

**FACTORS INFLUENCING THE PERFORMANCE OF PREMIUM
CUSTOMER SCHEMES IN KENYA POWER AND LIGHTING
COMPANY IN THE NAIROBI REGION**

BY

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DECLARATION

This research project is my original work and it has not been submitted for research to any other institution.

Signed

Date

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This research project has been submitted for research with my approval as the Supervisor.

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DEDICATION

This research work is dedicated to my mother Mrs. Pamela Ndombi who has been inspirational and supportive in many circumstances in my journey of life.

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LIST OF ABBREVIATIONS

AFD	French Development Agency
AFDB	African Development Bank
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IMF	International Monetary Fund
IPP	Independent Power Producers
KENHA	Kenya National Highways Authority
KERRA	Kenya Rural Roads Authority
KETRACO	Kenya Electricity Transmission Company
KURA	Kenya Urban Roads Authority
KWS	Kenya Wildlife Service
LMCP	Last Mile Connectivity Program
NACOSTI	National Commission for Science, Technology and Innovation
OSIC	One Stop Investment Centre
PPADA	Public Procurement and Assets Disposal Act
SGR	Standard Gauge Railway
SMART	Specific Measurable Realistic Time Bound
SPSS	Statistical Package for Social Scientists
SPV	Special Purpose Vehicle

ABSTRACT

This study sought to assess factors which influence the performance of premium customer schemes in Kenya Power in the Nairobi region. The objectives were to determine the influence of customer requirements, wayleave requirements, funding and availability of construction materials on the performance of premium customer schemes in Kenya Power in the Nairobi area. The study adopted a cross sectional exploratory research design since different groups of respondents were involved and no prior studies have been done on factors that influence the performance of power projects (schemes) that affect premium customers. Many studies done in the past have focused mainly on power projects that affect domestic customers. This study seeks to fill the gap left by lack of emphasis on premium customers despite their vital contribution to social and economic growth of the state. The target population of the study was 90 respondents which was inclusive of both the internal and external stakeholders. The key internal parties were 45 Kenya Power project staff. On the other hand, the key external parties consisted of 25 customers and 20 parties who were required to provide wayleave trace. A census approach was used to obtain information from the entire population. The study used a questionnaire which had both open-ended and closed-ended questions for data collection. The responses from the closed-ended questions were expressed quantitatively and analysed using Statistical Package for Social Scientists (SPSS) version 20 software. Here, the relationship between the independent and dependent variables was analysed using linear regression at a level of significance of 95%. Also, descriptive statistics of mean, sum and proportion were applied to summarize the obtained data. On the other hand, content analysis was used to analyse the qualitative data from the open-ended questions in a bid to understand relationships between the independent and dependent variables. The research revealed that customer requirements have a great influence on the performance of premium customer schemes in Kenya Power. Also, wayleave requirements, funding and availability of construction materials have a very great influence on the schemes. Various issues were determined to have a significant contribution to stalling of premium customer schemes. These included: lack of commitment by some customers in provision of required facilities, limited awareness on the Kenya Power standards that should be met when developing facilities, limited capacity for development of the required power facilities, difficulty obtaining consent from land owners or institutions, delays in getting approvals or consent from land owners or institutions, late payments for the cost of power, some of the customers being unable to afford the cost of power connection, limited involvement of Kenya Power in stakeholder forums, limited financial incentives and project scope changes. Also, lengthy procurement procedures, ineffective forecasting of materials required for construction works, and some construction materials being available in the local market while others requiring sourcing from foreign markets contributed to stalling of the schemes. This study recommends adoption of various key strategies in a bid to improve delivery of premium customer schemes. First, Kenya Power should streamline its internal processes especially material forecasting, procurement procedures and interdepartmental communication. Also, the organization must involve stakeholders in all phases of implementation of premium customer schemes in bid to identify and address any issues or challenges arising during the process. In addition, the government can provide incentives which stimulate connectivity of premium customers. For instance, low tariffs can be applied to power equipment sourced from foreign markets, premium customers can benefit from subsidies and local producers of power equipment can be given tax relief. The public procurement act may be reviewed to minimise procurement restrictions imposed on specialized power equipment being sourced from external markets, competition in the energy sector can be promoted and more efforts can be channelled towards further privatization of the energy sector.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A successful project is one that is completed on schedule, done within budget and it meets the required standards. The measure of a successful project has no clearly defined criteria since it draws varied ideas across institutions and among individuals but generally it is seen as achievement of required goals and objectives (Project Management Institute, 2013). Some of the factors that are vital for project success include: having SMART (Specific Measurable Attainable Realistic Time Bound) objectives, careful planning, identification and management of risks, effective communication, managing stakeholders, scope management, monitoring and evaluation, and having a competent and dedicated project team (Kerzner, 2013). On the other hand, a project can fail due to factors such as poor communication, lack of a monitoring and evaluation system, poor risk management, lack of support from stakeholders, an inexperienced and a non-committed project team, changing specifications, vague goals and objectives, insufficient resources and use of untested technology (Kendrick, 2009).

