

No impact will be encountered from slope stability problems since the terrain is level to slightly undulating. Poor drainage and clay and peaty soils in swamps may pose a problem. The sandy soils are susceptible to soil disturbance and not suitable as backfill materials. Soil compaction reduces

the water-holding capacity of the soil and may result in increased run-off and kill of below ground fauna. However, the pits dug will cover a small and insignificant area to warrant any considerable impact on geology and soils in any given area, therefore this impact is ranked as -1 slightly negative impact.

Wetland soils consist of primarily organic matter (decomposed organic matter). These soils are formed very slowly and if disturbed by digging, filling and compaction they do not readily recover and are not easily repaired. Using fill material on access roads especially in undisturbed wetland areas can cause soil compaction and decreased hydrological functioning of the wetland. Considering that the area to be affected is limited, the impacts on geology and soils will be slightly negatively significant -1. These impacts are localised only where electricity poles will be placed.

Mitigation: In water logged or sandy soils, the pits' original soils should be excavated, rammed, the pits compacted with hard core and back filled with murram (REA, 2014b). Timing of the construction during dry season will minimize disturbance to sensitive soils and problems in flood prone areas. Locating new access roads in wetlands shall not arise since the poles will be located in the road reserve, very close to the edge of the existing road network.

6.4.3 Noise and vibrations

During the construction phase, activities like movement of vehicles and the operation of heavy machinery may impact on construction workers or people living near the construction sites or workshops. However, these nuisances will be short-term effects restricted to daytime. This impact is ranked as -1 negative change/impact. It is localised to construction equipment and vehicles and only affects people nearby.

Mitigation: Most of the construction activities will be carried out by manual labour. There will be one or two vehicles delivering labour and materials to the sites. The Contractor should follow the noise regulations and should provide personal protective equipment (PPE) to personnel. All motorised equipment and vehicles should have silencers.

6.4.4 Increase in suspended particulate matter (dust)

Movement of heavy machinery and equipment to the site may generate dust within the environment arising out of the vehicular activities. These activities will be continuous throughout the construction phase. This is expected to be localised with -1 negative impact affecting mainly construction workers and people nearby.

Mitigation: Motorised equipment and vehicles should be regularly serviced and fitted with filters. Construction sites that are likely to generate dust should be sprinkled with water. Construction workers should wear masks to prevent dust entering their respiratory tract.

6.4.5 Habitat destruction

Creation of the right of way may destroy parts of the natural environment. This impact will be felt in sensitive fragile ecosystems like wetlands. It is anticipated that habitat destruction will be localised and its impact is ranked -1 slightly negative. However, the summation of destruction done at the construction of each pole along the entire route of the line may be big enough to cause worry.

Mitigation: The project should remain along the road reserve as much as possible. Clearance of trees should only be done for those of 2.5m and above. Further clearance should be done to the necessary extent.

6.4.6 Fire outbreaks

There is a possibility of wild fire out breaks caused by dry vegetable matter (leaves) resulting from vegetation clearance. Fires might also occur at the contractor equipment storage areas. This impact is -1 slightly negative because it will be localised. At the household level, short circuits, poor wiring, faulty electrical appliances or the illegal connection of electricity might cause fire. This is taken as -4 significant negative change or impact. During construction and operation, bush fires are a common phenomenon by the local people especially during the dry season when fire is used for clearing land, in preparation for cultivation or spurt of grass for grazing.

Mitigation: Maximum care should be taken not to start fires by bringing in lighters and other sources of fire to areas with dry vegetation matter. In case of fire, the Contractor should mobilise staff and the local community to quickly put out the fire. The Contractor should have fire detection and suppression policy, procedures and equipment. The Contractor should be insured against fire. Public sensitisation campaign will greatly reduce incidence of fire outbreaks. Furthermore, REA, the Contractor and the Operator in close collaboration with the respective District Local Authorities shall undertake community sensitization against bush burning. This should avert burning of poles and associated project equipment. Additionally the power line RoW should be regulated and cleared to remove vegetable matter, which might be a source fuel for fire out breaks.

6.4.7 Generation of solid waste

Junk from scrap metal, plastics, PVC cords, vehicle batteries, polythene papers etc., will be generated from construction activity. Such waste has potential to pose environmental challenges unless appropriately disposed of. This is taken as -1 slightly negative impact.

Mitigation: All storage and construction sites should be kept clean, neat and tidy at all times. No burying or dumping of any waste materials, metallic waste, litter or refuse should be permitted. The Contractor shall implement measures to minimise waste and develop a waste management plan. The Contractor shall practice sorting of waste and decommission/clean-up of equipment and storage area at the closure of the project activities. Hazardous solid waste should be handed over to a NEMA registered (licensed) waste handler, for final disposal in gazetted disposal sites. The Contractor and Operator should collect all used wires and give them to a licenced NEMA waste handler so that they are recycled. Decommissioned oil creosote treated poles should be recycled to make fences, while chippings and cuttings should be handed over to a NEMA licenced waste handler. These should be incinerated in a controlled incinerator.

6.4.8 Occupational health and safety

Construction, testing, commissioning, maintenance and decommissioning of electric power lines exposes workers to multiple occupational hazards such as injury or loss of life from accidental falling, motor accidents, electrocution, attack by wildlife (reptiles, bees etc.), exposure the creosote which are costly to both affected families in terms of loss of income through loss of productive

labour and increased dependency. This is taken as -1 slightly negative impact. The project will use creosote treated poles.

Mitigation: Both the Contractor and the Concessionaire who will manage the line need to have a Safety, Health and Environmental Management Policy, that is backed up by clear objectives, targets, activities, procedures and work instructions. These should be preferably based on ISO 14001, Environmental Management System as recommended by the International Standards Organization, All project workers must be provided with appropriate personal protective equipment such as gloves, helmets, overalls, gumboots, safety boots, climbing belts, goggles, etc. A First Aid Kit should always be handy as a first line of use in accidents. Use of PPE should be strictly enforced. There should be Workman Compensation Insurance for all workers.

In order to minimize exposure of creosote to the environment and workers, the Contractor and Operator should use well-seasoned and dried creosote treated poles, which are not dripping; workers should be provided with appropriate and adequate protective gear; poles should not be stored in water logged areas or near public drinking water sources; cut offs should not be burnt but given to NEMA licensed waste handler and the washing of creosote contaminated clothes should be separate from other clothes.

Only competent workers and staff should be allowed to operate any machinery and equipment to reduce accidents.

During construction, the project site should be completely sealed off and warning signs erected informing the general public to keep off the construction site when construction is in progress.

The Contractor should continuously train his staff and conduct refresher training to ensure that the staff is up-to-date with knowledge of new or latest equipment.

Safety regulations and guidelines should be developed and implemented.

6.4.9 Visual impacts and landscape

The lines run close to the existing roads for most parts. There will be clearance of vegetation along the Right of Way (RoW). The power line will therefore be visible to the road users. The lines will introduce visual disturbance to the undeveloped areas. The power line will pass close to some homes. The lines will affect the scenic view of these homes. This is taken as -1 slightly negative impact.

Mitigation: Unnecessary clearance of vegetation should be avoided. Where the line is not located within the road reserve, the natural woodland can be left to shield the power line.

6.4.10 Impact on flora

Clearance of the power line corridor (way leave) and access roads will impact the vegetation cover. This will cause diminished ecological functions due to the removal and degradation of the vegetation cover. Construction of the power line through the wetlands will be minimal because poles/towers will occupy small patches therein. At each site and specific location the impact is -1 slightly negative. Table 6.3 and Figure 6.1 below shows site specific project impacts on wetlands.

Mitigation: Clearance of trees/vegetation should be kept to the bare minimum and all trees cut should be compensated. Route clearance should be a radius of 5m on either side of the line and only trees and crops exceeding a height of 2 meters should be cut.

Table 6.3 and Fig 6.1 below shows site specific project impacts on wetlands. Mitigation measures are recommended for wetland site restoration.

Table 6.3: Fragile ecosystems along the proposed line

No	Feature Name	Distance to be traversed (km)	Sub county	Village	Parish Name	Sub county	County	District
1	Wetland	0.40	Kashongi	Rwemamba	Rwemaba	Kashongi	Nyabushozi	Kiruhura
2	Wetland	0.34	Kashongi	Rwemamba	Rwemamba	Kashongi	Nyabushozi	Kiruhura
3	Wetland	0.34	Kashongi	Kyamarebe	Kitura	Kashongi	Nyabushozi	Kiruhura
4	Wetland	0.41	Kashongi	Kitura	Kitura	Kashongi	Nyabushozi	Kiruhura
5	Wetland	0.35	Kashongi	Omukubumba	Kitura	Kashongi	Nyabushozi	Kiruhura
6	Kitura T.C	0.47	Kashongi	Kitura	Kitura	Kashongi	Nyabushozi	Kiruhura
7	Wetland	0.37	Kashongi	Mooya	Kitura	Kashongi	Nyabushozi	Kiruhura
8	Wetland	0.44	Kashongi	Mooya	Kitura	Kashongi	Nyabushozi	Kiruhura
9	Wetland	0.43	Kashongi	Mooya	Mooya	Kashongi	Nyabushozi	Kiruhura
10	Wetland	0.64	Kashongi	Kashongi	Rwenjubu	Kashongi	Nyabushozi	Kiruhura
11	Wetland	0.36	Kashare	Kengeye	Nchune	Kashare	Nyabushozi	Mbarara
12	Wetland	0.39	Kashare	Ruhumba	Nchune	Kashare	Kashari	Mbarara
13	Wetland	0.61	Kensunga	Omukayanja	Byanamira	Kensunga	Nyabushozi	Kiruhura
14	Wetland	0.27	Kashongi	kyeruruma	Byanamira	Kashongi	Nyabushozi	Kiruhura
15	Wetland	0.26	Kashongi	kishunzu	Byanamira	Kashongi	Nyabushozi	Kiruhura
16	Kachwangobe T.C	0.42	Kashongi	Kachwangobe	Byanamira	Kashongi	Nyabushozi	Kiruhura
17	Wetland	0.21	Kashongi	Kitabo Cell	Rwenjubu	Kashongi	Nyabushozi	Kiruhura
18	Wetland	0.34	Kashongi	Kitabo Cell	Rwenjubu	Kashongi	Nyabushozi	Kiruhura
19	Banana Plantation	0.48	Kashongi	Ruyonza	Rwenjubu	Kashongi	Nyabushozi	Kiruhura
20	Wetland	0.41	Kashongi	kitabo	Kitabo	Kashongi	Nyabushozi	Kiruhura
21	Kitabo T.C	0.56	Kashongi	kitabo	Kitabo	Kashongi	Nyabushozi	Kiruhura
22	Eucalyptus Plantation	0.34	Kakiika	Rwebishuri	Kakiika	Kakiika	Kashari	Mbarara

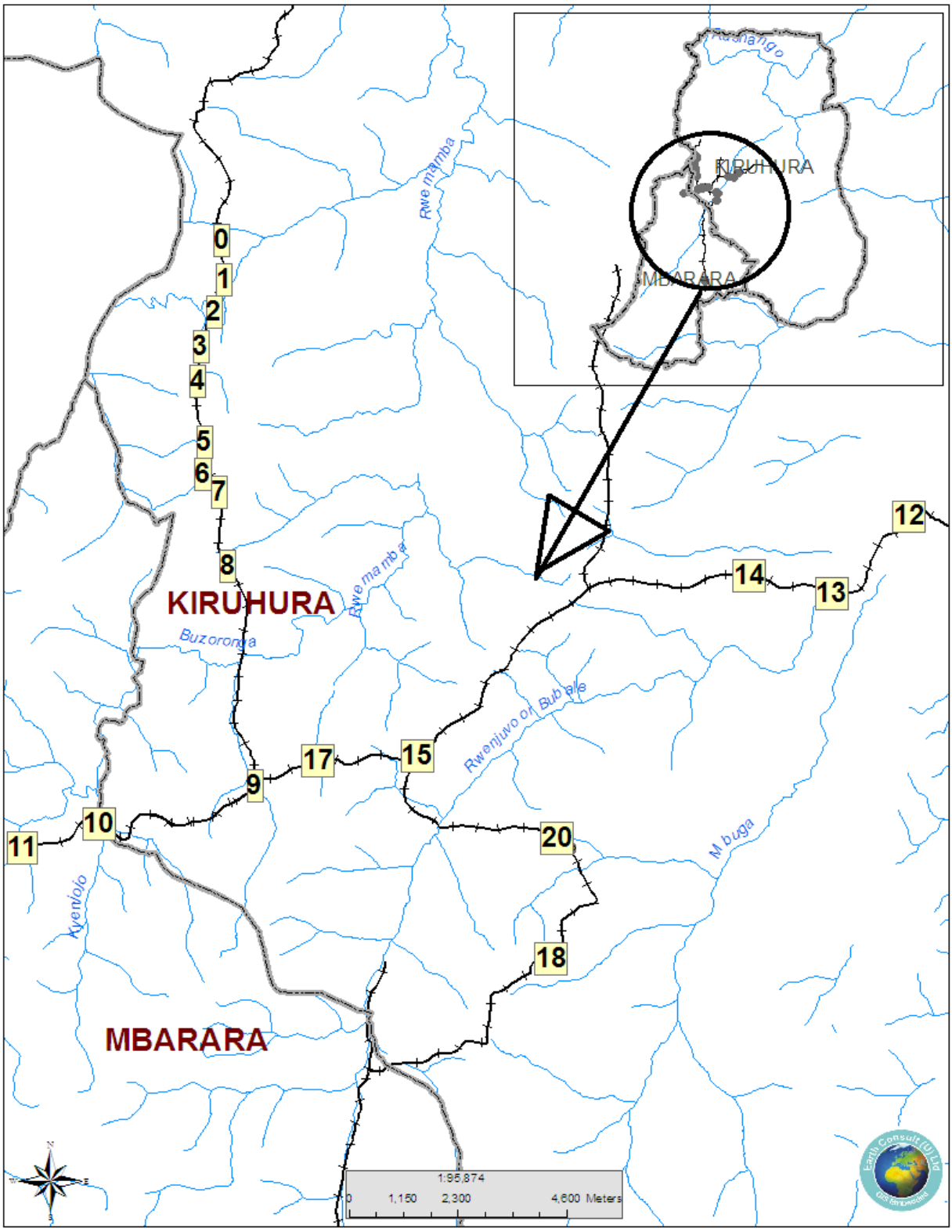


Figure 6.1: Ecological Sensitive areas in the project

Rural Electrification Agency

6.4.11 Impacts on Fauna

The proposed power line may cause electric shocks and electrocution to wildlife. High collision risks for birds with a large wingspan are possible where earth wires are mounted ahead of the conductors. This impact is ranked as -1 slightly significant, because bird collision or electrocutions on 33kV power lines is usually minimal.

Mitigation: Collision of birds with the line can be minimized through reducing the number of conductor levels. In areas where bird population is high, such as wetlands, M/H-pole arrangement of distribution lines should be adopted in which case, the power lines will run horizontal not in vertical perspective to reduce potential collision with the birds. In addition, birds must also be protected against electrocution by ensuring that the separation between wires is wider than the distance that can be stranded by any bird; i.e. no bird should able to stand on any two wires simultaneously.

6.4.12 Equipment Storage Yards Issues

Due to the nature of project activities it is likely that the contractors may set up temporary equipment storage sites. The operations of the storage sites can present a number of concerns ranging from, security risks, fires, waste management, noise and a host of issues, which can be causes of conflicts and other social ills (REA, 2014b). This impact is ranked as -2 negative impact.

Mitigation: It is recommended that: -

a. Land take related to the storage sites will be fully compensated by the Contractor

b. To address security concerns, the storage site shall be fenced to regulate access, have a check point at its gate to register entry and exit of traffic, register visitors entering the premises and issuing visitors‘ cards to be worn by the visitors;

c. Proper sanitation facilities will be put in place at the campsites;

d. Provide waste segregation bins and send recyclables such as water bottles and metal scrap to recycling facilities. The other types of wastes should be managed in accordance with the National Environment (Waste Management) Regulations;

e. To avoid issues relating to operations of vehicle repair workshops, contractors shall be required to retain services of established/gazetted garages to manage servicing their fleets. This will eliminate risks of hazardous waste build up with their associated disposal challenges; and

f. Establishment of the contractor‘s storage will have other impacts such as vegetation clearance; Noise impacts, and traffic related issues. However the roads in the project areas have less traffic i.e. construction traffic will be of minimal magnitude in the environment. The contractor shall compensate for trees and any vegetation cleared from the storage sites.

6.4.13 Electrocution and electric shocks

The proposed electricity distribution may pose a risk of electrocution to communities Broken live wires that fall on the ground are a serious risk if stepped on or handled. Maintenance workers are exposed to electric shocks and electrocution. This impact is ranked as -4 significant negative impact. Electric shocks are usually fatal or at the very least leave permanent physical and psychological effects. At the household level, electric shocks may be due to faulty electrical appliances, poor wiring or wrong use of electrical appliances.

Mitigation: The entire power system shall be constructed according to the Electricity Safety Procedures. Prior to the commissioning of the project, the local communities should be sensitised on the usage of electricity, the dangers of shocks and electrocution. Warming signs in the local language should be clearly displayed on all electrical installations. Maintenance crews should use PPE while on duty.

Plate 6.1: Sagging electric pole

6.4.6 Electromagnetic fields

Epidemiology studies show mixed results, which are not conclusive whether electromagnetic fields/ frequency (EMF) cause health effects like cancer in adults (Keen, 2008; WHO, 2007).

However, a strong correlation is possible for cancer in children where changes in nerve cell excitability in the central nervous system, nerve and muscle stimulation in adults has been observed (Keen, 2008; WHO, 2007). This means that the field strength should be kept as low as technically possible and economically reasonable. This impact is taken as -1 slightly negative.

Mitigation: Maintaining the RoW clear of human settlements is the recommended mitigation measure, not to expose people to electromagnetic fields. The RoW must strictly be observed throughout the power system lifetime. It is imperative that the government puts in place all measures to ensure that the RoW corridor is never encroached upon by settlements under any circumstances. However, overall EMF impact from distribution lines is very low given the voltage of 33kV and 11kV lines.

6.4.14 Social Impacts and grievance redress mechanism

During the construction phase of the project, an influx of skilled and unskilled labour will occur in the project area. This is likely to disrupt the closely netted social networks, cause tension between natives and non-locals and accelerate prostitution and elopement. Electricity construction workers are known to be vulgar. At the operational stage of the project, the establishment of industries in the project area will cause an influx of workers and their families. This may interfere with the local traditions and may result in a clash of cultures. With the arrival of electricity, the community will be exposed to globalisation and its associated social ills. This impact is taken as -1 slightly negative.

Mitigation: The Contractor should hire local people as much as possible. The Contractor should develop a strict code of conduct for its employees. The Foreman at each construction site should be the focal person to whom the community should take any complaint. Employees should respect the cultural norms of the local people, be courteous and should not be vulgar. As a long-term measure, the locals should be sensitised on how to live and deal with immigrant labourers. All community complaints should be recorded and addressed promptly, through a grievance redress mechanism detailed down below:

Grievance Redress Mechanism

The goal of this mechanism is to ensure project's affected persons' satisfaction with implementation of the 33kV Ruhumba-Kaswa grid power lines in Mbarara and Kiruhura district, and in effect provide for on the ground monitoring by affected persons of the adequate implementation of the project. This GRM handles projects physical impacts as well as some social aspects of the project.

The main objectives of the grievance procedure are to provide a mechanism to ensure that the environmental and social aspects of the project have been implemented accurately and fairly, alleviating any adverse effects on PAPs, to mediate conflict and to avoid lengthy litigation that is unfair to PAPs and can delay the project implementation. It also provides people who have objections or concerns about the project with an accessible and known procedure through which to raise their objections and have them resolved. The project grievance redress procedure for this Project will operate as follows:

Steps of grievance redress

Step 1: Receipt of complaint

A verbal or a written complaint from a PAP will be received by the Contractor's assigned Grievance Officer and recorded in a grievance log (electronically if possible).

Grievances can be lodged at any time, either directly to the Contractor, Sub-county/District Office or via the grievance committee member. The process for lodging a complaint is outlined below:

a) The GO will receive a complaint from the complainant.

b) The GO will ask the claimant questions in their local language, write the answers in English and enter them in English onto the Grievance Form.

c) A representative of the community and LC-1 Chairman shall witness translation of the grievance into English.

d) The GO reads the complaint in English and translates it into the complainant`s local language on the Grievance Form.

e) The local leader and the complainant both sign the Grievance Form after they both confirm the accuracy of the grievance.

f) The GO lodges the complaint in the Grievance Log.

Step 2: Determination of corrective action

If in his/her judgment, the grievance can be solved at this stage and the GO and a representative of the community and LC-1 will determine a corrective action in consultation with the aggrieved person. A description of the action; the time frame in which the action is to take place; and the party responsible for implementing the action will be recorded in the grievance database.

Grievances will be resolved and status reported back to complainants within 30 days. If more time is required this will be communicated clearly and in advance to the aggrieved person. For cases that are not resolved within the stipulated time, detailed investigations will be undertaken and results discussed in the monthly meetings with affected persons. In some instances, it may be appropriate to appoint independent third parties to undertake the investigations.

Step 3: Meeting with the complainant

The proposed corrective action and the timeframe in which it is to be implemented will be discussed with the complainant within 30 days of receipt of the grievance. Written agreement to proceed with the corrective action will be sought from the complainant (e.g. by use of an appropriate consent form). If no agreement is reached, Step 2 will be re-visited.

Step 4: Implementation of corrective action

Agreed corrective actions will be undertaken by the contractors or REA within the agreed timeframe. The date of the completed action will be recorded in the grievance database.

Step 5: Verification of corrective action

To verify satisfaction, the aggrieved person will be approached by the Grievance Officer to verify that the corrective action has been implemented. A signature of the complainant will be obtained and recorded in the log and/or on the consent form (see Step 3). If the complainant is not satisfied with the outcome of the corrective action additional steps may be undertaken to reach agreement between the parties. If additional corrective action is not possible alternative avenues maybe pursued.

Step 6: Action by Grievance Committee at the district level

If the complainant remains dissatisfied and a satisfactory resolution cannot be reached, the complaint will be handled by the Grievance Committee. A dedicated Grievance Committee will be established to assess grievances that arise from disputes. The Grievance Redress Committee at the district will at a minimum comprise the LC3 representative, representatives of vulnerable groups, District Land Officer, District Community Development Officer, District Environmental Officer, Contractor's representative and a REA Grievance Officer who will oversee and coordinate grievance issues at the village level including setting up of Local Grievance Committees.

This committee must have a quorum of at least five persons. Decisions will be reached by simple majority. The Grievance Committee shall be constituted for as long as no more grievances are lodged.

Once the Grievance Committee has determined its approach to the lodged grievance, this will be communicated to the GO, who will communicate this to the complainant. If satisfied, the complainant signs to acknowledge that the issue has been resolved satisfactorily. If the complainant is not satisfied however, the complainant notes the outstanding issues, which may be re-lodged with the Grievance Committee or the complainant may proceed with judicial proceedings by going to courts of law as the last resort. The decision of the courts of law shall be final.

REA shall include regular updates and analysis of the GRM in their quarterly reports and also provides regular feedback to communities and other relevant stakeholders. All submitted complaints and grievances will be added to a database/project files which will be updated regularly. Each complaint and grievance shall be ranked, analyzed and monitored according to type, accessibility and degree of priority. The status of grievances submitted and grievance redress will be reported through the monthly reports.

6.4.15 HIV/AIDS

The influx of workers recruited for the construction of the power line and people looking for work after the completion of the project will create a new social order in the project area. As stated above the first causality will be the breakdown of social networks. Workers with money to spend will change the social dynamics of the community by promoting prostitution and enticement of local women including the girl child. The sexual unions that may result will encourage the transmission of HIV/AIDS and other STDs into the community. This impact is taken as a -2 Negative change/impact.

Mitigation: Measures against the spread of HIV/AIDS and STD would be through implementation of the most efficient strategy concentrating on awareness and information campaigns on the group of workers (but not neglecting the community). Provide voluntary testing and treatment for all workers periodically on HIV/AIDS and ensure full participation of all workers. Condoms should be distributed free of charge for any eventual use. Information materials on HIV/AIDS should be posted at all work sites and villages along the entire line. The Contractor's social corporate responsibility should have a HIV/AIDS community outreach plan.

6.4.16 Impact on physical cultural sites

The proposed power line may in some places pass through cultural sites like shrines and graves. During pit excavations chance finds are likely to occur in the project area. This is impact is ranked as -1 slightly negative

Mitigation: Physical cultural sites particularly shrines should be avoided as much as possible. Shrines should be avoided by ensuring that electricity poles are located a distance away. A slight detour to avoid shrines is recommended. Just in case social/cultural/religious sites are impacted the Contractor should consult custodians of these sites, elders and the local community. Normally these people will give advice on relocation issues. However, cultural appeasement of the "gods and ancestors " may be needed to be carried out before the relocation is done. This usually involves the slaughter of a bull and buying of local brew.

The Contractor will need to have a Physical Cultural Resources Management Plan in order to manage chance finds. Once a chance find is discovered work has to be stopped, the area delineated and secured to prevent damage or loss. The Directorate of Museums and Monuments should be notified. Professionals should be allowed to remove the chance find and work can resume after the find has been taken away. The Chance Find Procedures are detailed down below:

In case of a Chance Finds:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Directorate of Museums and Monuments take over;

- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Directorate of Museums and Monuments under the Ministry of Tourism, Wildlife and Antiquities (within 24 hours or less);

- The Directorate of Museums and Monuments would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the Directorate of Museums and Monuments (within 24 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;

- Decisions on how to handle the finding shall be taken by the Directorate of Museums and Monuments. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage;

- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Directorate of Museums and Monuments; and

- Construction work could resume only after permission is given from the responsible local authorities and the Directorate of Museums and Monuments concerning safeguard of the heritage;

- These procedures must be referred to as standard provisions in construction contracts, when applicable. During project supervision, the Site Engineer shall monitor the above regulations relating to the treatment of any chance find encountered are observed;

- Construction work will resume only after authorization is given by the responsible local authorities and the National Museum concerning the safeguard of the heritage; and

- Relevant findings will be recorded in World Bank Implementation Supervision Reports (ISRs), and Implementation Completion Reports (ICRs) will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.

6.4.17 Impact on Property and Crop Production

The power line is expected to pass through gardens that may happen to be along the road reserve. It should be noted that the power line will at the most practical extent be restricted to the road reserve. In the creation of the RoW it will be necessary to cut some crops and trees. This corridor will be regularly maintained/slashed to ensure that trees/crops of heights more than 2.5m do not come up along the corridor. This impact is taken as -2 negative.

Although this is quite insignificant as compared with the total area of cultivated land in the project area, there is a likelihood of a permanent loss on tree cover due to the occupation of the land with power lines.

Mitigation: Commensurate compensation should be given to affected households whose trees and crops will be cut to pave way for the RoW. Farmers should be allowed time to harvest their crops before project activities commence. Property like houses, which are in the RoW, should be compensated, but not the land. All compensation measures should follow the RPF (REA, 2014c) and the specific recommendations of the RAP of the project.

6.4.18 Land uptake

Land uptake in this project is not anticipated to occur. However denial of restricted use may occur but only for a short time.

After the erection of the poles the owner of land continues to use the land with caution of not planting high growing crops of heights above 2.5m. However REA/or the operating agency remains with the right to maintain and/or clear any vegetation or crops that are likely to cause danger or disruption of the power line. However, it is noted that even when land take is temporary, peoples livelihood may be affected, structures and other assets destroyed etc. and that is why the a Resettlement Action Plan (RAP) has been done alongside this ESIA. The impact of land uptake is ranked as slightly negative -1 because the project will be mainly along the road reserve and REA only acquires temporary way leaves for right of use.

Mitigation: Any land uptake and compensation issues should follow the Resettlement Policy Framework (REA, 2014c) for ERT-3 project and RAP recommendations developed for this project.

6.4.19 Impacts on road users and safety of the general public

During the construction of the Distribution Line as well as during the haulage of heavy construction materials (poles) there is the possibility that both construction and haulage traffic will pose danger to the bona fide travellers including school children as well as to the project staff themselves. Further workers by the nature of the construction works do face possibility of accidents and exposure which is hazardous to the health of the workers. The community especially children who may be anxious to watch the construction activities could be exposed to possible accidents due to the works.

Secondly, the concentration of workers with excess liquidity among the poor can lead to the spread of sexually transmitted diseases including HIV/AIDS. This is a potential impact which could start during construction and will be there long after the construction. Measures will be taken to minimise the potential spread of HIV/AIDS during construction and after. This impact is taken as -1 slightly negative.

Mitigation:

The Contractor shall:

(i) Put in place Warning Signs on approaches to the working areas to warn bona fide travellers so that they do not get involved in related accidents since the operational areas are near the roads
(ii) Fence off storage areas and camp sites to discourage idlers to the sites;
(iii) Sensitise the community through the media and meetings at local levels;
(iv) Workers on project activities will be supplied with full Personnel Protection Equipment (PPE) particularly with respect to safety boots, gloves, overalls, safety belts and helmets;
(v) Warn School children through education and sensitisation about the likely dangers of loitering within the construction zone area.

(vi) A First-Aid kit to be provided at every active working site and at the camp. It should be supplied and managed by the Contractor;
(vii) During the construction phase workers should be sensitised about HIV/AIDS while condoms (both male and female) will be distributed among the workforce free of charge;

6.4.20 Disputes during construction, operation and decommission phases of the project

It is inevitable that disputes will arise in the entire cycle of the project. These will include but not limited to land acquisition, destruction of property, cutting crops and trees, employment related issues, financial matters, loss or theft. These disputes can terminate the project or delay the completion time. Therefore, this impact is classified as -4 significant impact.

Mitigation: The project implementation process should try as much as possible to avoid disputes. However, in case of any dispute, it shall be handled in accordance with the Grievance Redress Mechanism presented in Section 6.4.14 above.

7 PROJECT ALTERNATIVES

The project alternatives that have been considered in this report were based on a number of factors including technical feasibility and consultations between the project assessment team and the various project stakeholders including the local communities in the project area. These alternatives include alternative line routing and the 'Zero Option' scenario

7.1 No Project Option'

The 'Zero Option' alternative would involve no construction and subsequent operation of the proposed power line, implying that all the potential adverse impacts associated with the project would be avoided. In the same vein however, all the anticipated socio-economic benefits and development prospects would be forfeited.

An evaluation of the 'Zero Option' reveals that this option would perpetuate the following conditions in the project area:

- Suppressed demand for grid-based power and suffocation of a multitude of economic activities such as industrialization, agro-processing, welding and metal works, carpentry and telecommunications
- Continued use of the more expensive solar PVs and diesel generator sets in health units, schools and for other purposes such as entertainment
- Continued use of paraffin and biomass for lighting
- Continued use of firewood and charcoal for cooking in urban and peri-urban centers, thus leading to loss of vegetation cover and land degradation.

The 'No Project' option is clearly therefore not recommended.

7.2 Project as Described in the Project Brief

The power line follows the same transmission corridor as shown in Appendix B and C. The power line will mainly follow existing roads in the project area, thus less environmental disturbance and fewer impacts. The project equipment like transformers and switch gears chosen for the project are all environmentally related. i.e. they don't have PolyChloro Biphenyls and other environmentally unfriendly chemicals. The Line route was also carefully selected to minimize impacts on settlements and properties, thus reducing compensation and overall project costs. The Line route serves areas of potential economic and social importance at the least project cost. Therefore, this is the most preferred option for the project.

7.3 Off-grid energy alternative-solar systems

The project area has sunshine throught the year and therefore solar energy should work very well. However, solar energy has a number of challenges that include high initial costs of purchasing solar systems. Further, the solar systems are still inefficient and cannot power big machinery hence small scale industries cannot use it for production processes. These challenges therefore make solar energy a less preferred source of energy in the project areas which are characterised by mushrooming small scale industries.

8 ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

An Impact-Mitigation-Monitoring-Responsibility matrix is proposed and presented below. This is to ensure effective implementation and monitoring of all the major activities of the construction, operation and maintenance phases. Continuous supervision should be undertaken by the developer REA, to ensure that the development adheres to the proposed environmental standards and other civil works standards.

REA, NEMA, ERA and the District Local Governments should monitor the project activities to ensure that they are implemented in an environmentally sound manner and where it is discovered to the contrary, action should be taken accordingly.

As a guide to the environmental monitoring team, an impact-mitigation-monitoring-responsibility matrix is proposed in Table 8.1 below.

Table 8.1: Impact-Mitigation-Monitoring-Responsibility Matrix

Item	Environmental Impacts	Mitigation Measures	Responsible Party/implementer (Who)	Site of Implementation (Where)	Optimal Timing for Implementation (When)	Monitoring Indicators	Monitoring (Who)	Budget estimate for mitigation measures implementation(UGX)
1.	Land take	• Make sure that there is no land take by following the road alignment and within the Road Reserve. • In case of unavoidable land take, appropriate and adequate compensation will be made	• Contractor • REA	• Along the distribution line;	• During final design and construction	• Actual land taken • No. of Complaints from PAP	• LC • REA • Contractor • Supervising Consultant	30,000,000
2.	Population influx and the associated social and health impacts	• Working with LC leadership, hire local people for casual jobs; • Provide project specific Identification tags / uniform to all workers on site; • Maintain Good public relations between the local community, the contractor and REA; • Sensitise workers on Sexually Transmitted diseases especially HIV Aids • Distribute free condoms to workers	• Contractor	• Along the distribution line;	• During construction	• No of local people hired; • Number of identity cards/uniforms given out; • No. of awareness trainings conducted • No. of condoms distributed	• REA • Contractor • Supervising Consultant • Local leaders	7,000,000

3.	Impact on Human Settlements	• Avoid houses and structures as much as possible • Sensitise communities on dangers of electricity; • Poles to be guided away from buildings or graves;	• Contractor ; • designer	• Along the distributio n line;	• During constructi on; and • During design;	• No of complaints recorded • Frequency of sensitisation;	• REA • Contract or	4,000,000
4.	Security of Constructio n materials	• Sensitise the community about the negative effects of stealing and vandalising electrical installation; • Local workers to be vetted by the LC executive; • Guard equipment and limit intruders onto working sites; • Cooperate with local security officials including the Secretary for Defence at the local level (LC);	• Contractor	• Along the distributio n line;	• During constructi on	• No of sensitisation messages given out; • Number of identity cards/uniforms given out;	• REA • Contract or	15,000,000
5	Communit y and workers' health	• Put in place Warning Signs on approaches to the working areas to warn bona fide travellers • Fence off equipment storage areas and camp sites to discourage idlers to the sites; • Provide full Personnel Protection Equipment (PPE) to workers;	• Contractor ; • REA	• Along the distributio n line;	• During constructi on	• No of sensitisation messages given out; • Number of warning signs • No and types of PPE; • Presence of First AID Kits	• REA • Contract or	10,000,000

		• Sensitise community about construction hazards as well as HIV/AIDS; • A First-Aid kit to be provided at every active working site;						
6.	Deposition into wetland and sensitive ecosystems (sediment pollution)	• No construction of other roads will be permitted • Use existing roads to ferry construction materials ; • No poles will be planted within drainage lines; • No excavations within drainage canals will be allowed; • Excess materials in wetlands will be removed	• Contractor	• Close to wetlands and other sensitive ecosystems	• During construction	• Number of depositions if any; • Existence of poles in drains;	• Contractor • REA	• 10,000,000
7.	Impacts on loss of vegetation or habitat	• Ensure that the habitats are not disturbed by limiting the Line along the road reserve of the existing road alignment. • Clearing only those trees that are more than 2m high • Limit clearance for construction work and inspection to the necessary extent. • Remove as much vegetation as possible by hand and avoid the use of heavy machinery,	• Contractor	• Along the construction lines	• During construction	• No. of complaints registered regarding clearance • No of casual workers employed for line clearance	• Contractor • REA • Supervising Consultant • Local Governments • NEMA	• 30,000,000

		especially in sloping areas and sensitive areas.						
8.	Impacts on wetlands	• Clearance for construction work and inspection shall be limited to the necessary extent. • At completion of construction works areas not needed for the distribution process will be restored. • The holes for poles in wetland areas shall be back filled using imported suitable gravel material in such quantities that will be just enough to stabilize the hole with no extra soil to silt the wetland. Excess soils will be removed;	• Contractor	• Sensitive areas along the distributio n line	• During constructi on	• No of wetlands avoided using two or three member structures • No of wetlands areas restored	• Contract or • REA • Supervis ing Consulta nt • NEMA • Local Govern ments	5,000,000
9.	Impact on flying birds	• In wetlands where there big birds like crested crane normally stay, the conductors will be aligned horizontally to minimise the impact on birds	• Contractor	• Along the distributio n lines and in birds sensitive areas	• During constructi on	• No. of structures with horizontally aligned conductors in birds sensitive areas	• Contract or • REA • Supervis ing Consulta nt • NEMA	10,000,000

							• Local Governments	
10.	Issues of Equipment storage areas/ camps	• Compensate or promptly lease land / space for Equipment storage; • Provide adequate Proper sanitation facilities at Equipment Storage Areas; • Segregate waste into biodegradable, non-biodegradable and hazardous and dispose appropriately; • Decommission the equipment storage after the project is commissioned.	• Contractor • REA	• At the campsite;	• During construction	• No of bins at site • Presence of sanitation facilities;	• Contractor • REA • Supervising Consultant	30,000,000
11.	Air Quality (Increased Dust and air pollution)	• Limit construction traffic speed; • Keep all equipment and machinery in good working order to limit excessive fumes and noise, • Maintain safety measures (PPE) for the health and well-being of the workers. • Ensure workers use full PPE.	• Contractor	• Construction sites and work areas; • Along the haulage route especially in the vicinity of settlements ;	• During construction and transportation of construction materials;	• Occurrence of dust in the air. • Complaints from other residents	• Contractor • REA	• 5,000,000

12.	Hazardous materials and waste	• REA will adhere to their stated procurement guidelines (as stated above) ensuring that all their transformers shall conform to latest edition of appropriate EC specifications and/or other recognized International Standards in particular: • Do not accept PCB as part of the working materials; otherwise replace them environmentally acceptable insulators. • Procure poles that are well dried • Develop and implement a waste management plan	• REA for standards enforcement; • Contractor for pole treatment and importation of insulating materials;	• At Policy level for program; • At pole treatment plant for poles;	• Before commencement of works and during construction; • maintenance after construction for pole treatment;	• Existence of policy document; • Waste Management Plan • Existence of treatment plant offsite; • Number of poles treated	• REA	11,000,000
	DURING OPERATION OF THE LINES							
13.	Potential for electrocution in case of line breakages	• Sensitize communities about the dangers of exposed high voltage live wires; • Provide prominent warning signs at all installations to warn the intending intruders from touching the lines or fixtures. • Sensitize Communities to report a sagging wire or one that has fallen to the ground; • Vigilance of Maintenance personnel essential;	• REA • Operator	• In project area	• During construction and after	• Frequency of sensitization; • No of warning signs;	• REA • Operator	10,000,000

14.	Bush Burning	• Sensitise people on dangers of bush burning • Clear bush around each pole in areas where fires are common	• REA • Operator	• In project area	• During construction and after	• Frequency of sensitization; • No of warning signs;	• REA • Operator	5,000,000
15.	Occupational health	• Switch off and fully deactivate the main power while maintenance works are on; • Use personal monitors in vulnerable areas to detect EMF; • Use only well trained Workers;	• Operator	• At installations;	• During construction and after	• Records of maintenance (maintenance log book) ; • Evidence of PPEs and training	• REA • Operator	10,000,000

9 CONCLUSIONS AND RECOMMENDATIONS

The findings of this Project Brief concur with the guidance in Environmental and Social Management Framework for the Energy for Rural Transformation Project. The anticipated potentially negative environmental impacts for the grid extension from Ruhumba – Kashwa tee off at Rwebishuri and surrounding environs are generally minor, localised and of short term nature. According to World Bank OP 4.01 this project is ranked as Category B where a detailed EIA is not needed or Category II under The Environment Act where only a project brief is required. Significant impacts were identified as those related to occupational health and safety. Again these are localised, site specific and can be handled by either using appropriate engineering or provision of appropriate personal protective equipment.