Kenya Power is the sole public utility company in Kenya that is involved in distribution of power to consumers in the entire country. The firm supplies power to domestic and premium consumers. The domestic consumers form a bulk of the customers and over 2 million have been connected as at April 2014 (Kenya National Bureau of Statistics, 2017). Though, they have less power requirements of generally below 25 KVA and supplying them with power requires implementation of low capital power projects. The government has made efforts to ensure there is affordable power to domestic consumers by launching projects such as the Last Mile Connectivity Program (LMCP) which targets consumers who are within 600 meters of specific transformers where they pay for power connection at a subsidized rate of Kshs. 15,000. The premium customers form a small portion of the customers, but they contribute over 51% of the firm's revenue. The premium customers who have much larger power requirements of generally above 1 MVA consist of mainly medium and large business enterprises such as Mabati Rolling Mills, Safaricom and even Rift Valley Railways that has been involved in the standard gauge railway infrastructure development. Supplying power to the premium customers requires implementation of large capital power projects that are paid for by the consumer (Kenya Power, 2017).

In a nutshell, implementation of premium customer schemes involves various phases which are the design phase, wayleave acquisition phase, and construction phase. The execution of such schemes involves various activities such as the customer making an application for power, a design for construction being developed, the customer being issued with a quotation letter, payment being made by the customer, acquisition of wayleaves, and construction of the power supply facility. Just like any other project, the premium customer schemes can stall in any of the phases because of various factors some which can be beyond the project team's control (Kenya Power, 2016). This study seeks to examine factors that affect the performance of premium customer schemes in Kenya Power in the Nairobi region leading to stalling of some cases.

1.2 Statement of the Problem

About 34% of premium customer schemes stalled during implementation in the design phase, 16% in the wayleave acquisition phase, and 46% in the construction phase during the 2015/2016 financial year. This is despite various strategies effected to deal with constraints and risks associated with such schemes (Kenya Power, 2016).

The Kenyan government has launched various programmes such as LMCP in a bid to provide affordable electrical power connectivity to many domestic households in the country. The programmes are backed by development partners such as the World Bank, African Development Bank (AFDB) and the French Development Agency (AFD) who provide loans to the government. The beneficiaries of such programmes pay a subsidized fee in order to be supplied with power (Kenya Power, 2017). This is founded on the Vision 2030 economic pillar of achieving universal electricity access by 2020 which is vital for Kenya becoming a middle income and industrialized country (Ministry of Planning and Development, 2017) .The stalling of premium customer schemes is detrimental to the vision of having universal electricity and achieving an industrialized country since supplying power to medium and large businesses is critical in promoting an environment that is conducive for business. Having reliable, quality, and affordable power is necessary for any business. Growth of businesses eventually contributes to economic growth in the long run.

The performance of power projects is influenced mainly by three factors which are exogenous factors, external factors and internal factors. Exogenous factors are factors which are beyond the control of the power entity and the government. For instance, global economic meltdown, natural

calamities and insecurity. External factors are which are outside the control of the utility but may be controlled by the state. For instance, energy regulations, financial regulations, procurement regulations, wayleave acquisition and even investment requirements. Internal factors can be controlled by the firm. For instance, planning and execution of projects, management of stakeholders, and communication management. However, the variables that affect performance of power projects may fall into more than one category of the factors (The World Bank, 2012). In the year 2016, about 28% of power projects in Sub Saharan African countries such as Kenya, Nigeria, Tanzania, Uganda and South Africa delayed due to lack of funds that is attributed to cost overruns, inflation, foreign exchange fluctuations and difficulty getting loans. Also, about 32% of projects stalled due to contractor problems. For instance, some contractors were dismissed due to doing substandard work that did not meet specified requirements and the tasks were given to new contractors. Additionally, 35% of projects delayed due to lack of construction materials that was attributed to lengthy public procurement procedures and poor planning by the power utilities. Challenges in wayleave acquisition contributed to stalling of 15% of the projects (Eberhard, Gratwick, Morella, & Antmann, 2016).

The various factors outlined show need for improvement on the implementation of power projects in Kenya especially premium customer schemes which haven't been given a lot of emphasis like the domestic customer schemes. There are still significant challenges regarding access to power for the medium and large businesses who constitute the bulk of premium customers. This study sought to examine factors influencing the performance of premium customer schemes in Kenya Power in the Nairobi region.

1.3 Purpose of the Study

The purpose of this study was to assess factors influencing performance of premium customer schemes in Kenya Power in the Nairobi region.

1.4 Objectives of the Study

The objectives of this study were:

- i. To examine the influence of customer requirements on the performance of premium customer schemes in Kenya Power in the Nairobi region.

- ii. To assess the influence of wayleave requirements on the performance of premium customer schemes in Kenya Power in the Nairobi region.
- iii. To determine the influence of funding on the performance of premium customer schemes in Kenya Power in the Nairobi region.
- iv. To evaluate the influence of availability of construction materials on the performance of premium customer schemes in Kenya Power in the Nairobi region.

1.5 Research Questions

This study sought to answer the following questions:

- i. What is the influence of customer requirements on the performance of premium customer schemes in Kenya Power in the Nairobi region?
- ii. What is the influence of wayleave requirements on the performance of premium customer schemes in Kenya Power in the Nairobi region?
- iii. How does funding influence the performance of premium customer schemes in Kenya Power in the Nairobi region?
- iv. How does availability of construction materials influence the performance of premium customer schemes in Kenya Power in the Nairobi region?

1.6 Significance of the Study

A lot of emphasis has been placed by government agencies on connecting domestic consumers to power and little effort has been dedicated on premium consumers despite their large contribution in terms of revenue to the government and even Kenya Power. This study is useful in providing additional knowledge concerning constraints of implementing premium customer schemes and strategies of mitigating the same.

The findings of this study may be used to formulate policies that address the constraints concerning customer requirements, wayleave requirements, funding and availability of construction materials which influence the performance of premium customer schemes. The policies may be implemented at the government and company level.

The study also provides background information for scholars, organizations, and even researchers who may seek to do further research on this topic.

1.7 Limitations of the Study

Data collection involved getting information from respondents who were in areas with bad roads which are inaccessible in rainy seasons. However, as a strategy to overcome the challenge, data collection was done during a dry season.

1.8 Delimitations of the Study

This study was limited to the Nairobi region (county). Consequently, the findings may not be generalized for the whole country.

The target respondents were 90 in number and were scattered over a large geographical area. The topic also has limited literature and studies unlike for the case of domestic consumers.

1.9 Assumptions of the Study

It was assumed that the respondents would be cooperative and willing to provide truthful and accurate information.

1.10 Definition of Significant Terms

Construction materials – This refers to specialized materials and equipment such as metering breakers, cables, and switch gear that are required for development of power facilities by Kenya Power.

Customer requirements – This refers to requirements that the customer must meet before Kenya Power commences any construction works required to development of power supply facilities. These include provision of a transformer room or a metering room or a parcel land for development of the power facility which meet the utility's standards. Also, the applicant is expected to do the necessary civil works such as digging trenches and installing conduits for power supply cables. The applicant may involve contractors in development of the transformer and metering rooms.

Funding- This refers to a means of raising funds that are required to undertake a project in this case premium customer schemes. There are two broad sources of funds which are available to firms: shareholder funds and loan funds

Premium customers – This refers to a category of Kenya Power customers who have much larger power requirements of generally above 1 MVA. These consist of mainly medium and large

business enterprises such as Mabati Rolling Mills, Safaricom, Rift Valley Railways, among others. Supplying power to the premium customers requires implementation of large capital power projects that are paid for by them.

Wayleave – This refers to the right that is granted by an occupier of private land to an entity such as a public utility company or a private firm for development of infrastructure such as water drainage system, sewer system, telecommunication network, power lines or pipeline over or under the land. In Kenya, wayleave acquisition is governed by the Land Act of 2012.

1.11 Organization of the Study

This study sought to examine the factors that influence the performance of premium customer schemes in Kenya Power in the Nairobi region. The study is ordered in five chapters. The first chapter is the introduction which outlines the overview to the study. The second chapter looks at available literature on implementation of power projects in the global and Kenyan environment. The third chapter clarifies the research methodology adopted for the study. The fourth chapter presents analysis and interpretations of findings obtained from the field. The fifth chapter presents a summary of findings, conclusions and recommendations based on the topic under study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines literature on factors that influence the performance of power projects in various countries around the world, Sub Saharan Africa and Kenya. A review of relevant theories and the conceptual framework on which the study is founded on is also presented. Additionally, an assessment of the research gap concerning the topic under study is discussed.

2.2 Performance of Premium Customer Schemes

The performance of a project can be evaluated on the basis of schedule, budget and quality. A project is can be deemed to be successful if it is completed on time, within planned costs, and if it meets specified standards (Phillips, Bothell, & Snead, 2012).However, the criteria of evaluating performance is in the eye of the beholder. Different parties involved in project execution can have varied perspectives on how the project success can be evaluated. For instance, sponsors of a project can measure performance by profits, return on investment, delivery of the project within time and variation of costs from the budget. If a project is completed on time but on a high cost, it can be viewed as unsuccessful. A Project Manager, on the other hand, may evaluate the performance of a project based on achievement of milestones, adherence to specified standards, achievement of objectives, adherence to the project schedule, effectiveness of the monitoring and evaluation system and deviations from the planned costs (Turner, 2014).Generally, a successful project satisfies the key stakeholders, meets the required goals and objectives, and meets the specified standards (Project Management Institute, 2013).

Some of the factors that are vital for project success include: having SMART (Specific Measurable Attainable Realistic Time Bound) objectives, careful planning, identification and management of risks, effective communication, managing stakeholders, scope management, monitoring and evaluation, and having a competent and dedicated project team (Kerzner, 2013).On the other hand, a project can fail due to factors such as poor communication, lack of a monitoring and evaluation system, poor risk management, lack of support from stakeholders, an inexperienced and a non-committed project team, changing specifications, vague goals and objectives, insufficient resources and use of untested technology (Kendrick, 2009).

The performance of power projects is influenced mainly by three factors which are exogenous factors, external factors and internal factors. Exogenous factors are factors which are beyond the control of the power entity and the government. For instance, global economic meltdown, natural calamities and insecurity. External factors are which are outside the control of the utility but may be controlled by the state. For instance, energy regulations, financial regulations, procurement regulations, wayleave acquisition and investment requirements. Internal factors can be controlled by the firm. For instance, planning and execution of projects, management of stakeholders, and management of communication. However, the variables that affect performance of power projects may fall into more than one category of the factors (The World Bank, 2012).