An environmental and Social Management Plan to guide in mitigating and monitoring the identified potential impacts has been prepared and it will cost about One Hundred and Ninety Two Million (192,000,000) Uganda Shillings.

It is recommended that the Contractor should have an Environmental Specialist to give on-spot guidance on the environmental aspects such as emergency issues, traffic management, solid waste and wastewater management, occupational health and safety issues.

It is further recommended the Contractor should give equal employment opportunities to women as well as men within the project skills requirements; and to maximize the procurement of local products and services. There should be a deliberate policy to employ local people from the project area.

Since nearly all the negative impacts are minor and can be easily mitigated, the Environmental Practitioners recommend that project be approved by NEMA so that the Government of Uganda can full fill its development programmes.

REFERENCES

1. MDLG, (2013). Mbarara District Local Government http://www.mbarara.go.ug.

2. Keen Charles M, 2008. Possible Biological Effects of Electromagnetic Fields Associated with Electric Power Systems - History and Status of the Issue. http://www.emfservices.com/article.htm

3. National *Population* and Housing Census (2002). Uganda Bureau of Statistics. Entebbe.

4. NEMA (199 a). Guidelines of Environmental Impact Assessment for Uganda. National Environment Management Authority, Kampala.

5. NEMA (1997 b). Mbarara District Environmental Profile. National Environment Management Authority, Kampala.

6. OECD (1992). Good Practice for Environmental Impact Assessment. Organisation for Economic Co-operation and Development, Paris.

7. Pastakia, C. M. R. (2004) Rapid Impact Assessment Matrix. VKI, Horsholm, Denmark

8. REA (2014a). Construction Guidelines for Rural Electrification Projects. Rural Electrification Agency, Kampala.

9. REA (2014b). Environmental and Social Management Framework. Energy for Rural Transformation III (ERT III) Project. Rural Electrification Agency, Kampala, Uganda.

10. REA (2014c). Resettlement Policy Framework (RPF). Energy for Rural Transformation Phase III (ERT III). Rural Electrification Agency, Kampala.

11. UBOS (2011). 2011 Statistical Abstract. Kampala

12. WHO (2007). Electromagnetic fields and public health. World Health Organization. Fact Sheet No. 322, June 2007, Geneva http://www.who.int/mediacentre/factsheets/fs322/en/index.html.

13. Wikipedia (2014 a). Kiruhura District. W en. Wikipedia.org/wiki/Kiruhura District.

14. Wikipedia (2014 b). Mbarara District. W en. Wikipedia.org/wiki/Mbarara District.

15. World Bank (2009). Project Appraisal. Energy for Rural Transformation II. The World Bank.

APPENDIX A: TERMS OF REFERENCE

Section 6. Statement of Requirements

Procurement Reference Number: REA/SRVCS/13-14/00135

TERMS OF REFERENCE FOR CONSULTANCY SERVICES FOR ENVIRONMENTAL IMPACT ASSESSMENT (EIA) AND RESETTLEMENT ACTION PLAN (RAP) FOR 33KV DISTRIBUTION LINES UNDER ENERGY FOR RURAL TRANSFORMATION PHASE III

1.0 INTRODUCTION AND BACKGROUND

The Government of Uganda is set to receive financing from the World Bank towards the cost of the Energy for Rural Transformation Project Phase III, and intends to apply part of the loan proceeds to make payments under the contract for Consultancy Services for the Environmental Assessment (EA) and the detailed Resettlement Action Plan (RAP) for the proposed 33kV electricity distribution grid-extension lines and associated low voltage networks.

2.0 Description of Project Area Coverage

The project areas are divided into 2 (Two) Lots as follows:

a) Lot 1: Ruhumba – Kashwa with tee-off Rwebishuri:

The project is located in western Uganda in the Districts of Kiruhura and Mbarara. The proposed grid-extension covers approximately 113 km of 33 kV overhead lines, 60 km of low voltage networks and 41 distribution transformers with a total installed capacity of 1,875 kVA serving at-least forty three (43) villages/trading centres. A geographical map of the project area is shown in Figure 1.

Figure 1: Lot 1 Project Area

b) Lot 2: Kiganda – Mile 16 with tee-off Katabalanga and Kibyamirizi

The project is located in central Uganda in the District of Mubende. The proposed grid-extension project covers a distance of 95 km of 33 kV overhead lines, 52.2 km of low voltage network and 27 distribution transformers with a total installed capacity of 1,550 kVA serving at-least 23 load centres including towns/villages. A geographical map of the project area is shown in Figure 2.

Figure 2: Lot 2 Project Area.

The construction of the electricity distribution lines will be associated with the following key activities:

i. construction of line structures, accessories and conductors;
ii. clearing of right-of-way;
iii. construction of the low voltage reticulation for the covered trading centres and Towns;
iv. construction of workers' camps and storage facilities for the project materials;

The Environmental Assessment (EA) and Resettlement Action Plan (RAP are a pre-requisite to the implementation of grid-extension lines under ERT Phase III. It is envisaged that the proposed overhead power lines will traverse mainly the existing road reserve areas and therefore, there will be minimal

negative environmental and social impacts.

3.0 OBJECTIVE OF THE ASSIGNMENT

The objectives of the assignment are:

i. To conduct an Environmental Assessment (EA) and prepare a Project Brief detailing the potential impacts of the project and their mitigation measures; and

ii. To prepare a detailed Resettlement Action Plan (RAP) to determine anticipated resettlement impacts associated with the construction of the 33kV distribution lines, and put in place, measures to mitigate such impacts.

Therefore, this assignment shall include two main tasks namely, conducting an Environmental Assessment (EA) and preparation of a Resettlement Action Plan (RAP). Details of each of these tasks are given below.

4.0 TASK 1: ENVIRONMENTAL ASSESSMENT (EA)

4.1 Description of the scope of the services required for EA

The consultant shall prepare a Project Brief for the above-mentioned proposed overhead power line in accordance with the scope of services that will include but not be limited to the following:

a) Description of the prevailing environmental and social baseline of the project areas. Attention should be paid to the existing land uses as well as fragile ecosystems and environmentally important areas which include wetlands, forests, protected areas and those areas that may trigger safeguard policies of the World Bank;

b) Description of the project which should include its justification and the activities to be undertaken during its implementation;

c) Scoping of the EA;

d) Brief review of policy, legal and institutional framework for the project. In particular, provide a summary of important policies, legislation and regulations that are likely to be triggered by the project, as well as the World Bank safeguards;

e) Public consultations with key stakeholders such as Government Ministries, NGOs, and community leaders and members to document their input and concerns with regard to the planned project. Input from the public consultations should be incorporated into the project design and costs, and the Project Brief should document summarize how these inputs were incorporated ;

f) Assessment of the direct and indirect environmental and social impacts of the planned project activities;

g) Environmental and Social Management Plan (ESMP) detailing mitigation measures for addressing the potential negative environmental and social impacts of the project, and their timing vis a vis the construction and operational phases of the project. Mitigation measures should be integrated into the Bills of Quantities (BoQs) for the project costs. In addition, the ESMP should clearly identify institutional roles and responsibilities for implementing the mitigation measures, including potential gaps in capacity to implement the measures and how such gaps will be addressed; and

h) Monitoring Plan with clear monitoring indicators and institutional roles for tracking the implementation of and compliance with the proposed mitigation measures.

i) Maps of the project infrastructure showing in sufficient detail the spatial interaction of the proposed project with socially and environmentally sensitive features

(settlements, farmlands, wetland, forests, protected areas, cultural and spiritual sites, etc.)

j) Photos of the key social and environmental features.

4.2 Expected Outputs for EA

A Project Brief shall be produced by the consultant in accordance with Section 5(1) of the Environment Impact Assessment Regulations of 1998 and in consistence with the World Bank Operational Policy 4.01 and its Annex B (on the content of an environmental assessment report), and should include:

a. The nature of the project in accordance with the categories identified in the Third Schedule of the National Environment Act Cap 153;
b. Scoping report identifying key issues to be considered in the conducting the EA, temporal and spatial boundaries of the EA, and key aspects to be studied in detail to during EA preparation to enable informed decision making;
c. Description of the project area (land, social, air and water) that may be affected by the project (baseline);
d. The activities that shall be undertaken during and after the development of the project;
e. Evaluation of alternatives and rationale for selection of the preferred alternative;
f. The materials that the project shall use, including both construction materials and inputs;
g. Description of possible products and by products, including waste generation in the project and modalities of addressing such wastes;
h. The number of people that the project will employ and the economic and social benefits to the local community and the nation in general;
i. Project impacts, their magnitude, probability, duration, frequency, and reversibility and how such impacts will be addressed;
j. Community/public concerns on the project; and
k. Any other aspects as specified in the Third Schedule of the National Environment Act Cap 153.

The Project Brief shall incorporate comments from the Client and key stakeholders. The Project Brief should meet the requirements out outlined in the ERT-ESMF as well as the safeguard policies of the World Bank and the national environmental requirements.

The consultant shall submit to the Client twelve (12) hard copies of the Final Project Brief as well as two (2) softcopies. Ten (10) hard copies as well as one (1) soft copy shall be submitted to NEMA by the client.

4.3 Duration of the Assignment and Timing for EA

The assignment shall be completed within Twelve (12) Weeks.

Item	Milestones/Outputs	Timing (from the date of contr effectiveness)
1.	Inception Report	Two (02) weeks
2.	Scoping Report	Four (04) weeks
3.	Draft Report Project Brief	Eight (08) weeks
4.	Final Project Brief.	Twelve (12 weeks)

4.4 Key Personnel for EA

Consultant shall provide all personnel necessary for the completion of the Study. The following key personnel shall be included as a minimum requirement for the consultant's personnel:

a) Environmental Specialist (Team Leader). He/she shall be a holder of at-least of a graduate (Master's level) degree in Environment, Natural Resources Management or related field. He/she must have at-least ten years' experience in conduct of Environmental Impact Assessments for development projects including significant experience with EA for electricity distribution. He/she must be a Registered Environmental Practitioner with NEMA.

b) Sociologist
Must be a holder of at-least a bachelor's degree in any of the following fields; sociology, social work and social administration, anthropology or related fields. Must have at-least five years related experience resettlement/mitigation or social impact assessment issues and shall have significant experience with World Bank's on RAP (safeguard policies). Must be a Registered Environmental Practitioner with NEMA or equivalent.

c) Electrical Engineer/Energy Expert
The Expert should be qualified in fields relating to energy with at-least a bachelor's degree in Electrical Engineering with at-least three years' experience in electrical distribution line design and construction.

d) GIS / Mapping Specialist
The GIS / Mapping specialist will have at least undergraduate degree in geography, GIS or similar field, and documented proficiency in collecting geographically referenced information in the field and producing maps to clearly communicate spatial information to general audience.

5.0 TASK 2: RESETTLEMENT ACTION PLAN (RAP)

The purpose of the Resettlement Action plan (RAP) is to identify social impacts from project activities that displace people from land or productive resources, and which result in the loss of shelter, the loss of assets or access to assets, and the loss of income sources or means to livelihood whether or not affected people must move to another location.

Specifically, the RAP will examine adverse social impacts associated with the proposed distribution line, including clearing of the Right of Way (RoW) and establishment of temporary camps for storage of construction equipment. The RAP will be prepared consistent with the Government of Uganda's laws and policies as well as the World Bank's Policy on Involuntary Resettlement, OP 4.12.

The Objectives of the RAP are:

- Determine the scope and magnitude of social impacts resulting in the permanent or temporary acquisition of land and displacement of people.
- Avoid or minimize adverse social impacts
- Provide people with opportunities to participate in the design and implementation of the

resettlement program

- Assist displaced people in their efforts to improve their livelihood and standards of living or at least to restore them.

The RAP should set the parameters and establish entitlements for project affected people (PAP), the institutional framework, mechanisms for consultation and grievance resolution, the time schedule and the budget, and propose a monitoring and evaluation system.

The RAP will include the methodology to be used in valuing losses to determine their replacement value and description of the proposed types and levels of compensation. It will present a definition of affected persons and the criteria for determining their eligibility for compensation and resettlement assistance. An entitlement matrix defining compensation packages and other resettlement measures that will assist each category of eligible persons.

Resettlement measures should be prepared in consultation with the affected population and should be framed in the overall approach of livelihood restoration and development. In addition, the RAP will clearly explain the process of how compensation and resettlement measures will be implemented. This includes details of information flows, money transfer to affected people, paperwork and sign off for compensation package approval.

An important part of this process is establishment and dissemination of a cut-off date after which people moving into the project area will not be eligible to receive benefits under the project. The cut-off date must be communicated in writing to the affected people.

In this regard, The RAP should capture the following key aspects:

- The extent of the pegged way leaves corridor of the proposed power line. ;
- The way leaves definitions for 33kV lines and associated low voltage lines;
- Social economic baseline information and project impacts detailing the project affected people by household and their losses;
- Documentation of views and concerns raised by stakeholders and potentially affected persons regarding the development and implementation of the RAP and action points for concerns raised;
- The proposed compensation measures with options identified and discussed with the affected people;
- The agreements reached and the way forward;
- A review of existing grievance measures, gaps and recommendations for project grievance mechanism;
- RAP implementation arrangements, citing agencies and their responsibilities and detailed roles and responsibilities while making recommendations where some agencies have lean staff;
- Monitoring and Reporting arrangements both during the project and post project implementation in order to assess the efficiency and effectiveness of the RAP process;
- Implementation Schedule in relation to overall project implementation;
- Costs and Budget including costs compensation, livelihood restoration activities, community development plan, monitoring activities.

5.1 Socio-Economic Studies and Project Impacts

The socio-economic studies should be conducted with the involvement of potentially affected people, including:

(a) The results of a census survey and socio-economic studies which should include:

(i) Both the current occupants and the inventory of the assets they are likely to lose or that are affected by the project to establish a basis for the design of the resettlement program;

(ii) The Consultant shall present data on PAPs disaggregated by categories of loss, such as those including the following;

a. Number who will lose residential or commercial land with structures;
b. Number who will lose residential or commercial land only;
c. Number who will partially lose part of their structure;
d. Number who are tenants in the affected structure;
e. Numbers who have leases on certain buildings/structures from the owners;
f. Numbers who will lose of standing crops and trees;
g. Numbers of inhabitants in townships who will lose houses
h. Numbers of rural teachers, retired staff and workers who will lose houses);
i. loss of public infrastructure and other community or shared assets;
j. Numbers of PAPs with permanent land use rights, marginally and severely affected; and
k. others

Tables may be used to highlight presentation of the above data, the Consultant shall also identify the project component or activities that will give rise to resettlement; sections of the road where resettlement shall be practiced; the alternatives and the mechanisms considered to avoid or minimize resettlement prior to project implementation.

(iii) The socio-economic studies shall be confined to the 33kv line environment with the aim of recommending appropriate livelihood restoration strategies and community development action plans for the PAPs along the line. The Consultant can use earlier collected data if available (although district profiles are more generic) and collect data on social-economic characteristics of the project affected people together with the census and inventory of assets. In order to provide for the socio-economic environment of the area and its environs, secondary data may also be included.

(iv) The Consultant shall present the findings of the social economic studies that have been conducted earlier or together with the census of the PAPs and:

(v) In more detail, socio-economic studies should document standard characteristics of households to be affected, 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 population to be affected by the project activities; the magnitude of the expected loss - total or partial - of assets, and the extent of the effect, physical or economic while bearing in mind the different income

streams

(vi) detailed information on vulnerable groups or persons, for whom special provisions may have to be made; especially in the event that relocation is required; the consultant should outline criteria used to identify vulnerable persons and

(vii) Provisions to update information on the affected people's livelihoods and standards of living at regular intervals.

(b) Other Studies describing the following:

(i) 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 grazing ,use of forest and swamp areas,) governed by local recognized land allocation mechanisms, and any issues raised by different tenure systems in the project area;

(ii) 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 for example are there any specific community groups like SACCOS or farmer groups that could be disrupted as a result of project implementation?;

(iii) public infrastructure and social services that will be affected based on the findings of the socio-economic survey the consultant should conclude whether the project will have a significant impact on access to social services like water sources and health centers; and

(iv) social and cultural characteristics of communities to be affected, including a description of formal and informal institutions (e.g., community organizations, ritual groups, nongovernmental organizations (NGOs)) that may be relevant to the consultation strategy and to designing and opportunity for synergies in implementing the resettlement activities especially livelihood restoration activities based on existing activities implemented by Districts and other development partners.

5.2 Policy and Legal Framework

The Consultant shall document the findings of an analysis of the legal framework, covering:

a. the scope of the power of eminent domain and the nature of compensation associated with it, in terms of both the valuation methodology and the timing of payment;

b. applicable legal and administrative procedures , including a description of the remedies available to displaced persons in the judicial process and the normal time frame for such procedures and any available alternative dispute resolution mechanism that may be relevant to resettlement under the project;

c. relevant law (including customary and traditional law) governing land tenure, valuation of assets and losses, compensation and natural resource usage rights, customary personal law related to displacement and environmental laws and social welfare legislation;

d. laws and regulations relating to the agencies responsible for implementing resettlement activities;

e. gaps, if any between local laws covering eminent domain and resettlement and the Bank's

resettlement policy and the mechanisms to bridge such gaps and

f. any legal steps necessary to ensure the effective implementation of resettlement activities under the project , including as appropriate a process for recognizing claims to legal rights to land – including claims that derive from customary law and traditional usage.

5.3 Eligibility

The consultant should define persons to be affected based on specified criteria for determining their eligibility for compensation and other assistance, including relevant cut-off dates. These should be guided by the policy and legal frameworks previously discussed.

5.4 Scope of Land/Property Survey and Valuation

The methodology to be used in valuing losses to determine their replacement cost; and a description of the proposed types and levels of compensation under local law taking into accounts the requirements of OP 4.12 and such supplementary measures as are necessary to achieve replacement cost for lost assets.