Execution of premium customer involves various phases such as the design phase, wayleave acquisition phase, and the construction phase. Just like any other project, the premium customer schemes can stall in any of the phases because of various factors some which can be beyond the project team's control (Kenya Power, 2016). A study by Kariungi (2014) on factors affecting execution of power projects in Kenya Power in Thika area found that funding and procurement delays are the main factors that contribute to stalling of such projects. Another study by Masila (2016) on the factors that contribute to delays in timely execution of power projects in Kenya Power found that funding difficulties is the key factor.

2.2.1 Performance of Power Projects in Various Countries Globally and in Sub-Saharan Africa

Access to quality, reliable and affordable power is vital for social and economic growth of any country. Around the world, the power sector in various countries faces a myriad of challenges despite ongoing efforts to improve the sector. This section reviews the power sector in China, USA, India, Nigeria and South Africa in a bid to examine issues facing the sector.

China over the past years has experienced a drastic economic growth averaging a growth rate of 9% between 2000 and 2015. This consequently resulted in a high demand for power. China is currently the world's largest consumer of power and it has experienced a lot of outages especially between the years 2000 and 2005 due to a gap between generation and consumption. The fast-economic growth greatly caused a lot of fluctuations on supply and demand patterns. Also, China is heavily dependent on coal reserves to generate electricity which has increased the level of pollution due to emission of greenhouse gases. Over 56% of power is generated from coal while

renewable energy sources such as wind, hydro and solar produce a combined average of only 32%. Additionally, there are still over 11 million citizens without access to power due to inability to afford the cost of connection to power supply. The country's power sector has for many years been owned by a single state power utility which had limited public funds. The utility owned most of the generation, transmission and distribution assets. However, China has affected various short and long-term plans in a bid to reform the power sector. In 2002, the single power utility company in the country was bundled to two state owned grid companies and various generation companies in a move to separate the grid and generation. In subsequent years, some state companies were privatized, and regional power markets were developed to promote competition. The state is also developing a framework to regulate competition, control greenhouse emissions, promote power generation using renewal energy sources and regulate prices for power supply connection (International Energy Agency, 2014).

The power sector in the United States of America (USA) has many players in generation, transmission and distribution segments. In 1997, there were over 3000 players in the various segments with about 900 of them in the generation segment. Most of the utilities are involved in power distribution and there is also a small number of power marketers. The various segments are managed by different public institutions. About 60% of the utilities were state owned while 40% were owned by private investors. The large number of players in the sector promotes competition which is beneficial to consumers get affordable power connection costs. However, the competition has proved detrimental to the utilities because of rising operational costs. The power marketers must be involved a lot in marketing of electrical supply services to potential consumers in a crowded market Also, the power sector has experienced a slow increase in demand for power supply. Between the years 2003 and 2014, the rate of power uptake has increased at a rate of only 1.5% per year. This has been fueled by changing customer demands and requirements (Shioshansi, 2013) . Many industrial companies and businesses and even some domestic consumers have been focusing on cutting down power connection and running costs. Some preferred using technologies such as solar panels, among others in a bid to cut down on power costs. This trend has reduced uptake of power supply services from various utilities. The utilities are expected to provide smart power supply solutions which are energy efficient to cut costs, but this is expensive to roll out on a large scale even through subsidiaries. In addition, scarcity of water sources and land has hindered implementation of some power generation and distribution projects. The USA still relies heavily

on coal reserves for generation of power which contributed about 34% of the total power produced in between the years 2012 and 2014. The combustion of the coal sources has significantly contributed to emission of greenhouse gases and this has resulted in many players in the power sector focusing on greener renewable energy sources such as wind, solar and hydro in a bid to reduce pollution (Flaherty, Schwieters, & Jennings, 2017).

India is one of the largest producers of power globally. In 2014, the country ranked as the third largest producer of power in the world which is predominantly from fossil fuels. However, despite having a large generation capacity, the country has limited capacity of distributing power to the consumers. Consequently, a lot of power outages have been experienced in the country with the most famous outage occurring in 2012. The surplus power capacity but limited infrastructure for distribution to customers has been a big challenge to implementation of various power projects. The government came up with various programs that offered subsidy for electricity connection costs especially for domestic consumers in a bid to promote the level of access to electricity. There are still over 300 million citizens without access to power who rely to traditional energy sources such as biomass and firewood despite this effort (Banerjee, Barnes, Singh, Mayer, & Samad, 2015). The government's initiative to subsidize cost of power connection through various state-owned distribution companies while having limited funds resulted in a growing public debt. The distributing companies facing limited subsidy funds were forced to pass extra operational costs to the consumers consequently many poor citizens were unable to afford the cost of getting power supply. The government failed to work closely with development partners such as the World Bank and International Monetary Fund (IMF) during execution of its initiatives consequently losing technical and financial backing. Also, many utilities have faced challenges acquiring land and environmental clearances for power projects leading to delays of many schemes. A bill seeking to streamline land acquisition was also opposed in parliament in 2013. In addition, there is a limited work force with specialist skills in doing engineering projects and the government has not put enough effort in ensuring the education system produces a capable work force that supports the power sector. Finally, shortage of specialist equipment required for implementation of power projects has led to delays in implementation of some schemes. Though, the government has made efforts to reduce this shortage by encouraging local manufacturing of equipment by establishing partnerships with foreign suppliers and procuring directly from external markets (Dubey, 2015).

Nigeria is a key economic powerhouse in Africa and the country became the largest economic giant in 2013 with a Gross Domestic Product (GDP) of over 500 million dollars. However, its growth has been constrained by unreliable power supply that is characterized by frequent outages. The country has insufficient power generation capacity and an inefficient distribution system. In 2013, only about 45% of the citizens were connected to power. For many years the country's power sector has been owned and managed predominantly by a single power utility company which had limited funds and technical capacity to generate and distribute power to the citizens (Oni, 2013). Many power projects necessary for provision of power supply to consumers stalled due to lack of funding necessary to set up the required infrastructure and lack of specialized equipment which required to be sourced from external markets. In a bid to address the low level of access to power and frequent outages, the government came up with various interventions. In 2005, the sole power utility was bundled into six generation companies, one transmission company, and eleven distribution companies. Over the subsequent years, all the distribution companies were sold to private investors in a bid to promote privatization and competition. Also, in order to overcome financial and technical hurdles, the government came up with policies seeking to promote private sector participation. For instance, tax holidays were granted to companies that manufactured equipment necessary for power projects, some power generation companies paid tax at a lower rate, the various government agencies operated under an umbrella called One Stop Investment Centre (OSIC) in order to ease service delivery, and duty incentives were granted to equipment necessary for power projects that was sourced from external markets (Emodi, 2016).

South Africa is one of the leading economies in Africa which has been characterized by fast economic growth. The country's GDP has tripled from about 100 billion dollars to 430 billion dollars between the years 1997 to 2015. However, this growth has been restricted by unreliable power supply characterized by frequent outages and load shedding. The power sector has a gap between power generation and consumption. The country has been unable to cope up with increasing energy demands fueled by rapid economic growth. Most of the assets in the generation, transmission, and distribution segments are owned by the state utility Eskom. Many power projects in the state over the years have stalled due to reliance on limited state funding and technical capacity. For many years the power sector has grappled with limited generation capacity which culminated to one of the worst national blackouts in 2008. In a bid to reduce the outages, the state encouraged participation of Independent Power Producers (IPPs) to increase the development of

power generation capacity mainly from renewable energy sources (South Africa Department of Energy, 2015). However, the state utility is still dominant producing over 87% of the generation capacity while the IPPs produced about 3% and municipalities 10% in 2014. The state utility still dominates the distribution segment with a share of 46% and has a tendency of passing the cost of buying generated power to consumers consequently making the cost of accessing power high. Some of the power projects have also experienced delays due to lack of specialized equipment which must be sourced from external markets and difficulty accessing land (Eberhard, Gratwick, Morella, & Antmann, 2016).

2.2.2 Performance of Power Projects in Kenya

The power sector is characterized by surplus power generation capacity but limited distribution infrastructure. In 2016, the installed capacity was 2200 MW against an average consumption of 1600 MW. The power sector in Kenya has many players in the generation segment but the transmission and distribution segments power assets are controlled by two state utilities which are Kenya Electricity Transmission Company (KETRACO) and Kenya Power respectively. Kenya power enjoys a position of monopoly in distribution of power to domestic and premium customers. The government has come up with various programmes such as the Last Mile Connectivity Program (LMCP) and Rural Electrification Project in collaboration with development partners such as the World Bank and the African Development Bank (AFDB) where the partners provide loans to the government. The arrangement enables the state to subsidize the cost of accessing power primarily for domestic consumers (Kenya Power, 2017). However, little emphasis has been given to premium customers despite their significant contribution to economic development. The premium customers do not enjoy subsidy like domestic consumers and consequently they do not enjoy low connection costs of accessing power supply. Also, the power sector has only one state utility controlling the power distribution market and as consequently consumers do not enjoy competitive pricing as far as access to power is concerned.

Implementation of premium customer schemes involves various phases such as the design phase, the wayleave acquisition phase, and the construction phase. The execution of such schemes involves various activities such as the customer making an application for power, a design for construction being developed, the customer being issued with a quotation letter, payment being made by the customer, acquisition of wayleaves, and construction of the power supply facility.

Just like any other project, the premium customer schemes can stall in any of the phases because of various factors some which can be beyond the project team's control. In the 2015/2016 financial year, about 34% of premium customer schemes stalled during implementation in the design phase. This is attributed to change of scope of the project and failure by the consumer to pay for the provided cost estimates required to implement the project. Also, in the same year, approximately 16% of the schemes delayed in the wayleave acquisition phase. This was attributed to lack of willingness by some stakeholders to provide right of way to use land for development of electricity supply facilities and competition from other entities on use of limited land resources. Finally, in the same year, about 46% of the schemes stalled in the construction phase. This was attributed to failure by the consumers to adhere to given requirements and lack of specialized equipment which is sourced from external markets (Kenya Power, 2016).