5.4.1 Property Survey

Accordingly the Consultant shall:

- ♣ Establish the names and particulars of the affected persons, size of land and other properties such as house to assist the valuers compute the values of such property

- ♣ obtain cadastral and other relevant information necessary to identify property owners and other persons that are likely to affected by the project.
- ♣ Document the damaged crops during survey and prepare a photo documentation of affected PAPs.

5.4.2 Valuation

In accordance with the scope and in line with agreed guiding principles with communities and PAPs, the Consultant shall:

- ♣ Identify the project affected persons using procedures approved by the Chief Government Valuer and in line with the World Bank OP 4.12 to ; carry out detailed valuation of all affected land, properties and livelihoods affected by the project, which will provide the basis for compensation/resettlement;

- ♣ Valuation for lost assets will be on the basis of current replacement value

- ♣ compile land acquisition and resettlement costs for areas that PAPs are to be resettled if any;

- ♣ Ensure the data collection during valuation is done on forms acceptable to the CGV and the process is properly witnessed by the client

- ♣ Ensure that all property such as houses and PAPs are photo documented, for easy

identification during disclosure and payments

♣ Witnessing the valuation exercise: REA staff or an appointed agent shall **sign** on behalf of the client during the valuation exercise. Other signatories will be the Consultant and local council.

♣ The valuation data base is to be duplicated one copy to the Client and the other to the consultant during the valuation process

5.5 Resettlement Measures

A description of the packages of compensation and other resettlement measures tailored to each category of eligible affected persons while ensuring that resources are allocated efficiently and effectively. In addition to being technically and economically feasible, the resettlement packages should be compatible with the cultural preferences of the affected persons, and prepared in consultation with them.

5.6 Site Selection, Site Preparation, and Relocation.

Depending on the project impacts, provide alternative relocation sites considered and an explanation for the site selection criteria, covering:

(a) Institutional and technical arrangements for identifying and preparing relocation sites, whether rural or urban. The combination of productive potential, location specific advantages, and other factors shall at least be comparable to the advantages of the old sites, with an estimate of the time needed to acquire and transfer land and ancillary resources;

(b) any measures necessary for example adequate sensitization and information dissemination to prevent land speculation or influx of ineligible persons at the selected sites;

(c) procedures for physical relocation under the project, including timetables for site preparation and transfer; and

(d) Legal arrangements for regularizing tenure and transferring titles to resettlers.

5.7 Community Participation

In order to ensure that RAP is efficient and effective, consultations with stakeholders and project affected persons is key. Therefore, the involvement of affected and host communities should include:

(a) a description of the strategy for consultation with and participation of resettlers and hosts in the design and implementation of the resettlement activities in order to develop a stakeholder engagement plan;

(b) a summary of the views expressed and how these views were taken into account in preparing and implementing the resettlement action plan;

(c) a review of the resettlement alternatives presented and the choices made by affected persons regarding options available to them, including choices related to forms of compensation and resettlement assistance, to relocating as individual families or as parts of pre-existing communities or kinship groups, to sustaining existing patterns of group organization, and to retaining access to cultural property (e.g. places of worship, pilgrimage centres, cemeteries); and

(d) institutionalised arrangements by which affected people can communicate their concerns to project authorities throughout planning and implementation, and measures to ensure that such vulnerable groups such as indigenous people, ethnic minorities, the landless, and women are adequately represented.

5.8 Integration with host Populations

Depending on the project impacts, if there are persons to be relocated, the consultant should recommend measures to mitigate the impact of resettlement on any host communities, including:

(a) Undertake consultations with host communities and local governments to capture any concerns and fears in the relocation process;

(b) arrangements for promptly tendering any payment due to the hosts for land or other assets provided to resettlers;

(c) arrangements for addressing any conflict that may arise between resettlers and host communities; and

(d) any measures necessary to augment services (e.g., education, water, health, and production services) in host communities to make them at least comparable to services available to resettlers.

5.9 Grievance Procedures

Identification of affordable and accessible procedures for settlement of complaints related to the planning and implementation of resettlement activities. This includes establishing procedures for recording grievances and response times for resolution of problems.

The consultant shall identify agencies responsible for implementing these procedures and take into account community and traditional dispute settlement mechanisms as well as the availability of judicial recourse.

5.10 Organizational Responsibilities

The organizational framework for implementing resettlement, including identification of agencies responsible for delivery of resettlement measures and provision of services; arrangements to ensure appropriate coordination between agencies and jurisdictions involved in implementation; and any measures (including technical assistance) needed to strengthen the implementing agencies' capacity to design and carry out resettlement activities; provisions for the transfer to local authorities or resettlers themselves of responsibility for managing facilities and services

provided under the project and for transferring other such responsibilities from the resettlement implementing agencies, when appropriate.

5.11 Implementation Schedule

An implementation schedule covering all resettlement activities from preparation through implementation, including target dates for the achievement of expected benefits to resettlers and hosts and terminating the various forms of assistance. The schedule should indicate how the resettlement activities are linked to the implementation of the overall project.

5.12 Costs and Budget

Tables showing itemized cost estimates for all resettlement activities, including allowances for inflation, population growth, and other contingencies; timetables for expenditures; sources of funds; and arrangements for timely flow of funds, and funding for resettlement, if any, in areas outside the jurisdiction of the implementing agencies.

5.13 Monitoring and Evaluation

The purpose of monitoring and evaluation is to report on the effectiveness of the implementation of the RAP, covering physical resettlement, disbursement of compensation and effectiveness of public consultation, amongst others. Monitoring and purposeful evaluation will be key factors for the successful resettlement activities.

Arrangements for monitoring of resettlement activities by the implementing agency, supplemented by independent monitors as considered appropriate by the Funding Agency, to ensure complete and objective information; performance monitoring indicators to measure inputs, outputs, and outcomes for resettlement activities; involvement of the affected persons in the monitoring process; evaluation of the impact of resettlement for a reasonable period after all resettlement and related development activities have been completed; using the results of resettlement monitoring to guide subsequent implementation.

Therefore the Consultant shall prepare a proposed Monitoring and Evaluation Framework for RAP implementation, including a plan for monitoring and evaluation of the compensation package with indicators for measuring implementation performance, impacts and outcomes. The plan shall provide for reviews by stake holders (national level including the World Bank and at local levels) of the regular progress reports to REA.

The Framework will include a review of the Baseline survey results, the compensation complaints / grievance redress committee, identification of alternative land for resettlement and farming, adherence to compensation payment schedule, movement and support of the PAPs (including the vulnerable people) and in particular the situation of small and marginal landholders, unskilled laborers, mobile vendors, migrant populations, ethnic minorities, women, children, and the elderly and disabled persons.

Monitoring and Evaluation Indicators

The Consultant will use Baseline survey data (**examples** set out below) to provide benchmarks

(preferably in tabular form) for measuring and evaluating the success of the RAP, i.e.:

a. nos. of affected households and those consulted;
b. nos. of persons paid compensation or resettled citing various categories;
c. nos. of possibly affected households pending reviews (injurious affection);
d. nos. of complaints received at all levels, handled and their categories;
e. nos. of complaints reported to other government oversight bodies (e.g. The Inspectorate of Government) and the outcomes, including the party that initiated the process;
f. nos. compensation grievances referred to the sub-counties;
g. nos. of cases to the Uganda courts of law (High Court or Magistrate's Court) instituted and the outcomes;
h. Performance indicators that show achievement versus planned action may also be added especially for compensation, demolitions, relocations, etc. this compares the planned activities and what is actually implemented, e.g. number planned to be compensated by time of reporting and number actually compensated.
i. frequency and quality of public meetings including the issues discussed; and
j. the number of vulnerable or disadvantaged individuals or groups assisted
k. Suitability of relocation sites, number of new houses, etc where applicable

The Consultant shall also study the PAP livelihoods, e.g. household improvements after compensation (new buildings, GCI roofing, new commercial activities, bicycles, etc.); food sufficiency /security among the impacted communities (food security); school attendance rate; income generation (**or household expenditure patterns**); increase in demand and supply of good services during the resettlement activities; improvements of social amenities along the project roads in the project- impacted corridor (e.g. availability of power, water, health and sanitation, telephone and educational facilities); and HIV/AIDS coverage.

The Consultant shall also consider the following monitoring and evaluation indicators for measuring and evaluating the success of the RAP:

a) social Services in the Impacted areas: Improvement of the social amenities in the road corridor if any; status of the new availed / replaced social services; Availability of power, water, educational facilities;
b) means of Livelihood: Restore means of livelihood of the affected population; PAPs employed on project sites, their categories and estimated earnings;

c) income Generation Activities: Increase in income generation; demand and supply of goods and services during project implementation by the affected people;

d) Community Participation in the RAP: PAPs participation; participation of local leaders; understanding of the compensation / resettlement complaints/ grievance procedures; effectiveness of community meetings; roles of local communities in PAPS verification; social organization of the affected community after project.

5.14 RAP Implementation

The Client will implement the RAP as a separate assignment once the final scope has been defined in the RAP.

5.15 Personnel for RAP

Consultant shall provide all personnel necessary for the completion of the Study. The following key personnel shall be included as a minimum requirement for the consultant's personnel:

Position	Description
RAP Specialist	A Bachelor's Degree in Land Economics or Sociology with 7 years of relevant experience in RAP preparation for power projects, and shall have significant experience with World Bank's on RAP (safeguard policies) as will be evidenced from similar works carried out and financed by the World Bank.
Sociologist	A University Degree in Sociology with 5 years experience in resettlement/mitigation or social impact assessment issues related to development schemes on projects financed by the World Bank. Must also be a registered Environment Practitioner with NEMA or equivalent.
Valuer	A University Degree in Land Economics or its equivalent with 5 years experience in property valuation and must be registered by the Surveyors Registration Board (SRB) with a valid practicing certificate.
Surveyor	A University Degree in Survey with 5 years experience in survey of distribution lines and road networks must be registered by the Surveyors Registration Board (SRB) with a valid practicing certificate.
Legal Expert	A University Degree in Law and a Post Graduate Diploma in Legal practice, with 5 years significant experience in handling issues of involuntary resettlement as evidenced from similar works carried out and financed by the World Bank.

The Consultant shall designate a suitable Team Leader among the team

5.16 Expected Outputs for RAP

The Consultant shall prepare and submit **a RAP report** to the Client (REA) which shall include the following:

- ♣ Valuation Report;
- ♣ Survey Report; (strip maps))
- ♣ Site plan(s) for the proposed resettlement sites, if any.

The Consultant shall report to REA. The Client shall review and comment on the submitted reports. .

After the incorporation of the Client's comments, the Financier shall review the Draft RAP to issue a '*no objection'* before the Consultant submits Final reports.

The RAP (entitlements) will be approved by the Chief Government Valuer and the RAP without the entire list of entitlements will be disclosed at the World Bank's Infoshop prior to appraisal of the main project.

5.17 The Timing and Duration of the RAP Assignment

The assignment shall be completed within Twenty (20) weeks.

The RAP approved by the Chief Government Valuer is expected from the Consultant within the 20th week.

All reports shall be submitted as three (3) hardcopies and a softcopy.

Item	Activity	Timing in weeks (from th date of contract effectivene	Mile stones/outputs
1.	Inception	4	Inception report
2.	RAP studies	14	Draft RAP report
3.	Review by client	15	Comments
4.	Consultant incorporates clie comments	16	Final Draft Report
4.	Review and Approval of RAP rep by CGV	20	Final Report

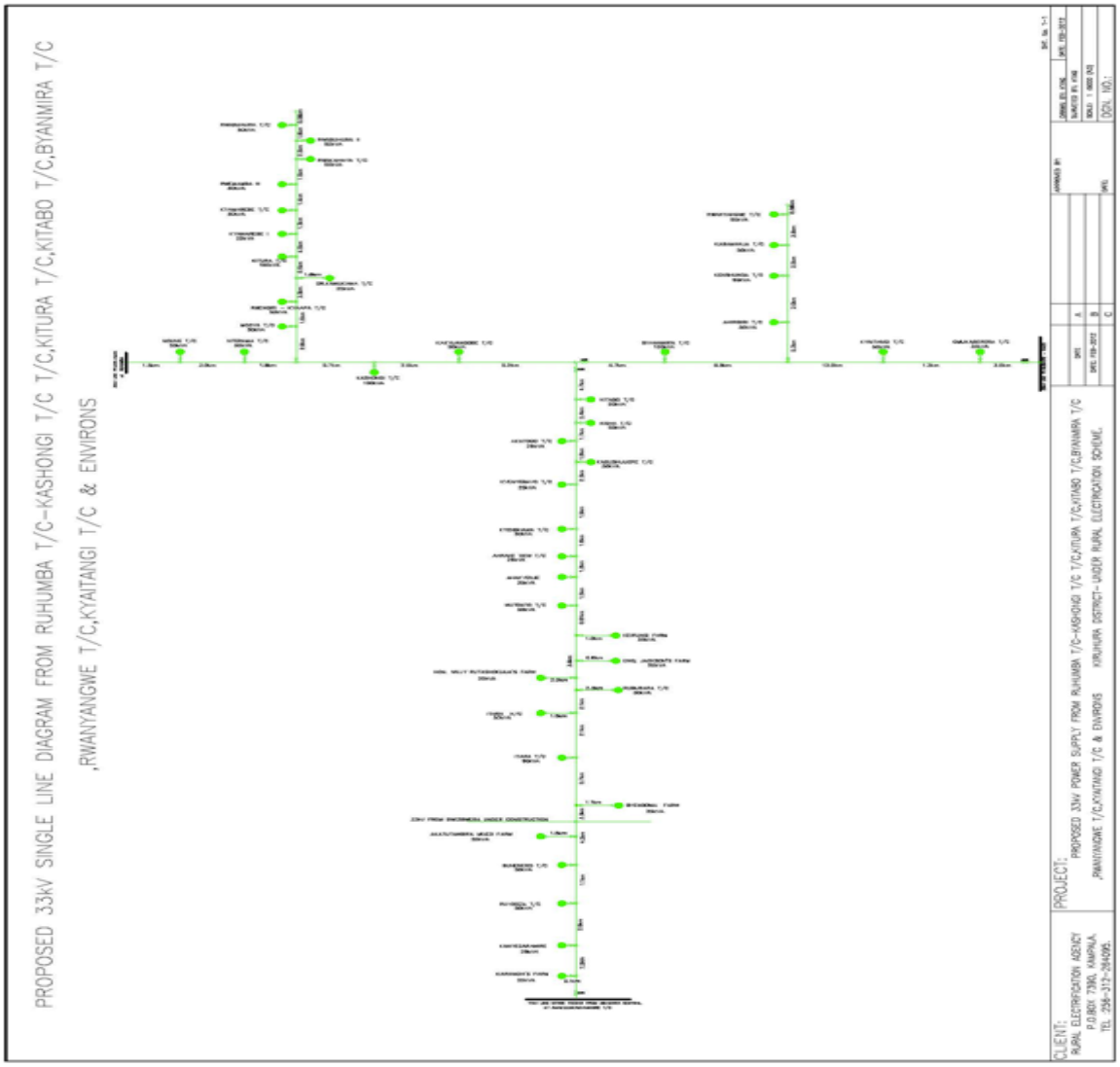
ANY FACILITIES, SERVICES OR RESOURCES TO BE PROVIDED BY REA

The Employer will provide the project site maps and/or preliminary power line survey drawings and any relevant studies prior to contract effectiveness.

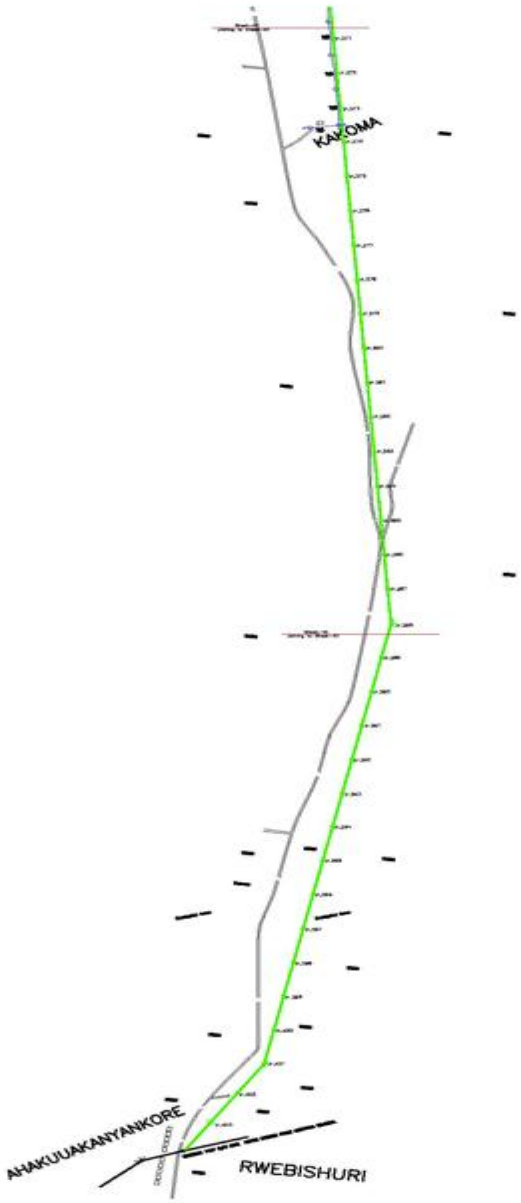
REPORTING REQUIREMENTS

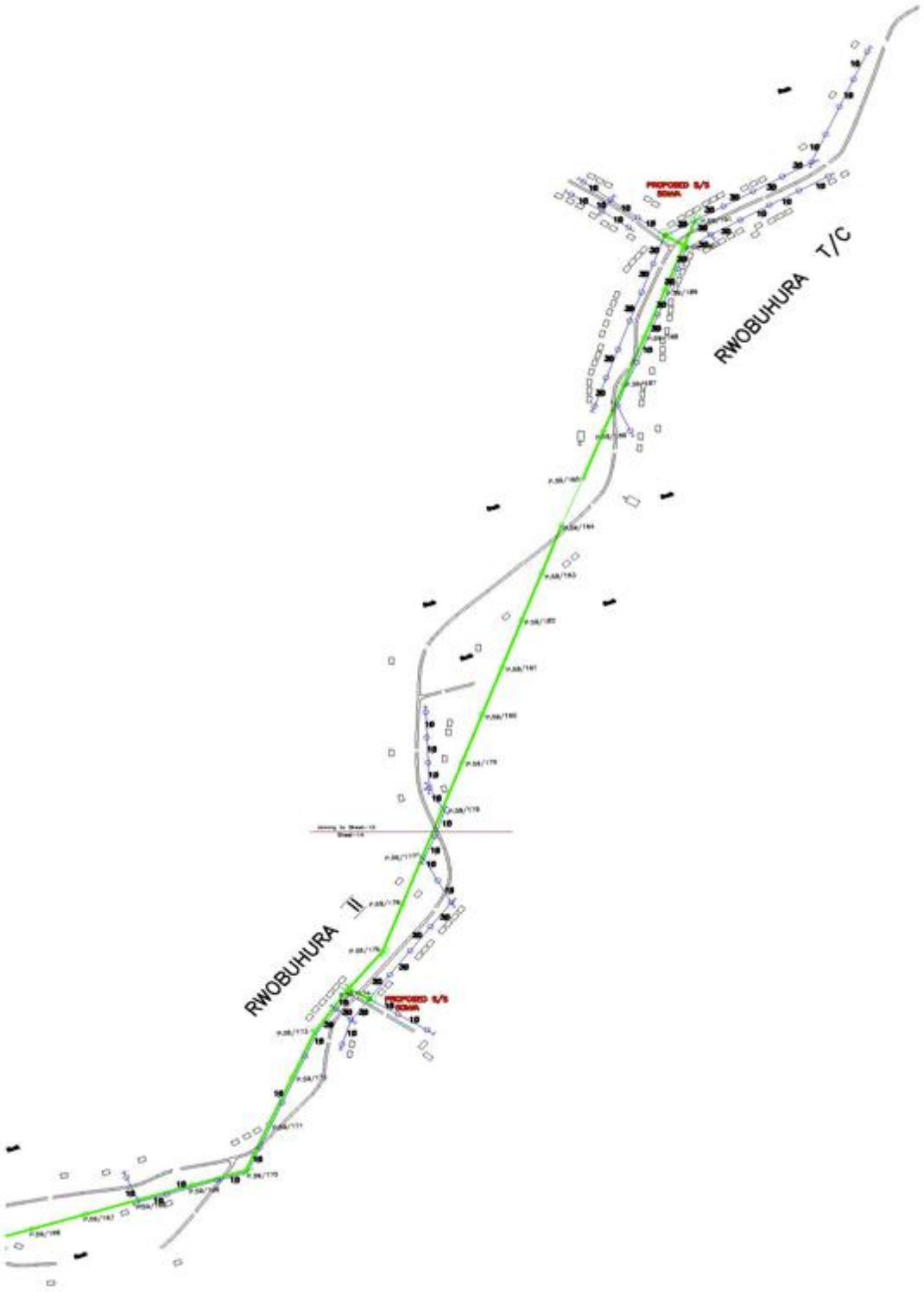
The consultant shall report to Manager, Energy for Rural Transformation.