2.3 Customer Requirements and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

Execution of premium customer schemes through the design, wayleave acquisition and construction phase involves various stakeholders or parties. The key parties are the premium customer making an application to get power, Kenya Power staff and external parties such as individuals or entities who may be required to provide wayleave rights (Kenya Power, 2014). The stakeholders have the ability to influence directly or indirectly the outcome of the project due to their roles, motives, influences and interests. A project can easily stall due to lack of commitment, conflict of interest and lack of quorum among the parties (Heldman, 2013).

During the design phase of execution of premium customer schemes, customers are issued with a quotation letter from Kenya Power which outlines the cost of constructing the power facility necessary to supply power and requirements that the customer must meet before construction works commence. These include provision of a transformer room or a metering room or a parcel land for development of the power facility which meets the utility's standards. Also, the applicant is expected to do the necessary civil works such as digging trenches and installing conduits for power supply cables. The applicant may involve contractors in development of the transformer and metering rooms under a construction contract. However, the various requirements that must be met by the applicant for power supply depend on his or her power consumption demands.

Failure by the customer to meet given requirements results in the utility stopping any further execution of the scheme. (Kenya Power, 2014).

The ability to identify, assess and manage key stakeholders is critical for the success of any project. A project manager should be able to understand the roles, influence, motives, interests, objectives, strengths, weaknesses and abilities of the various parties involved in a project in order to come up with a plan of action of dealing with issues before they occur. He or she must also communicate well to all key stakeholders so that they understand the project requirements, available resources and risks associated with the project (Heldman, 2013).

2.4 Wayleave Requirements and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

Wayleave refers to the right that is granted by an occupier of private land to an entity such as a public utility company or a private firm for development of infrastructure such as water drainage system, sewer system, telecommunication network, power lines or pipeline over or under the land. In Kenya, wayleave acquisition is governed by the Land Act of 2012 (International Business Publications, 2014).

The first step in wayleave acquisition involves a public or private entity contacting and obtaining consent from the land owner. The owner must be briefed on planned developments, potential impact of the development and compensation that he or she is entitled to receive. Once a mutual agreement is reached, the entity in this case Kenya Power and the land owner sign a form which is known as a wayleave consent agreement form. The agreement grants Kenya Power the right to erect, lay, remove, maintain, repair or inspect a power line or facility. Also, the land owner is obligated not to interfere with the power line or facility for instance by dumping waste or growing vegetation as outlined in the Energy Act of 2006. In addition, the rates for compensation of trees, crops or vegetation is outlined (Kenya Power, 2013).

Kenya Power must constantly acquire wayleave rights for development of power facilities due to the increased efforts by government to connect over 70% of the citizens by 2020 in line with Kenya's Vision 2030 blue print. The firm in some instances must obtain rights to develop power lines over land owned by entities such as Kenya Wild Life Service (KWS.), Kenya National Highways Authority (KENHA), Kenya Urban Roads Authority (KURA), Kenya Rural Roads

Authority (KERRA), Kenya Railways, among other entities apart from individual land owners. A lot of land has been acquired by the utility from various land owners by mutual agreement. However, in some cases, land owners object to giving the right of way on their parcels of land leading stalling of power projects. For example, in 2016, supply of power to Liquid Telecom stalled due to difficulty in obtaining wayleave approval from Kenya Railways. Also, delays in getting approvals from various road agencies and some county government offices resulted in stalling of some power projects (Energy Regulatory Commission, 2016).

2.5 Funding and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

Project finance refers to a means of raising funds that are required to undertake a project. The project manager usually identifies a project and determines how it will be funded while a project accountant deals with the mechanics for accounting for the project finances. There are two broad sources of funds which are available to a firm: shareholder funds and loan funds. A project company (special purpose vehicle) is usually created for a project to protect the assets of project owners from any failure resulting from the project. The special purpose vehicle (SPV) usually has the project as the only asset. Key stakeholders in the project also share the capital and risks associated in the project during creation of the SPV. Project financing is typically used in development of infrastructure projects that requires heavy capital outlay for instance development of power lines, telecommunication networks, road networks, airports, among others (Yescombe, 2014).

Lending entities usually look at the capital structure of the project company to determine the level of debt. Also, other factors such as the cash projections of the project, nature of assets and risks associated with the project are considered before the lender decides on whether to finance a project or not. Apart from lending institutions, a project company can also use other debt instruments such as debentures, term loans, bonds, among others. Debt instruments generally require the project company to pay the investors their principal amount and interest. Raising capital through debt instruments is cheap and fast compared to selling shares to investors but an organization can face liquidity problems in case loan terms and agreements are not met (Finnerty, 2011).

Funds can also be obtained by selling ordinary or preference shares to potential investors. This can be done through various means such as public placing, private placing, public issue by prospectus

and offer for sale. Capital raised through shares is more expensive than using debt instruments, but the organizations liquidity is not put at risk. In addition, other sources of funds such as third-party financing and venture capital can be employed. The ability to raise capital for a project is critical for its success especially for power projects which are capital intensive. Lack of funds can be detrimental on the performance of a project resulting even in premature closure of a project (Bodmer, 2014).

In Kenya, premium customers consist mainly of public institutions, medium and large business enterprises. Examples include Mabati Rolling Mills, Safaricom, Tatu City Real Estate Development, Pinacple Real Estate Development and even Rift Valley Railways that has been involved in the standard gauge railway infrastructure development. Supplying power to the premium customers requires implementation of large capital power projects that are paid for by the consumer during the design phase after receiving a quotation from the utility which outlines the project's cost (Kenya Power, 2016).