APPENDIX B: 33kV LINE ROUTE SURVEY OF THE PROPOSED PROJECT

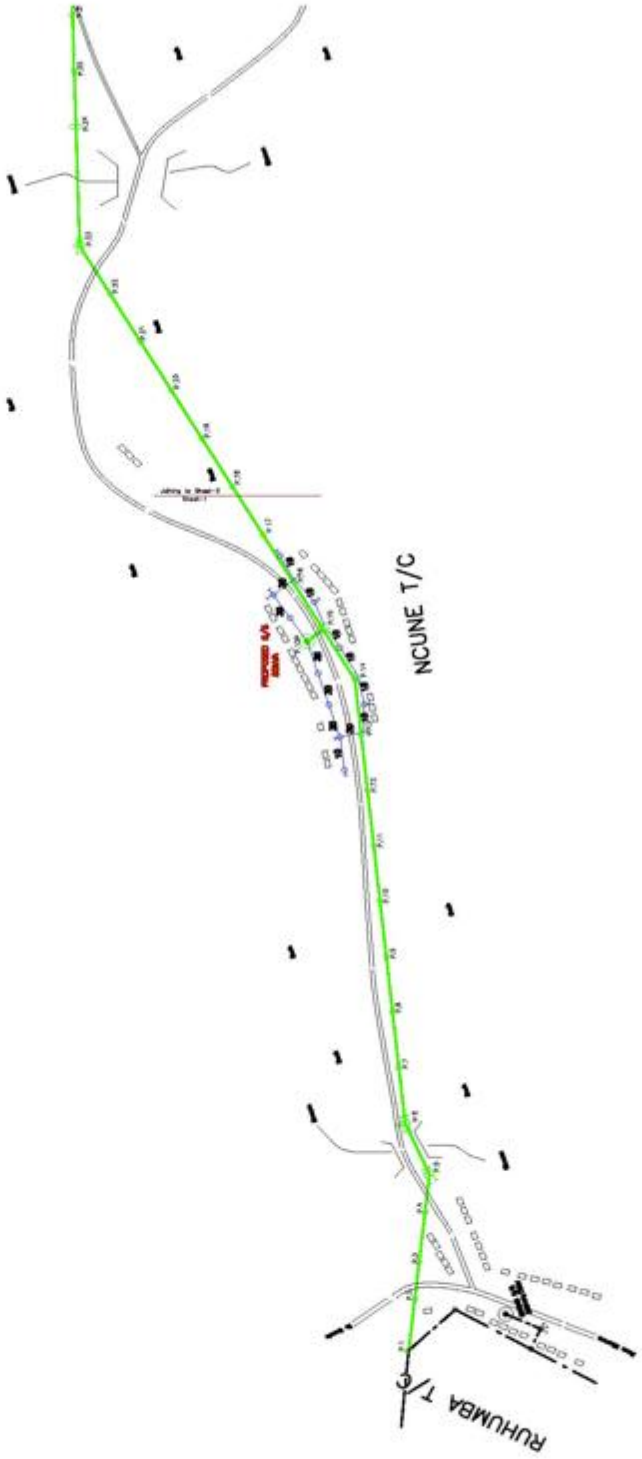


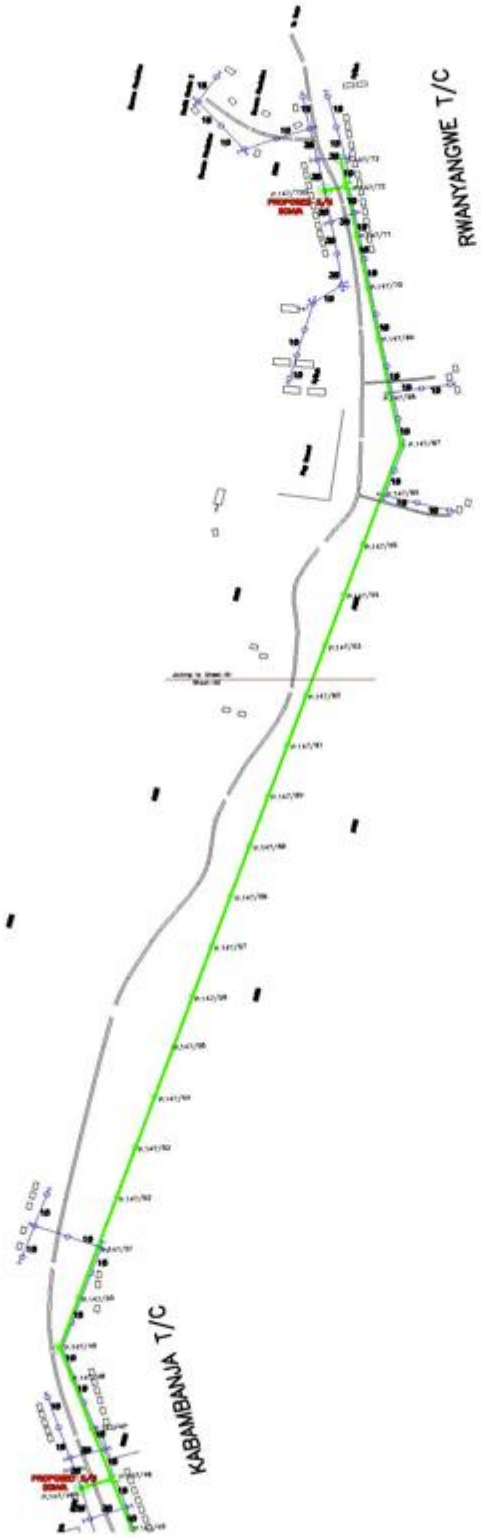
APPENDIX C: STRIP MAP OF THE PROPOSED PROJECT



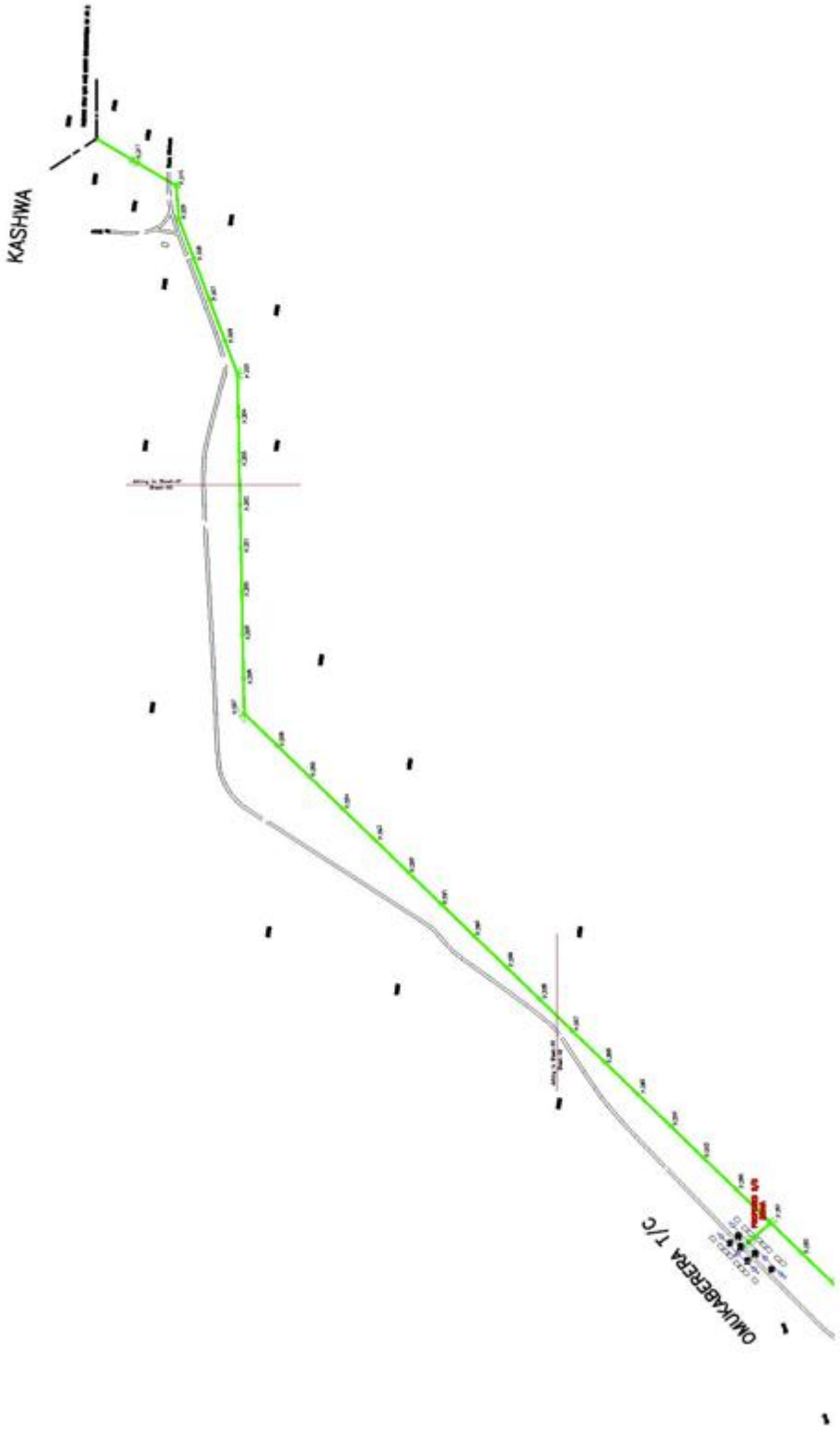


Rural Electrification Agency


NCUNE T/C
RUHUMBA T/C



Rural Electrification Agency


KASHWA
OMUKABERERA T/C

APPENDIX D: STAKEHOLDERS CONSULTED

MINUTES OF THE MEETING HELD WITH THE SPECIALISED SAFETY INSPECTOR (CONSTRUCTION) DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH, MINISTRY OF GENDER, LABOUR AND SOCIAL DEVELOPMENT. 18th JULY 2014. 4th FLOOR SIMBAMANYO BUILDING, PLOT 2, LUMUMBA AVENUE, KAMPALA

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the key informant
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Specialised Safety Inspector (Construction) Mr. Andrew Ambazimana of the Department of Occupational Safety and Health welcomed the EIA Team to Ministry of Gender, Labour and Social Development.	Mr. Andrew Ambazimana, Specialised Safety Inspector (Construction)
2.	The EIA Team introduced themselves and gave an over view of the project to extend 33kV grid to Ruhumba- Kashwa with tee-off Rwebishuri in Mbarara and Kiruhura District. The Team then used the questionnaire to ask the pros and cons of the project. The main focus was identification and mitigation of occupational safety and health issues associated with the construction, operation and the decommission of 33kV grid power lines.	EIA Team
3.	The main function of the Department of Occupational Safety and Health is to implement and enforce the Occupational Safety and Health Act of 2006. This Act repealed the Factory Act of 1954. The Act has a number of provisions that concern the safety and health of workers at the work place. The main requirement of this Act for this type of project is to carry out a risk assessment of the likely possible occupational safety and health hazards. This involves identification of risks and recommending mitigations. It is a requirement that before this type of project is constructed that the Developer or the Contractor should notify the Commissioner of the intension to construct. The following occupational safety and health concerns were recommended: - • Provision of sanitary facilities for workers at the work place. • The welfare of the workers should be provided by the employer i.e. food and water. • Provision and enforcement of use of Personal Protection Equipment (PPE) while on duty for all workers. These	Mr. Andrew Ambazimana, Specialised Safety Inspector (Construction)

	include shoes, overall, masks, ear protection devises, head gear etc. • Procedures to work in dangerous conditions e.g. heights and confined places. • Provision of First Aid and training Employees in First Aid. • Statutory Equipment e.g. cranes should be serviced and maintained. The Department should periodically test these statutory equipment. • Proper and qualified personnel should do the wiring of the project. • There should be proper and adequate signage particularly warming the possibility of electrocution i.e. "Hatari" "Kabi" • Electrical wires should not pass over buildings • The community should be sensitised about the dangers of electrocution. • Child labour should be avoided. Anybody below 18 years should not be employed. • Mandatory worker medical examination i.e. pre-employment, periodically during employment (annually) and post-employment. • Insurance of workers is mandatory. This should include and not limited to the following: - - Health Insurance - Workers Compensation - Accidents	
4	There being no any other business the meeting was closed.	All

MINUTES OF THE MEETING HELD WITH THE NATIONAL FOREST AUTHORITY STAFF, AT THE HEAD QUARTERS, BUGOLOBI, KAMPALA 11th JULY 2014

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the key informants
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Environmental Impact Assessment Specialist Mr. Rukundo welcomed the EIA Team to National Forestry Authority.	Mr. Rukundo, The Environmental Impact Assessment Specialist
2.	The EIA Team introduced themselves and gave an over view of the project to extend 33kV grid to Ruhumba- Kashwa with tee-off Rwebishuri in Mbarara and Kiruhura District. The main focus was identification and mitigation of occupational safety and health issues associated with the construction, operation and the decommission of 33kV grid power lines.	EIA Team
3.	The EIA Team informed the EIA Specialist that they had visited the Forest and GIS Section and interviewed Mr. John Disii the Co-ordinator. After inspection of the GIS Map of the project area it was observed that there were no local or central forest reserves on the Ruhumba – Kashwa tee off at Rweibishuri line.	EIA Team and Mr. John Disii
4.	Although there is no central forest reserve in the area, REA should take the duty of care to replant trees it cuts along the project.	Mr. Rukundo, The Environmental Impact Assessment Specialist
5.	REA should assist the local community to do re-afforestation programmes in the area because of high rate of deforestation.	Mr. Levi Ewudo the Ag. Natural Forest Director
4	There being no any other business the meeting was closed.	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub–region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 11/07/2014 Time 11:00pm Place/Venue NFA Head Quarters

No	Name	Designation	Phone No.	Signature
1	RUKUNDO TOM	EIARs	0772591205	[illegible]
2	LEVI ETWODU	Ag. DNF	0772581494	[illegible]
3.				

MINUTES OF THE MEETING HELD WITH THE UGANDA WILDLIFE AUTHORITY STAFF, AT THE HEAD QUARTERS, KAMWOKYA, KAMPALA 21st JULY 2014

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the key informants
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Senior Planner and Environmental Impact Assessment Officer Mr. Richard Kapere welcomed the EIA Team to Uganda Wildlife Authority (UWA).	Mr. Richard Kapere, Senior Planner and Environmental Impact Assessment Officer
2.	The EIA Team introduced themselves and gave an over view of the project to extend 33kV grid to Ruhumba- Kashwa with tee-off Rwebishuri in Mbarara and Kiruhura District. The Team than used the questionnaire to ask the pros and cons of the project. The main focus was identification and mitigation of environmental issues associated with the construction, operation and the decommission of 33kV grid power lines in protect areas.	EIA Team
3.	There are no protected/conservation areas in the project area. But, there is plenty of wildlife that this on private land. Wildlife that is prone to electricity power line projects included bird and monkeys. Therefore the design should take care of issues of electrocutions.	Mr. Richard Kapere, James Ikukol, Adonia K.Bintora
4	There being no further comment on the Ruhumba - Kashwa tee off at Rwebishuri project because there no conservation areas in area the meeting was closed.	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub–region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 21/07/2014 Time 9:15 am Place/Venue Uganda Wildlife Authority Kamwokya HQ

No	Name	Designation	Phone No.	Signature
1	Kapere Richard	Senior Planning Env Officer	0772 698875	[signature]
2	IVAN NUWAGABA	Volunteer Planning Unit	0779218964	[signature]
3	OKWANE JAMES Tuekil	Senior Warden, PPBurR	0774318289	[signature]
4	Bindoora K. Adonia	Conservation Area Manager – MECA	0772620638	[signature]

MINUTES OF THE MEETING HELD WITH THE DEPARTMENT OF WETLANDS MANAGEMENT STAFF, AT THE HEAD QUARTERS, LUZIRA, KAMPALA 08th JULY 2014

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the key informants
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Principal Officer, Mr. Joseph Ongol welcomed the EIA Team to the Wetland Management Department.	Mr. Joseph Ongol, The Principal Officer
2.	The EIA Team introduced themselves and gave an over view of the project to extend 33kV grid to Ruhumba- Kashwa with tee-off Rwebishuri in Mbarara and Kiruhura District. The Team than used the questionnaire to ask the pros and cons of the project. The main focus was identification and mitigation of environmental issues associated with the construction, operation and the decommission of 33kV grid power lines in protect areas.	EIA Team
3.	There is no way how Uganda can develop without electricity. Electricity is the first requisite for development. Therefore, the extension of the national grid to all corners of the country is well come. But development should have dimensions that encourage economic growth, social equality and environmental sustainability. Wetlands are called wetlands because of the presence of water and the biota is adapted to stay in water logged conditions. There is always a wetland in Uganda in every 50km. Wetlands have benefits that are divided into products, services and attributes. There is a systemic failure in the Land Acquisition Policy in Uganda. Because government fears pay colossal sums of money to compensate land owners, most government projects are relocated to into wetlands, which are "free" Because of this unbecoming behaviour in unfortunately is copied by citizens leading to the destruction of most wetlands in the country. Dumping of murram in wetlands should be kept at a minimum during construction. Construction of access roads in wetlands should be kept at a minimum. Water should be allowed to flow freely, wetland restoration should be encouraged before contractors live the site. Awuja Wetland in Soroti District has been impacted by construction access roads to each pole in the wetland. Littering should not be encouraged in wetlands.	Mr. Joseph Ongol, The Principal Officer
4	There being no any other business the meeting was closed.	All