The premium customer schemes are more expensive to implement because they involve construction of power lines and facilities that require specialized equipment. Most of the equipment must be sourced from external markets whose cost can run into millions of Kenyan shillings due to foreign exchange fluctuations and market inflation. In the 2015/2016 financial year, 34% of the power projects stalled in the design phase. This was attributed to lack of capacity by some premium customers to pay for the high cost of power connection. Also, in some instances, the premium customer schemes were revised during the design phase due to scope changes. This resulted in much higher costs of power connection which some consumers were unable to pay. (Kenya Power, 2016). Unlike domestic consumers, premium customers do not enjoy government subsidies which are aimed at lowering the costs of accessing power. The government has initiated various programmes in such as Rural Electrification and Last Mile Connectivity Project (LMCP) which subsidize the cost of accessing power, but focus has been mainly on domestic consumers. The power sector also has no other players in the distribution segment and this has given Kenya Power a position of dominance and monopoly. The consumers do not benefit from affordable cost of power connection due to lack of competition in the market.

2.6 Availability of Construction Materials and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

During the construction phase of premium customer schemes, the utility's project manager initiates the construction works for development of a power facility that will supply the consumer with power after he or she is satisfied that the necessary customer requirements have been met. The construction works involves use of specialized equipment that is mostly sourced from external markets. The utility may involve contractors in some of the construction works. Procurement officers must plan on which materials or services require sourcing by working hand in hand with the project team and even officers who keep inventory of materials in the utility's stores. The project manager must work closely with procurement officers who are involved in sourcing materials and equipment in order to minimize cases of projects delaying due to lack of materials (Kenya Power, 2014).

In Kenya, procurement of goods, works or services by public entities and parastatals is guided by the Public Procurement and Asset Disposal Act (PPAD) of 2015. The act requires all procuring entities to develop annual procuring or disposal plans that are based on approved budgets. Also, the procurement process can only be undertaken when there is enough cash flow to pay suppliers, consultants or contractors for their goods or services. In addition, the head of the procurement function is also required to maintain records of key stakeholders involved in the procurement process and communicate using Information Communication Technology (ICT) platforms such as emails and websites (National Council For Law Reporting, 2016).

Kenya Power sources materials and equipment for development of power facilities mainly using three methods which are open tendering, direct tendering and restricted all which all provided in the Act. In the 2015/2016 financial year, 46% of premium customer schemes stalled in the construction phase. This was primarily attributed to lack of specialized materials and equipment such as metering breakers, cables and switch gear that were required for development of power facilities. For, instance in April 2016, development of a power facilities to supply power to the Standard Gauge Railway (SGR) communication centres stalled due to lack of specialized materials which had to be sourced from external markets and the lengthy public procurement procedures which are involved in sourcing the same. However, in the subsequent months, direct procurement was employed in a bid to speed up acquisition of the specialized equipment (Kenya Power, 2016).

The procurement act of 2015 was enacted in a bid to promote efficiency and minimize fraud but there are still areas of concern especially due to the lengthy procedures of obtaining critical infrastructure equipment. Also, the utility's procurement and store officers have not been effective in coming up with forecasts for key infrastructure projects and planning for the same.

2.7 Theoretical Review

This section presents the key theories that the study infers on. This study applies concepts of the stakeholder participation theory and the theory of constraints.

2.7.1 Stakeholder Participation Theory

The stakeholder participation theory is based on the idea that a project company or an entity has relationships with individuals or parties or groups or institutions (stakeholders) who are affected by or can affect its decisions. The stakeholders can influence directly or indirectly the outcome of the project due to their roles, motives, influences and interests. Generally, stakeholders usually have a common interest of having a successful project though their perspectives on how it can be achieved could be differing. A project manager needs to come up with a stakeholder management plan that will aid in identification of the stakeholders and management of their interests and relationships. The parties must be involved in all phases of the project from planning to closure. A project can easily stall due to lack of commitment, conflict of interest and lack of quorum among the parties in any of the project phases (Heldman, 2013).

The stakeholders can be internal or external to the project company. Internal project stakeholders in typical project company may comprise of the top management, the project manager, the project team, support staff, and the technical steering committee. Their function is to ensure project deliverables and objectives are achieved. The external stakeholders may comprise of vendors, suppliers, customer's project team and government agencies. These participants ensure that the project meets their business purposes or expectations (Greiman, 2013).

A project can be deemed to be successful if the stakeholder's expectations are met or exceeded. The influence of the parties on success or failure of a project is evident but there is no single method of engaging them. The key methods are meetings, workshops, retreats, polls or surveys, field trips, consultations, negotiations and use of social media platforms. In practice, a combination of the various methods is used to encourage participation by the stakeholders (Silvius, 2010).

The benefits of stakeholder participation in all project phase are numerous. For instance, better decisions are made, conflicts among parties is reduced, parties can identify and mitigate potential risks associated with the project, parties feel they 'own' the project, parties have a better understanding of the project's goal, trust is developed among the parties due to transparency and alternative plans of action can be easily formulated concerning contentious issues. On the other hand, failure to involve stakeholders in all the project phases can result in numerous problems which can affect the projects performance. For example, some stakeholders may feel they interests have not been considered resulting in competition and conflicts among the parties. Also, some parties may not meet the project standards and legal requirements resulting in potential delays in project implementation. In addition, deprivation of resources such as human, financial and technical can lead to stalling of projects (Stackpole, 2013).