Meeting the Principle wetlands officer
Wetland Management ~~Department~~ Unit
08/07/2014

No.	Name	Designation	Mobile	Signature
1.	Ongol Joseph	~~principal~~ officer	0772 7934	
2.	Samuel Y. Matege	Consultant	0772 654691	

MINUTES OF THE MEETING HELD WITH STAFF OF UGANDA NATIONAL ROADS AUTHORITY, HELD AT THE HEAD QUARTERS, PLOT 5, LOURDEL ROAD, NAKASERO, KAMPALA 25th JULY 2014

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the key informants
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Surveyor Mr. Richard Akuze and the Land Acquisition Officer Mr. Robert Odongpiny welcomed the EIA Team to Uganda National Roads Authority. Then the Surveyor asked the EIA Team to explain the project.	Mr. Richard Akuze, The Surveyor and Mr. Robert Odongpiny, The Land Acquisition Officer
2.	The EIA Team introduced themselves and gave an over view of the project to extend 33kV grid to Ruhumba- Kashwa with tee-off Rwebishuri in Mbarara and Kiruhura District. The Team than used the questionnaire to ask the pros and cons of the project. The main focus was identification and mitigation of environmental issues associated with the construction, operation and the decommission of 33kV grid power lines in protect areas.	EIA Team
3.	The construction and maintenance of roads in Uganda is implemented using The Roads Act, Cap 345 of 14th April 1949. Recently the Design Manual for Roads and Bridges by the Ministry of Works and Transport was released in 2010. A new law is in the offering to replace the old law. While the Act puts the Right of Way at 30m i.e. 15m from the centre of the road on either side for all roads, the design manual has classified roads into two butimised and gravel roads. It has further, categories the two types of roads in three classes first, second and third class. The main items that are compensated when acquiring roads Right of Way is land, crops and property (buildings). Compensation is to any body that has an interest in the land (registered and non registered). This includes but not limited to the following; land owner, leaseer, licensee, Kibanja Holder. The biggest challenges in land acquisition are: -	Mr. Richard Akuze, The Surveyor and Mr. Robert Odongpiny, The Land Acquisition Officer

MIN NO.	MINUTES	ACTION BY
	Absentee land lords, Disputes among families members especially if the parent/s are dead, this causes delays to acquire the land because the case has to be settled by the Administrator General, under value which makes compensation meaning less, great expectations from the impacted persons who hope that compensation will solve all their financial problems, the introduction of money in families ends up disorganising family members, when men get the money they either marry more wives or leave old wives. The land office does not have a list of all land owners in the country, the compensation process is slow because of cash flow problems. The Contractor workers usually cause mayhem in the community. The have money, the prices of commodities usulally goes up, they disrupt social networks i.e. elopement, sexual intercourse with the girl child and most of the causal labourers are men causing a gender disparity. REA should seek the designs of new roads in areas where they want to extend the power lines so that it is line will the road network.	
4.	There being no any other business the meeting was closed.	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 25th July 2014 Time 11:12 am Place/Venue UNRA Head Quarters Lourdel Road

No	Name	Designation	Phone No.	Signature
1	Ochengping Robert	Land Acquisition Officer	0776990858	
2	RICHARD AKUZE	Surveyor - UNRA	0772509426	

MINUTES OF THE MEETING HELD WITH THE DEPUTY CHIEF ADMINISTRATIVE OFFICER OF MBARARA DISTRICT AT THEIR OFFICE IN KAMKUZI HEADQUARTERS ON 2nd JULY 2014, AT 8.30 AM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the key informant
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The EIA Team from Kampala reached the office of the Deputy CAO of Mbarara Mr. Bwayo G. R. to introduce the purpose of the visit to the region.	EIA Team
2.	The Team was welcomed by the Deputy CAO Mr.Bwayo. The DCAO responded positively to the proposed project. The DCAO gave an overview of the experience and the impacts already created by the existing electricity in other parts of Mbarara District.	DCAO Mbarara District Mr. Bwayo,
3.	The Deputy CAO Mbarara District was asked about the positive impacts of electricity on the wellbeing of the community. The answers below are what the Deputy CAO's envisaged once the project is implemented. **POSITIVE IMPACTS** 1. Electricity will give the rise of commercial, industrial, business, medical and education potential of the communities where the electricity will be extended. 2. There will be employment of the people due to growth and development of businesses. 3. Health services and education services in the Region will improve. 4. Urbanisation will greatly be enhanced due to the many developments and increased income generating activities by the local people.	Deputy CAO Mbarara District
4.	For every project have positive effects and negative effects too. The CAO's were asked what negative effects this project is likely to have on the people's wellbeing. **NEGATIVE IMPACT/ CHALLENGES** 1. Affordability of electricity by the local people is likely to be the most challenge for the implementation of the project. This is because some people may have to incur costs of buying poles in order for them to have electricity at their premises. 2. Road reserves where the project will be constructed have been fenced as part of the plots of the people and in other areas there are buildings where the lines will pass.	Deputy CAO Mbarara District

MIN NO.	MINUTES	ACTION BY
	MITIGATION MEASURES He did not give any mitigation measures but emphasized that the project is a welcome venture for the people of the region so there won't be serious difficulties in implementation. The people have for long waited for this project so they cannot resist but rather support it. The EIA team thanked him for the time given for the interview and assistance rendered to give introduction letters to the lower LCs.	
5.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 14/07/2014 Time 9:44 am Place/Venue Kamukuzi HQ Mbarara Municipal council, Mbarara District

No	Name	Designation	Phone No.	Signature
1	BWAYO K-R.	DCAO	0701421578	
2	MUSINGUZE JECONIOUS	DNRO	0772482352	
3	MURINGE GERALD	STAFF SURVEYOR	0772180462	
4	Muhwezi Ben	Senior Cartographer	0772565740	Muhwezi.
5	ARUHO EDWIN	Cartographer	0773063412	

MINUTES OF THE MEETING WTH THE DISTRICT NATURAL RESOURCES OFFICER MBARARA, A KEY INFORMANT INTERVIEW ON THE RUHUMBA- KASHWA-RWEBISHURI GRID HELD AT KAMKUZI HEADQUATERS ON 14th JULY, 2014 AT 10:25 AM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the district environment officer
4. Questions, Answers and Closing Remarks from the EIA Team.

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Mbarara District Natural Resources Officer, Mr.Jeconious Musingwere, welcomed the EIA Team into his office.	Mr.Jeconious Musingwere, Mbarara District Natural Resources Officer
2.	The EIA Team Leader gave a brief overview of the project. He clearly stated the purpose of the meeting was the introduction of the project to the District, find out his opinion on the positive and negative impacts of the project and to solicit mitigation measures that could be applied to avoid the negative impact. He then handed over to the Sociologist who then went ahead to find out the environment officer's perception of the impact of the project.	EIA Team
3.	**POSITIVE IMPACTS** 1. There will be conservation of the environment since the people of the region will then use electricity and reduce on cutting down trees for charcoal. 2. Reduction in deforestation due to shift from charcoal to use of electricity. 3. Pupils in the primary schools of region will be able to access electricity so that they can read at night. This will improve performance in the education sector.	District Natural Resources Officer.
4.	**NEGATIVE IMPACTS** 1. There will be challenges in land use because of land fragmentation. 2. There will also be fewer people to consult in the cattle keeping areas because of the large size of the ranches but many people in the agricultural areas of Kashare, Kashongi. 3. There will be compensation issues, which will make the project very costly.	District Natural Resources Officer.
5.	There being no other business, the meeting was closed	All

MINUTES OF THE MEETING WITH THE STAFF SURVEYOR-MBARARA DISTRICT ON 14th JULY, 2014 AT 11:15 AM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team
5. The Attendance list is attached at the bottom.

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Mbarara District Staff Surveyor welcomed the EIA Team into his office.	Mr.Muringe Ubrad
2.	The EIA Team Leader gave a brief overview of the project. He clearly stated the purpose of the meeting was the introduction of the project to the District, find out if the District had village, parish and sub county boundaries and maps.	EIA Team
3.	The staff surveyor was asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the surveyor came up with. **POSITIVE IMPACT** 1. He said that school children in the schools within the region where power will be extended will have light for reading at night. 2. The provision of power will enable the trading centers to grow into towns because businesses will improve. 3. It will act as a security along the roads and within the trading centers during the night, theft will reduce. 4. Electricity will create more job opportunities especially for women who work in business ventures such as selling sodas and water along the road and for the redundant youth that have dropped out of school because of fees.	Mr. Muringe Staff Surveyor
4.	**NEGATIVE IMPACT** 1. The local people may not afford the costs of installation since most of the homes are far from the roads where the lines will pass. 2. Danger of electrocution due to ignorance about the use of electricity and the appliances.	Staff surveyor
5.	There being no other business, the meeting was closed	All

MINUTES OF THE MEETING ON THE RUHUMBA-KASHWA-RWEBISHURI GRID EXTENSION HELD AT KABAGARAME TRADING CENTER, KAKIIKA SUB COUNTY, KASHARI COUNTY IN MBARARA DISTRICT ON 14th JULY, 2014 AT 3:00 P.M

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	Mr. Francis Bushobozi a Teacher and resident of Kabagarame Trading Centre welcomed the EIA Team and asked the EIA team to introduce themselves and the project.	Mr. Francis Bushobozi
2..	The Team Leader greeted the group members and introduced himself and the rest of the EIAteam members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba through Kachwangobe to Kashwa then down to Rwebishuri. He also provided the members with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated the purpose of the meeting was to introduce the project to them, find out their perception of the positive and negative impacts of the project and to solicit mitigation measures that could be applied to avoid the negative impact. He then handed over to the Sociologist who then went ahead to find out the members' perceptions of the impact of the project. He urged the participants to give their objective views, not to hesitate to ask any questions where necessary.	EIA Team
3.	The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants came up with once power is connected. **POSITIVE IMPACT** 1. Electricity is expected to bring lighting to this trading centre and there will be less buying of paraffin and candles. 2. Many businesses will be initiated,such as saloon, coolers for milk and soft drinks and this will create employment opportunities most especially for the redundant youth. 3. Electricity is expected to ease the operations of the health units, schools and businesses within the area.	Residents of Kabagarame Trading Centre

MIN NO.	MINUTES	ACTION BY
	4. Communities will also benefit when the work begins. Redundant persons will be engaged in digging poles and this will earn them a living. 5. Services will be brought nearer to the people, in terms of health facilities and businesses will boost. 6. Grinding machines that are run by electricity will come to the trading centre and this will facilitate in the grinding of cassava and maize flour. 7. Security along the roads will improve; people moving at night will be secured from the enemies and the thieves.	
4.	For every project with positive effects, there are always negative effects too. Members were asked what negative effects this project is likely to have on the people's wellbeing. **NEGATIVE IMPACT** 1. The members came up with the issue of bare wires as a danger to the communities. 2. Land conflicts will rise as some people have small pieces of land and part of it will be taken away for when electric poles are constructed. 3. Electrocution due to ignorance of the people about electricity usage. 4. Some people may not afford the costs of installation and extending electricity to their homes due to distance from where the poles will pass. 5.Fires due to bad wiring may destroy people's homes and bush fires will burn the wooden electric poles.	Residents of Kabagarame Trading Centre
5.	The people were asked to enumerate the best way these negative impacts can be mitigated. **MITIGATION MEASURES** 1. The electrical lines should be high to avoid electrocution of herdsmen and livestock. 2. There is need to sensitize the people about the dangers of electricity. 3. The households that will be relocated should be given enough time to relocate before the commencement of the project. 4. People should be compensated for the loss of crops and buildings and the compensation plan should be clearly explained to the people before execution of the project.	Residents of Kabagarame Trading Centre

MIN NO.	MINUTES	ACTION BY
	6. The Contractor should work with the leaders of the communities to handle issues of compensation and road reserve.	
6.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 14/07/2014 Time 9:44 am Place/Venue KABAGARAME T/C
Kakoma Parish, Kakiika Sub county, Kashari County Mbarara District

No	Name	Designation	Phone No.	Signature
01	BUSHOBOZI FRANCIS	TEACHER.	0758059061	Bitsho.
02	Atuhire BAKER	Fama	– –	
03	M. Namata	–	N –	N Namata.
04	Bayenzaki ALEX	P.	–	
05	Byamukama Ely	Pastor	0758524465	
06	Bugyengaava Emmanuel	mallanika	0757265194 0778475503	
07	Niinhire John polo	BOBABOBA	0759 105590	
8	Mwesiye Robert	Pesant	0757093225	
9	Asiimwe Johnson	Pesant	0757319619	Asiimwe

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA TEE OFF AT RWEBISHURI GRID EXTENSION WITH THE PEOPLE OF RUYOOZA TRADING CENTRE LC1, BUNENERO PARISH, RUBAYA COUNTY, KASHARI COUNTY MBARARA DISTRICT ON 14th JULY, 2014 AT 3:15 PM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Chairman of the area Mr. Moses Sande welcomed the EIA team to the trading centre. He then invited the EIA Team to speak to the residents.	Mr. Moses Sande, LC 1 Chairman
2.	The Team Leader introduced himself and the rest of the team members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba through Kachwangobe, Kashwa and finally to Rwebishuri in Mbarara. He proceeded to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated the purpose of convening this particular meeting as an introduction of the project to the members, find out their perception of the positive and negative impacts of the project and to solicit mitigation measures that could be applied to avoid the negative impacts.	EIA Team
3.	The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants envisaged to get once the community are connected. **POSITIVE IMPACT** 1. The electricity will improve service delivery since health centers can then use machines that need power to operate. Even schools will improve performance since there will be power for students to read at night. 2. The power will help in the development of grinding mills 3. The power will be used for welding, refrigeration, coolers for preserving milk, salon business, and lighting. 4. It will reduce tree cutting since a substantial number of people rely on wood for fuel. 5. Employment opportunities will be created for the redundant youth as many investors will be attracted to come and operate in the area.	Residents

MIN NO.	MINUTES	ACTION BY
4.	The locals were asked what negative effects this project is likely to have on their wellbeing. **NEGATIVE IMPACT** 1. Electric shocks on the beneficiaries by accidently touching naked wires. 2. Compensation issues since many of the people of the community have their ranches and plantations up to the road reserve.	Residents
5.	The people were asked to enumerate the best way these negative impacts can be mitigated. **MITIGATION MEASURES** 1. Sensitize or get the communities informed about the usage and dangers of electricity. 2. Design a clear compensation plan to mitigate the issues that will arise from road reserve demarcation.	
6	The following question was raised by the participants 1. Why is the power supply on and off like? The EIA team leader answered them as follows: 1. Power supply is on and off because the amount of electricity available falls short of existing demand.	
7.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 14th-7-2014 Time 4 00.2 Place/Venue RUHONZA CELL Bunenero Parish, Rubaya Sub-county, Kashari county Mbarara district

No	Name	Designation	Phone No.	Signature
1	Sande Moses	c/person LC1	0753566[illegible]	
2	NDYAMUBA SIMON	RUHONZA C/PERSON L.C1	0757051015	
3	Banyanga FRED	C/PASON LC1	0782603791	Banyanga
4	Sabiiti Amos	Rubaya. C/person LC1	0775720835 0752490314	
5	Tumwesigye Grace	Resident	0700355410	
6	Bamwiraki Julius	president	0755903210	
7	[illegible]	[illegible]	0750962207	
8	Muhwezi Simon	Mutuze Mbarara		
9	Kabagambe Julius	Resident	0754447422	
10	Baguma PATRICK	Omukungi	0757474017	

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA-RWEBISHURI GRID EXTENSION WITH THE COMMUNITY MEMBERS OF ITARA PARISH, RUBAYA SUB COUNTY HELD AT ITARA TRADING CENTER, MBARARA DISTRICT ON 14th JULY, 2014 AT 5:13 P.M

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	Mr. Geoffrey Nuwagira the LC 1 Chairperson of the village welcomed the EIA Team and asked the EIA team to introduce themselves and the project.	Mr. Geoffrey Nuwagira the LC 1 Chairperson
2.	The Team Leader gave a brief overview of the project and a brief explanation of the line drawings showing the transmission lines from Ruhumba through Kachwangobe to Kashwa and Rwebishuri in Mbarara District. He went ahead to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He mentioned that, electricity of poles will move away anything within the road reserve. He clearly stated the purpose of convening the meeting as the introduction of the project to them, find out their opinion on the positive and negative impacts of the project and to solicit mitigation measures that could be applied to avoid the negative impacts.	EIA Team
3.	The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants came up once they are connected with electricity. **POSITIVE IMPACT** 1. One of the women mentioned that electricity will bring security along the roads, people will move at night without fear 2. They also mentioned that installation of electricity will benefit school children who will be able to have more reading time thus improving their performance. 3. The men mentioned that, electricity will enable development of their areas into towns with better service delivery. 4. The health facilities will be improved due to availability ofpower; there will be reduced maternal death as a result of improved care for pregnant women.	Residents

MIN NO.	MINUTES	ACTION BY
	5. The area will realize industrialization as people intend to set up small scale industries agro-processing for bananas etc. 6. Employment will be availed to the people as many businesses shall be set up such as milk preservation using coolers, saloons, grinding / milling machines.	
4.	For every project with positive effects, there are always negative effects too. Members were asked what negative effects this project is likely to have on the people's wellbeing. **NEGATIVE IMPACT** 1.The women fore saw the costs of transferring structures as a negative impact in terms of building materials like bricks and cement. 2. The men mentioned that accidents may occur due to naked wires that may not be properly put and this may lead to loss of lives. 3. The issue of road reserve did not go well with the people because of the fact that part of their land will be cut off. They think that their land is being grabbed. 4. The people may lose their fertile land and crops and banana plantations to the project; many people have their gardens close to the roads. 5. The negotiation procedure for compensation will take long and this will delay the commencement of the project yet it is long awaited in this region. 6. The residents were concerned that the jobs during the contract execution are not given to the local people to earn incomes. Instead the contractors come with their own labour.	Community
5.	The people were asked to enumerate the best way these negative impacts can be mitigated. **MITIGATION MEASURES** 1. They suggested that, they be compensated in case parts of their crops and plantations fall in the road reserve to enable them recover what they will have to the project. 2. They also called for thorough sensitization drive to enhance them with knowledge about electricity.	Community
6.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub–region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 14/02/2014 Time 5:13 pm Place/Venue Ilo ra Parish Ekeirgehe II Rubaga Sub county, Kashari County, Mbarara District

No	Name	Designation	Phone No.	Signature
1	NAMWANJE DOREEN	BUSSINES	0752030788	Doreen
2	Ryamukama Luckas.	Bussiness	0758165670	Lucka
3	Banyo Geofrey	Sallon man	0775920209	[illegible]
4	Ka Twesigye Amos.	Bussinessman	0776/0755670262	Amos.
5	Katusiime HENRY	Radio mechanical	0754909761	[illegible]
6	Gumaoshebe Stephen	Business	0785124418	[illegible]
7	Byakatonda James	farmer	0754373740	Byakatonda.
8	Tukahebwa Wilson	Makanika	0776424366	Wilson
9	Nuwagira Geoffrey	C/man L.C.I	0756686651	[illegible]
10	Atuheire Joy	Bussines	0751861268	Joy.
11	Agaba Arnold	Parent	—	Agaba
12	ALLEN			
13 / 14	MUSIIME / Munangi John Bosh	Bussines.	0754473348	[illegible]

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA- RWEBISHURI GRID EXTENSION WITH THE COMMUNITY MEMBERS OF MITONTO TRADING CENTRE, MIRONGO PARISH, KASHARE SUB COUNTY, KASHARI, MBARARA DISTRICT HELD ON14th JULY, 2014 AT 5:35 P.M

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The meeting was opened by Stephan Mugizi, one of the participants who welcomed the team to the area.	Stephan Mugizi, Resident
2.	The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba, Rwobuhura, Kachwangobe, Rwanyangwe, Kashwa and finally ends up in Rwebishuri to meet the one coming from Kachwangobe. He went ahead to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated the purpose of convening this particular meeting as the introduction of the project to the community, find out their perception of the positive and negative impacts of the project and to solicit mitigation measures that could be applied to avoid the negative impacts.	EIA Team
3.	The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants envisaged to get once they are connected to the national grid. **POSITIVE IMPACT** 1. One of the positive impacts was lighting. 2. Security of the area is also expected to be boosted because of the light at night. 3. Health units and hospitals will be supported to operate electrical equipment and therefore services will be improved. 4. Electricity will help in welding for construction of buildings and will also help in cooking. 5. Many businesses will be set up such as grinding/milling machines, coolers for milk and refreshments, etc.	Mitonto Trading Centre Community

MIN NO.	MINUTES	ACTION BY
4.	For every project with positive effects, there are always negative effects too. The people were asked what negative effects this project is likely to have on their wellbeing. **NEGATIVE IMPACT** 1. The possibility of accidents arising if a person touches a naked wire, short circuiting, electrocution or when the wires break and fall from the poles leading to deaths. 2. If the poles are passing through the house, it will result to destroying the building hence relocations which people are not very ready for. 3. Death out of electrocution because people are not yet aware of how to use electricity	Mitonto Trading Centre Community
5.	The people were asked to enumerate the best way these negative impacts can be mitigated. **MITIGATION MEASURES** 1. The poles should be strongly erected, may be deeper than usual and higher as well and ensure that, they are firm on the ground. 2. The community should be sensitised about how to avoid hazards from electricity	Mitonto Trading Centre Community
6	**The questions raised by the members** 1. How long is the distance between poles? 2. If the pole passes over the house, will that house be allowed to stay there? The EIA team answered the questions as follows. 1. The distance is about 100 metres. 2. No, because the risks to the inhabitants of that house are high. After answering the questions, the EIATeam Leader, wrapped up by thanking the community members for sparing their time to attend the meeting. The Team Leader specifically urged them to cooperate with all the teams that will be working on the project, work hard to afford the electricity and to increase the tax base for the government to be able to service the World bank loan, plant trees and avoid encroaching on the road reserve. The team then proceeded to Second Lake View trading centre.	Mitonto Trading Centre Community
7.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 14/07/2014 Time 6:05pm Place/Venue MUGONGO-AHAKYEZIE T/C - Rwetyoto parish, Kashare Sub-county, Kashari County Mbarara

No	Name	Designation	Phone No.	Signature
1.	JOHN Twinomutsiga	06:07	0755787870	[signature]
2.	E. Kaguwahira	06:03.	0752832167	[signature]
3	F Kuragigi			
4	Kamurizi ALEX			
5	Kyosimire Edith			
6	Tuyundane Generous			[signature]
7	Mugizi Stephen	06:07.	0756694824	[signature]
8	Nkaborema .V.		075446723	Nkaborema
9	Muhanuzi Robert.		0756972987	[signature]
10	Tumuhimbise [illegible]			
11	Muganzabowe. P.			
12	Milton			
13	Kakubo David		0757066054	[signature]

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA- RWEBISHURI GRID EXTENSION WITH THE PEOPLE OF NYABISIRIRA PARISH, KASHARESUB COUNTY, KASHARI COUNTY, MBARARA DISTRICT HELD AT KYEISHEMA TRADING CENTRE ON 14th JULY, 2014 AT 7:30 P.M

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Chairman LC 1 Mr. H. Kadandize, welcomed the EIA team to trading centre. He then introduced his executive.	Mr. H. Kadandize, The Chairman LC 1
2.	The Team Leader introduced himself and the rest of the team members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba to Kashwa through Kachwangobe to Rwebishuri. He passed on the map for the participants to look at as he proceeded to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated the purpose of this particular meeting as the introduction of the project to the community, find out their perception of the positive and negative impact of the project and to solicit mitigation measures that could be applied to avoid the negative impact.	EIA Team
3.	The answers below are what the participants envisaged once the connections aredone. **POSITIVE IMPACT** 1. The electricity will be cheaper for investment and this will reduce solar power use. 2. It will be good for the local economy; people will be empowered to start local businesses and industries. 3. Electricity is good for security purposes, there are a lot of thefts in the community, hence good for lighting up streets at night 4. It will also be good for charging laptops, phones and other electrical items and also for refrigeration, coolers for milk preservation.	LC 1 Kyenshema Trading Centre

MIN NO.	MINUTES	ACTION BY
	5. There will also be population increase because of the growth and development that shall be realized with the installation of power. 6. Improved service delivery to the people of the region i.e. health, education, communication, etc. 7.The trading centre will develop into a town since more business activities will be boosted.	
4.	Participants were asked what negative effects this project is likely to have on their wellbeing. **NEGATIVE IMPACT** 1. Electric accidents since the people initially are ignorant about electricity. (Shocks and short circuiting.) 2. TheLC 1 committee did not have many negative effects rather they are very positive and they just can't wait to have power.	The LC 1 Committee ofKyenshema trading centre.
5.	They were asked to enumerate the best way the negative impact can be mitigated. **MITIGATION MEASURES** They asked for proper sensitization on electricity and its related dangers for them to be able to guard against them and for proper usage.	LC Committee Kyenshema trading centre
6	The questions raised by the participant include: - 1. When will the connections be done? The EIA team answered the questions as follows. 1. The connections will start as soon as this report is finalized and submitted for approval. Power may reach by 2016 if all goes well.	LC 1 Committee Kyenshema trading centre
7.	There being no other business the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 14/07/2014 **Time** 7:30 pm **Place/Venue** Kyeshama Trading Centre Ngabisirio Parish, Kashare Sub-county, Kashari County Mbarara District

No	Name	Designation	Phone No.	Signature
	MARIIRI EDITH	Secl women LC	0754852618	Mariiri Edith
	NAHWERA ENAN	Sec/information	0752355248	[signature]
	Atlatushabire Jude		0701816185	[signature]
	Kabanoiza H' Chair LC	Kyeshama	0752445653	[signature]

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA- RWEBISHURI GRID EXTENSION WITH THE COMMUNITY MEMBERS OF KABUSHWIRE PARISH, KASHONGI SUB COUNTY, NYABUSHOZI COUNTY, KIRUHURA DISTRICT HELD AT AKATOGO TRADING CENTRE ON 15th JULY, 2014 AT 11:00 A.M

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Chairman LC 1 Mr. Hussein Tumwesigye, welcomed the EIA team to trading centre. He then invited the EIA team to introduced the project to the community.	Mr. Hussein Tumwesigye The Chairman LC 1
2.	The Team Leader introduced himself and the rest of the team members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba to Kashwa through Kachwangobe to Rwebishuri. He passed on the map for the participants to scrutinise as he proceeded to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated the purpose of this particular meeting as the introduction of the project to the community, find out their perceptions of the positive and negative impact of the project and to solicit mitigation measures that could be applied to avoid the negative impact.	EIA Team
3.	One of the participants who was formerly a member of the district land board mentioned that, on behalf of the community they embraced the project. The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants envisaged to get once the connections are done. **POSITIVE IMPACTS** 1. Service delivery will improve, there will be no much movement to main towns to charge equipment like phones and computers. During rainy season the solar power is very low. Therefore electricity will make life easy. 2. Electricity will boost security by lighting up dark corners and having electrified fences. This will reduce theft.	All

MIN NO.	MINUTES	ACTION BY
	3. It will help in boosting business as well as development of our community within the sub county. 4. It will improve the services of health center iv, secondary schools, boarding primary school, catholic/C.O.U. missions, all these organizations need electricity. 5. The community concluded by saying that electricity can do everything and they just have to welcome it.	
5.	They were asked to enumerate the best way these negative impacts can be mitigated. **MITIGATION MEASURES** The participants did not mention any mitigating factors to this effect.	All
6	The questions raised by the community members include: - 1. What will happen to the load shedding that has gone on for many years in places where power has already been connected. The EIA Team answered the questions as follows: - There are 3 dams under construction and once they are completed in the next 4 years there will be no more load shedding. There are also non River Nile small hydropower stations under construction in hilly places around Uganda. These will supply electricity in the regions where they are located. Flat areas in Uganda will get hydroelectric power from the large Nile dams at Kiira, Nalubale, Karuma, Isimba and Kalagala. Finally the team thanked the participants for their contribution during the meeting and wrapped up by thanking the participants for sparing their time to interact with the EIA Team. The team leader specifically urged the participants to cooperate with the teams that will come after.	Residents
7.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 15th July 2014 Time 9.47 am Place/Venue A Katogo / Kabushwere III Parish Kabushwere Kashongi Sub County, Nyabushozi County Kiruhura District

No	Name	Designation	Phone No.	Signature
1	BANYIMEHI ELIAS		0702827809	Kisha D [illegible]
2	Mwesigye Yoram		0703765870	Kabushwere III
3	Nyakato L.		0754473144	
4	Tusingwire R		0777959684	
5	Tusiime Hassan			Kabushwere III
6	TUMUSIIME FRED		0752873754	Tumusiime Fred
7	AMPIRE DIDASI		0778492640	Ampire
8	Byaruhanga		0782706122	Wilber
9	Mwesigye Samuel		0756563299	[illegible]
10	Mukwatagye Charles	Farmer.	0757457808	[illegible]
11	Isingoma Pius		0705012-035	[illegible]
12	Winfred Mubangizi.		0775214235	[illegible]
13	Kobusime Lovence			Lovence

14. Tumwekyirize C. 0759448737. [signature]
15. Nuwagaba Eliazaru. 0757718380 [signature]
16. Tumwesigye Hassan Ahumuza [illegible] c/person 0758081457- 0756763451

MINUTES OF THE MEETING WITH THE DISTRICT ENVIRONMENT OFFICER, KIRUHURA DISTRICT, A KEY INFORMANT INTERVIEW ON THE IMPACT OF THE GRID EXTENSION FROM RUHUMBA TO KASHWA WITH A TEE OFF AT RWEBISHURI HELD ATKIRUHURADISTRICT HEADQUATERSON 15th JULY, 2014 AT 12:00 PM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The EIA Team was welcomed by the Kiruhura District Environment Officer Ms Deborah Namara. She welcomed the project in her District.	Ms Deborah Namara, District Environment Officer
2.	The EIA Team leader introduced himself and the rest of the team members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba to Kashwa and finally to Rwebishuri. He passed on the map for the Environment Officer to scrutinise as he proceeded to inform her that the project will mainly pass through the road reserve. The EIA team's purpose of this particular meeting was to get her views on the positive and negative impact of the project from an environmental specialists' perspective and to solicit mitigation measures to curb the negative impact.	EIA Team
3.	The answers below are what the District Environment Officer envisaged as positives from the project. **POSITIVE IMPACT** 1. Service delivery of the District will be improved. 2.Conservation of the environment since the project will help reduce dependence on natural resources such as trees for cooking (reduction in deforestation) due to shift from charcoal to electricity. 3.The project will also allow socio-economic activities to start in the region hence development of the region. 4.She also highlighted the fact that the small trading centres (rural growth centres) will grow into big towns because of the businesses that will be set up.	District Environment Officer.

	5.The District Environment officer said that there were not many environmental issues, the wetlands in the region are seasonal wetlands and so they won't pause big challenges.	
4.	On the negative effects this project is likely to have on the people's wellbeing, she highlighted the following. **NEGATIVE IMPACT** 1. Compensation issues will be the main challenge. Landowners have encroached road reserves. They fence right up to the edge of the road shoulders. They will therefore resist to cut their hedges. 2.Many houses are so close to the road only 5 meters and this will affect many people. This may create conflicts between the affected people and the Contractors. 3.Live wires may also pose a danger to the community members if not properly installed.	District Environment Officer
5.	She was asked to enumerate the best way these negative impacts can be mitigated. **MITIGATION MEASURES** 1. The people affected will need to be compensated for their property and their land. 2. There is need to sensitize people who will be affected. 3. The surveyors need to tell people to construct in a proper way. 4. Poles need to be very high to avoid electrocution. 5. Liaise with the local leaders (LC'S) in handling compensation issues with the local people. After the interview with the district environment officer, she wished the EIA team a good time on their survey since the people of the region are not hostile but rather embracing and good.	District Environment Officer.
6.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 15th/07/2014 **Time** 12:00pm **Place/Venue** KIRUHURA DISTRICT HQ, KIRUHURA District

No	Name	Designation	Phone No.	Signature
1	Deborah Namara	D. Environment officer	0701327063	[signature]
2.	Evans Black Ndyabawe	District Surveyor	0772053292	[signature]
3.	Kijule Martin M.	D.C.A.O	0772866245	[signature]

PROCEEDINGS OF THE MEETING WITH THE DEPUTY CHIEF ADMINISTRATIVE OFFICER-KIRUHURA DISTRICT, KEY INFORMANT INTERVIEW ON THE IMPACTS OF THE GRID EXTENSION FROM RUHUMBA- KASHWA WITH A TEE OFF AT RWEBISHURI HELD AT KIRUHURA DISTRICT HEAD QUARTERS,15th JULY, 2014 AT 12:30 PM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Interview with the Deputy CAO.
4. Closing Remarks from the Officer

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The EIA Team was welcomed by the Kiruhura District Deputy Chief Administrative Officer Mr. Martin M. Kisuule. He welcomed the project in the District. However, mension that through the District Head Quarters had 33kV line for the last two years the 11kV line has not been installed. The HQ still uses solar power.	Deputy Chief Administrative Officer Mr. Martin M. Kisuule.
2.	A brief overview of the 33kV grid extension from Ruhumba to Kashwa with a tee off at Rwebishuri was given by the Team Leader who also showed the Deputy CAO the map of the route to enable him understand the various areas that would benefit. The Team Leader requested the Deputy CAO to give us letters of introduction to the lower local councils and parish chiefs.	EIA Team
3.	The Deputy CAO was asked to identify the likely positive Impact of the project. **POSITIVE IMPACT** 1. Improvement of service delivery to the people of the region since even the District headquarters does not have power as yet. 2.Electricity will bring about small scale industrialisation in the region. People will set up industries e.g. meat processing, diary processing etc. 3. It will cause growth and development in the region where the grid is going to be extended. 4. Job creation for a number of people in these areas through enterprises and businesses that will develop because of electricity. 5. Improvement of people's livelihoods since they will be able to do many things with the electricity, which they were not able to do before. **NEGATIVE IMPACT** 1. The respondent came up with one fear that affordability of electricity by most local people may be an issue. Otherwise the grid extension is more than welcome to the region.	Deputy CAO

	MITIGATION MEASURES He did mention that there is nothing to worry about that will cause alarm because the people in this region are civilised and welcoming so there won't be any troubles in execution.	
4.	There being no other business the meeting was closed	All

PROCEEDINGS OF THE KEY INFORMANT INTERVIEW ON THE IMPACTS OF THE GRID EXTENSION FROM RUHUMBA TO KASHWA WITH A TEE OFF AT RWEBISHURI, HELD WITH MR. EVANS NDYABOWE, THE DISTRICT SURVEYOR KIRUHURA DISTRICT,AT THE DISTRICT HEADQUARTERS ON 15TH JULY, 2014 AT 11.30 AM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the District Staff Surveyor
4. Closing Remarks from the EIA Team.

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	Mr.Evans Ndyabowethe District Staff Surveyor welcomed the EIA Team to the District.	Mr.Evans Ndyabowe, District Staff Surveyor
2.	The Team Leader gave a brief overview of the 33kV grid extension from Ruhumba to Kashwa and Rwebishuri. The Staff Surveyor was shown the map of the route to enable him understand the various areas that would benefit.	EIA Team
3.	The surveyor was asked to identify the likely positive Impact of the project. **POSITIVE IMPACT** 1. Employment opportunities will be created this is most especially for the youth and the youth will become happy. 2. Growth and development will be realised in the region. 3. Trade will be increased because business can be done at night and day. 4. Electricity will reduce insecurity. It will prevent thugs from entering towns to loot and rob people's phones and even kill them. 5. Development will be realised inform of infrastructure and buildings that will be set up by the people in these regions. 6. Reduced costs of trade, like cold drinks will be parked in fridges for long and also the costs of production will reduce hence increase in business. 7. Power will also be used for academic purposes most especially for school learners and this will improve the performance in schools.	Mr.Evans Ndyabowe, District Staff Surveyor

MIN NO.	MINUTES	ACTION BY
	NEGATIVE IMPACT. 1. Some institutions are off the road/Lines, hence they may incur high installation costs if they are to benefit from the project. 2. Accidents may occur like electric shocks most especially if connections are low. 3. Delays of the project, it raises hopes but all in vain. 4. The issue of road reserve will be a challenge since most or all the people fence their land up to the road. **MITIGATION MEASURES** 1. Need to educate masses on the use of power and the dangers of electricity. 2. Poles need to be secured around like in Kampala.	
4.	The Officer indicated that the community needs the power and the people want it, but they need to be mobilised and educated in advance if they are to cooperate. He also noted that, there is need for subsidies especially where people are not satisfied with the service.	Evans Ndyabowe, District Staff Surveyor
5.	There being no other business the meeting was closed	All

MINUTE OF THE MEETINGON THERUHUMBA – KASHWA- RWEBISHURI GRID EXTENSION WITH THE PEOPLE OF RUGONJI PARISH, KENSHUNGA SUB COUNTY,NYABUSHOZI COUNTY,KIRUHURA DISTRICT HELD AT KYEITAGI TRADING CENTRE ON 15th JULY, 2014 AT 2.40 PM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Interview
4. Closing Remarks from the EIA team.

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	Mr. David Muhangi, welcomed the EIA team to trading centre. He then invited the EIA team to introduced the project to the community.	Mr. David Muhangi, Resident
2.	The Team Leader introduced himself and the rest of the team members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba to Kashwa through Kachwangobe to Rwebishuri. He passed on the map for the participants to scrutinise as he proceeded to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated the purpose of this particular meeting as the introduction of the project to the community, find out their perceptions of the positive and negative impact of the project and to solicit mitigation measures that could be applied to avoid the negative impact.	EIA Team
3.	The participants were asked to identify the likely positive impact of the project. **POSITIVE IMPACT** 1. Electricity will lead setting up of businesses which use power such as welding, grinding /milling machines etc. 2. It will encourage the processing of agro pastoral products by value addition like processing milk, extraction of oil from oil seed etc. 3. Service industries that do not exist now will come up due to power and these will create employment opportunities for people. 4. Government services will be improved for instance health centres, schools etc 5. Being the link centre to other villages, the trading centre will develop into a big town due to increase in business activities in the area and thus more people will come to do business.	

MIN NO.	MINUTES	ACTION BY
	Other associated benefits that are invisible will be seen when power comes. **NEGATIVE IMPACT** 1. Fires due to electric accidents like when the wires break and fall off the poles. 2. Shocks and short circuiting due to poor connections and ignorance on power usage in the short run. There are few negatives because the people here are more interested in having the electricity and they promised to deal with the negatives as the need arises. **MITIGATION MEASURES** The people here requested for a thorough sensitization on electricity and its dangers such that they can be able to use it profitably and meaningfully. Otherwise it is indeed long awaited.	
4.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub–region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 15/07/2014 Time 2:40pm Place/Venue KYEITAGI, Rugaaga Parish, Kashunga Sub county, Kiruhura

No	Name	Designation	Phone No.	Signature
1	MUHANGI DAVID	KYEITAGI TC	0782727965	
2.	SALI FRANK		0784019127	Sali
3	Bainomugisha . J.	Kyeitaagi Tc	0756907164	
4	Tushemerirwe Francis	kyeitagi TC	0759263926	Tushemerirwe
5.	KANGUME ACKLINE	kyeitagi TC	0789475749	Kangume
6.	Aryatuha Edwige	kyeitagi TC	0	Edwige
7.	Kanyesigye Frank	Kyeitaagi TC	0701226996	
8	Rwakashaija	Kyeitagi Tc	0753828744	
9	Rwatinyabushozi David	Kyeitagi TC	0782267295	Rwenyu

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA- RWEBISHURI GRID EXTEENSION WITH THE PEOPLE OF BYANAMIRA PARISH, KASHONGI SUB COUNTY, NYABUSHOZI COUNTY, HELD AT KACHWANGOBE TRADING CENTRE ON 15th JULY, 2014 AT 4:40 PM

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Interview with the people
4. Closing Remarks from the EIA team.

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The EIA team was welcomed the LC 1 Defence Secretary. He then invited the EIA to present the project.	Secretary for Defence
2.	The people were asked to identify the likely positive impact of the project. **POSITIVE IMPACTS** 1. Electricity has a forest of benefits like the employment for redundant youth; the youth will be engaged in income generating activities. 2. Investors will be attracted to boost different industries in the area. A number of businesses and trade will be boosted. 3. Development will be realised in this area as a result of the many businesses that will be started such as, mechanical workshops and repairs, charging batteries, welding, carpentry workshops,coolers for milk etc. 4. There will be improvement in the services of hospitals and health centre since they will be able to run machines that use electricity. 5. The electricity will improve the security of the area since the streets will be lighting thus scaring away wrong doers. **NEGATIVE IMPACT** 1. Electric poles will require space that means environment will be destroyed (trees, land, displacement and destruction). 2. Electrocution from hanging wires may occur if not properly installed and maintained causing death. 3. Compensation issues of the affected land, people did not know about road reserve and therefore land will be a major problem. It will cause land disputes between the implementers and the communities. **MITIGATION MEASURES**	Kachwangobe trading centre community.

MIN NO.	MINUTES	ACTION BY
	1. There is need to compensate the affected people in advance before the work begins. 2. There is also need to sensitize people on electricity and its dangers to reduce on the accidents that may arise.	
4.	There being no other business the meeting was closed.	All

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA-RWEBISHURI GRID EXTENSION WITH THE COMMUNITY MEMBERS OF NCUNE PARISH, KASHARE SUB COUNTY, KASHARI COUNTY HELD AT NCUNE B TRADING CENTER, MBARARA DISTRICT ON 15th JULY, 2014 AT 5:40 P.M

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The community members were mobilised for the meeting by the LC 1 Chairperson of the area. Finally, twenty seven (27) people were mobilised and the chairperson opened the meeting and asked the people to co-operate.	LC1 Chairperson
2..	The Team Leader gave a brief overview of the project and a brief explanation of the line drawings showing the transmission lines from Ruhumba through Kachwangobe to Kashwa and Rwebishuri in Mbarara District. He went ahead to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He mentioned that, electricity of poles will move away anything within the road reserve. He clearly stated the purpose of convening the meeting as the introduction of the project to them, find out their perception of the positive and negative impacts of the project and to solicit mitigation measures that could be undertaken to avoid the negative impact. He then handed over to the Sociologist who went ahead to find out the participants' perceptions of the impacts of the project. He urged the participants to give their objective views, not to hesitate to ask any questions where necessary and to respect each ones views.	EIA Team
3.	The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants came up once they are connected with electricity. **POSITIVE IMPACT** 1. One of the women mentioned that electricity will bring security along the roads, people will move at night without fear 2. They also mentioned that installation of electricity will benefit school children who will be able to have more reading time thus improving their performance. 3. The people mentioned that, electricity will enable development of their area into a town with better service delivery.	Ncune B community members

MIN NO.	MINUTES	ACTION BY
	4. The health facilities will be improved due to availability of power; there will be reduced maternal death as a result of improved care for pregnant women. 5. The area will realize industrialization as people intend to set up small scale industries agro-processing for bananas etc. 6. Employment will be availed to the people as many businesses shall be set up such as milk preservation using coolers, saloons, grinding / milling machines.	
4.	For every project with positive effects, there are always negative effects too. Members were asked what negative effects this project is likely to have on the people's wellbeing. **NEGATIVE IMPACT** 1.The women fore saw the costs of transferring structures as a negative impact in terms of building materials like bricks and cement. 2. The also mentioned that accidents may occur due to naked wires that may not be properly put and this may lead to loss of lives. 3. The issue of road reserve did not go well with the people because of the fact that part of their land will be cut off. They think that their land is being grabbed. 4. The people may lose their fertile land and crops and banana plantations to the project; many people have their gardens close to the roads. 5. The negotiation procedure for compensation will take long and this will delay the commencement of the project yet it is long awaited in this region.	Ncune B community members
5.	The people were asked to enumerate the best way these negative impacts can be mitigated. **MITIGATION MEASURES** 1. They suggested that, they be compensated in case parts of their crops and plantations fall in the road reserve to enable them recover what they will have to the project. 2. They also called for thorough sensitization drive to enhance them with knowledge about electricity.	Ncune B community members
6.	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba - Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 15/07/2014 Time 5:40Pm Place/Venue Ocune B:, Nsana Parish Kashare Sub-county, Kashari County, Mbarara

No	Name	Designation	Phone No.	Signature
1	Kakulikire		0777634338	[signature]
2	Bakahuimia Speeloz		0785651796	[signature]
3	Caroline Twesigye		0777946557	[signature]
4	Mugizi Bernar		0786228119	[signature]
5	Nyabonono Augustine		0752687085	[signature]
6	Mbaine Jesca		077960883 68	Mbaine
~~7~~	~~Kyosimire~~			
7	Mbeeha JANE		0777767 98 76	Mbeeha.

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date ....15/07/2014.... Time ....5:40PM.... Place/Venue....Ocuade B., Ncana Parish, Kashare Sub-county, Kashari County, Mbarara

No	Name	Designation	Phone No.	Signature
1	Kakuhikire		0777634353	[signature]
2	Bandahumuza Speciozi		0785651196	[signature]
3	Caroline Twesigye		0777946557	[signature]
4	Mugizi Bener		0786228117	[signature]
5	Ngabirano Augustine		0752659088	[signature]
6	Mlaine Jesca		0779608334 68	Mlaine
~~7~~	~~Kyosimire~~			
7	Mbeera Jane		07777676 98	Mbeera.

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA- RWEBISHURI GRID EXTENSION WITH THE PEOPLE OF KATONGOLE PARISH, KANONI SUB COUNTY, KAZO COUNTY, KIRUHURA DISTRICT HELD AT RWOBUHURA II TRADING CENTRE ON 16th JULY, 2014 AT 11:50 P.M

AGENDA:

1. Introductions
2. A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	The Chairman of the area Mr. Byaruhanga Wilson welcomed the EIAto Rwobuhura II Trading Centre. He then invited the EIA Team to introduce the project.	Mr. Byaruhanga Wilson, LC 1 Chairman
2.	The Team Leader introduced himself and the rest of the team members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba to Kashwa through Kachwangobe to Rwebishuri and also that the line reaches them at Rwobuhura. He passed on the map for the participants to scrutinise as he proceeded to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated that the purpose of this particular meeting was to introduce the project to the community, find out their perception of the positive and negative impact of the project and to solicit mitigation measures to curb the negative impact. He handed over to the Sociologist who interviewed them.	EIA Team
3.	The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants envisaged once the connections are done. **POSITIVE IMPACT** 1. The electricity will be cheaper for investment and this will reduce solar power use. 2. It will be good for the local economy; people will be empowered to start local businesses and industries. 3. Electricity is good for security purposes, there are a lot of thefts in the community, hence good for lighting up streets at night 4. It will also be good for charging laptops, phones and other electrical items and also for refrigeration, coolers for milk preservation.	Rwobuhura community

MIN NO.	MINUTES	ACTION BY
	5. There will also be population increase because of the growth and development that shall be realized with the installation of power. 6. Improved service delivery to the people of the region i.e. health, education, communication, etc. 7. The trading centre will develop into a town since more business activities will be boosted.	
4.	**F**or every project with positive effects, there are always negative effects too. Participants were asked what negative effects this project is likely to have on their wellbeing. **NEGATIVE IMPACT** 1. Electric accidents since the people initially are ignorant about electricity. (Shocks and short circuiting.) 2. The people here did not have many negative effects rather they are very positive and they just can't wait to have power.	The people of Rwobuhura trading centre.
5.	They were asked to enumerate the best way the negative impact can be mitigated. **MITIGATION MEASURES** They asked for proper sensitization on electricity and its related dangers for them to be able to guard against them and for proper usage.	Rwobuhura trading centre community.
6.	The questions raised by the participant include: - When will the connections be done? The EIA team answered the questions as follows. The connections will start as soon as this report is finalized and submitted for approval. Power may reach by 2016 if all goes well.	Rwobuhura trading centre community
7.	There being no other business the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 16/07/2014 Time 11:50 am Place/Venue Rwobuhura II T/C, Kitongole Parish Kenoni Sub-county, Kazo County, Kiruhura

No	Name	Designation	Phone No.	Signature
14	BYARUHANGA WILSON	C/man LCI Rwobuhura II Cell	0785353867	[signature]
15	KWIGIZIRE GIDION	" " I	0751432791	[signature]
16	SUGARIKI KOZ.			
17	Byarugaba Vincent	Rwobuhora T	0777098908	Byarugaba
18	Mbaniizo Denis	Rwobuhura TC		[signature]
19	Kedi'idi Ryanbaga	Rwobuhura	0758281549	
20	Mujesi P.	Rwobura	0788164465	
21	Ramisiriza	Ronard	0443902037	
22	Murokori F	Rwobuhura	0779661797	Murokori
23	KATO NICHOLAS	Kishanga	0775729997	Nicks
24	Byarutonda David	Rwobuhura II	0787126518	[signature]
25	Narcello. Jackson	Rwobuhura I	0788500770	[signature]
26	Twesiga Dickas	Rwobuhura I	0706880269	[signature]

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub–region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 16/07/2014 Time 11:50am Place/Venue Rwobuhura II T/C Kanoni Sub-county, Kazo County, Kiruhura

No	Name	Designation	Phone No.	Signature
1.	BYAMUGISHA . J.	I. SoPU	0783388513	ROBURA.
2.	MUBANGIZI Tomson	Rwobuhura		
3.	Fridah. Tumuhairwe.	Rwobuhura.	0778224309	
4	Binugwe DAVID	Rwobuhura	0783138081	
5	Kyomugisha Annah	Rwobuhura	0777502217	
6.	Bwatokore Farasisico	Rwobuhura II	"	B. F
7.	Kagundo Enock	Rwobuhura I Kitongore, Kanoni	0777115254 0716115254 0705831487	
8.	Jackie-Katonbora	Rwobuhura I	0785140462	Jkatombora
9.	Akatukunda Judith	Rwobuhura I	0783331623	
10	Tumuhimbise Sarepher.	Rwobuhura I	0779144627	Tsarepher.
11	Nurse Jenipher	Rwobuhura	0787083512	Jenipher.

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 16/07/2014 Time 11:54am Place/Venue Ruborumura T/C
Kenoni Sub-County, Nyabushozi County, Kiruhura

No	Name	Designation	Phone No.	Signature
1	Murisha Alone	youth C/person Ruborumura	0757472151	[signature]
2.	Alex Membsa		0779797991	[signature]
3	Johnson Mukangozi		0771609427	[signature]
4	Roman Katabile	Barber	0702-461528	[signature]
5	Nayebare Evaloy	Health worker.		[signature]
6	Kabandize Samuel			[signature]
7	Twijahabwe. Elly.	~~Health~~ worker	0772573379	[signature]
8	Muheveza James	Peasant Mmvezi	0784548555	Muheveza
9	Mpirirwe moses	Peasant	- -	Mpirirwe
10.	Nowomugisha Zadoc	Sec. finance L.C.I Rwebishuri	0775384555	[signature]
11	J.M. Byarugaba	Ndi munbey	0784703142	J.M. Byarugaba
12	BRIGHT AGABA	ACCOUNTANT RUBORUMURA	[signature]	0784703142
13	Bikanga S.	OMUTAKA Ruborumura T.C	0772683140	[signature]

MINUTES OF THE MEETING ON THE RUHUMBA- KASHWA- RWEBISHURI GRID EXTENSION WITH THE PEOPLE OF RWANYANGWE PARISH, KASHONGISUB COUNTY, NYABUSHOZI COUNTY, KIRUHURA DISTRICT HELD AT RWANYANGWE II TRADING CENTRE ON 16th JULY, 2014 AT 2:00 PM

AGENDA:

1. Introductions
2.A brief overview of the project from the EIA Team Leader
3. Reactions from the Community Members
4. Questions, Answers and Closing Remarks from the EIA Team.
5. The Attendance list is attached at the bottom

MINUTES

MIN NO.	MINUTES	ACTION BY
1.	Mr. Frank Tumuhomwe the LC1 Chairperson welcomed the EIA Team to the area and asked Team to introduce.	Mr. Frank Tumuhomwe the LC1 Chairperson
2.	The Team Leader introduced himself and the rest of the team members. The Team Leader gave a brief overview of the Project and a brief explanation of the line drawings showing the transmission lines from Ruhumba to Kashwa through Kachwangobe to Rwebishuri and also to them up in Rwanyangwe. He passed on the map for the participants to peruse through as he proceeded to provide them with information about road reserves, how they are measured and the implications of encroaching on them. He clearly stated the purpose of this particular meeting as the introduction of the project to the community, find out their perception of the positive and negative impact of the project and to solicit mitigation measures to avoid the negative impact. He then handed over to the Sociologist who went ahead to interview them on the impact of the project. He urged the participants to give their objective views, not to hesitate to ask any questions where necessary.	EIA Team
3.	The participants were asked about the positive effects electricity would have on the wellbeing of the community. The answers below are what the participants envisaged once the connections are done. **POSITIVE IMPACT** 1. The electricity will be cheaper for investment and this will reduce solar power use. Thus, many businesses will be set up creating employment for the people as well. 2. It will be good for the local economy; people will be empowered to start local businesses and industries. 3. Electricity is good for security purposes, there are a lot of thefts in the community, hence good for lighting up streets at night	Rwanyangwe trading centre community

MIN NO.	MINUTES	ACTION BY
	4. It will also be good for charging phones and other electrical items and also for refrigeration, coolers for milk preservation. 5. There will also be population increase because of the growth and development that shall be realized with the installation of power. 6. Improved service delivery to the people of the region i.e. health, education, communication, etc. 7. The trading centre will develop into a town since more business activities will be boosted. So it will lead to urbanization.	
4.	**F**or every project with positive effects, there are always negative effects too. Participants wereasked what negative effects this project is likely to have on their wellbeing. **NEGATIVE IMPACT** 1. Electric accidents since the people initially are ignorant about electricity. (Shocks, fires, electrocution and short circuiting.) 2. The people mentioned high costs of installation and use of electricity in a rural setting like theirs 3. Compensation issues also arose due to the explanation about the road reserve. The people who will be affected say they do not have money to relocate because it's expensive. 4. Power shortages and blackouts will affect the smooth running of their businesses and will cause losses in some incidences.	The people of Rwanyangwe trading centre.
5.	They were asked to enumerate the best way the negative impact can be mitigated. **MITIGATION MEASURES** They asked for proper sensitization on electricity and its related dangers for them to be able to guard against them and for proper usage.	Rwanyangwe trading centre community.
6	The questions raised by the participant include: - When will the connections be done? The EIA team answered the questions as follows. The connections will start as soon as this report is finalized and submitted for approval. Power may reach by 2016 if all goes well.	Rwanyangwe trading centre community
7	There being no other business, the meeting was closed	All

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub–region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 16/07/2014 Time 2.00pm Place/Venue Rwabonyanyane II T/C, Rwenyangwe Parish, Kashongi Sub-county, Nyabushozi county, Kiruhura

No	Name	Designation	Phone No.	Signature
1	Tumuhairwe Frank	Chairman LC I	0782104970	[signature]
2	Ntebekaine J.		07826[illegible]	[signature]
3	Mwesigye Irumba		0757701779	[signature]
4	Potongo Nathan		0782144227	[signature]
5	Kateera Benon	Businessman	0702624019	[signature]
6.	Elijah Katorogo	"	07[illegible]	[signature]
7	Amutusimire A	[signature]	0785933940	[signature]
8	Kellen Kanyeranga	"	0759479537	[signature]
9.	Tushemereirwe John.			
10	Bainomugisha-Aggrey	[signature]	0703473633	[signature]
11	Ninsiima Amina	H/m In Law Ebenezer	772-366480	[signature]
12	Nuwagira - Bonefence	Bonefence	0703042412	N Bonefence
13	Abaho Smith	Barber	0750759587	[signature]

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 15/7/014 **Time** 02 : 16 **Place/Venue** RWANYANGWE
Kashwiza Sub-county, Nyabushozi County, Kiruhura

No	Name	Designation	Phone No.	Signature
13	Rwebiwonko-Gordon	Pastor		[illegible]
14	Nooha Edward	Peasant	0774430118	EdwardNooha
15	Kwoyeranga	Farmer	—	[illegible]
16	Kubandeeba	Phone Technician	—	[illegible]
17	Mwesigwa	Builder	0757393160	[illegible]
18	Atwiine Charity	Farmer	0704898009	Atwine
19	Twongirwe miliam		—	Twongirwe milliam
20	Byamuhanga Joseph	Farmer	0777844864	[illegible]
21	Kabaruga willing	CHPERSON	0701274120	[illegible]
22	Mwebaze M	Chairman L.C.I	0772 182191	[illegible]

Attendance List of Central Government Official for the Environmental Assessment of the construction of 33 kV Grid Extensions and Associated LV Reticulations in the Karamoja Sub-region (REA/SRVCS/13-14/00189) and Ruhumba – Kashwa tee off Rwebishuri Mbarara and Kirihura District

Date 15th 7th 2014 Time 4:45 pm Place/Venue Kanwangabe T/C, Byenjiira Parish, Kashongi Sub county, Kiruhura District

No	Name	Designation	Phone No.	Signature
1	Bwemelanda herbert		0789335688	H.B
2.	Nuwahereza David		0754917742	[illegible]
3	Amon Kamwesigye		0776529147	AMON
4	HARRIET. N.		0779391449	HN
5	Dianah m		0757058560	[illegible]
6	Florence muhairwe		0773563295	[illegible]
7	Rwaburinguda J			[illegible]
8	Diana B			
9	Tayebwa Nathan			
10	Janiphor Ruzigana		0702701224	JRK
11	Kyoshabire Juliet			[illegible]
12	Aiho Geoffrey			
13	Bakashaba v.chman LCI		0783679963	BG
14	MUHORE ROBERT		0752368845	[illegible]