Execution of premium customer schemes involves various key parties or stakeholders. For instance, Kenya Power's project team, suppliers, contractors, the customer or applicant, and parties or individuals who are required to provide wayleave consent to the utility (Kenya Power, 2014). Management of the roles, interests and influences of the various parties is critical to the success of the project. Lack of commitment and support among the parties can be detrimental to the performance of the premium customer schemes. For instance, in the 2015/2016 financial year, some of the power projects stalled due to failure to adhere to the project standards by a section of customers and difficulty obtaining wayleave consent for development of power facilities from some entities and individuals (Energy Regulatory Commission, 2016).

The ability to identify, assess and manage key stakeholders is critical for the success of any project. A project manager should be able to understand the roles, influence, motives, interests, objectives, strengths, weaknesses and abilities of the various parties involved in a project in order to come up with a plan of action of dealing with issues before the occur .He or she must also communicate well to all key stakeholders so that they understand the project requirements, available resources and risks associated with the project (Heldman, 2013).

2.7.2 Theory of Constraints

The theory of constraints is based on the idea that any system (organization or company) is restricted from achieving its goals or objectives by one or more constraints (Levinson, 2007) . It was developed in the 80s by Dr. Elihayu Goldratt who sought to improve manufacturing processes

and activities. The theory focuses on improving organization processes by identifying and exploiting constraints until they are no longer a limiting factor. This may involve resources being employed to improve a constraint, review of existing processes and even restructuring of an organization. Once a constrained is 'broken' and is not impeding throughput, focus shifts to the next constraint (Woepfel, 2001).

The constraints (limiting factors) can be classified as internal or external. Internal limiting factors are restrictive factors within an organization. These include limited budgets, restrictive policies, scope changes, contractual agreement problems, lack of skilled personnel, lack of equipment, lack of technologies, among others. The external limiting factors are restrictive factors external to an organization. These include limiting government policies, environmental issues, political instability, economic instability, social and cultural issues, among others (Suerken, 2010).

However, there are opponents who do not support the theory. For instance, Mabin (2006) argues that the theory fails to adequately show the link between improved processes and better throughput. He insists that more case studies are needed for the theory to be adopted in academia. Navid (2004) also adds that the theory focuses on streamlining systems while ignoring empowerment of workers and coming up with new ways doing things.

Execution of premium customer schemes involves resources such as human, financial and technical. During the design phase of execution of the schemes, customers are issued with a quotation letter from Kenya Power which outlines the cost of constructing the power facility necessary to supply power. The customer is expected to pay for the given quote before wayleave acquisition and construction works commence. However, there are cases where customers have a limited capacity to pay for the high costs quoted and costs also escalate in case the project design is reviewed. Failure by the customer to pay for the given quote results in the utility stopping any further execution of the scheme. Also, during the construction phase of the project, the utility's project manager initiates the construction works for development of a power facility that will supply the consumer with power after he or she is satisfied that the necessary customer requirements have been met. The construction works involves use of specialized equipment that is mostly sourced from external markets. The utility may involve contractors in some of the construction works. Procurement officers must plan on which materials or services require sourcing by working hand in hand with the project team and even officers who keep inventory of

materials in utility's stores. The project manager must work closely with procurement officers who are involved in sourcing materials and equipment in order to minimize cases of projects delaying due to lack of materials (Kenya Power, 2014).

Kenya Power sources materials and equipment for development of power facilities mainly using three methods which are open tendering, direct tendering and restricted all which based on the Public Procurement and Asset Disposal Act (PPADA) of 2015. In the 2015/2016 financial year, 46% of premium customer schemes stalled in the construction phase. This was primarily attributed to lack of specialized materials and equipment that was required for development of power facilities (Kenya Power, 2016). The procurement act of 2015 was enacted in a bid to promote efficiency and minimize fraud but there are still areas of concern especially due to the lengthy procedures of obtaining critical infrastructure equipment. Also, the utility's procurement and store officers have not been effective in coming up with forecasts for key infrastructure projects and planning for the same.

The above-mentioned issues prompt the need for the utility and the government to review their processes and policies. For instance, the utility can be providing budgetary estimates first to applicants for planning purposes. Also, the supply chain officers should work closely with the project team in planning for sourcing of specialized equipment required for construction works and forecasting of the same. The government has made efforts in a bid to improve procurement processes done by public institutions. For instance, split procurement was outlawed, and more procurement methods were introduced. However, a further review of laws governing procurement of specialized equipment from external markets is required. The state may also offer subsidies and tax incentives to entities importing specialized equipment.

2.8 Conceptual Framework

A conceptual framework is a useful tool for outlining, organizing and showing relationships between variables of a topic under study (Bhandari, 2013). In this study, the independent variables are customer requirements, wayleave requirements, funding and availability of construction materials. The dependant variable is performance of premium customer schemes. The conceptual framework that the study is based on is depicted in Figure 1.

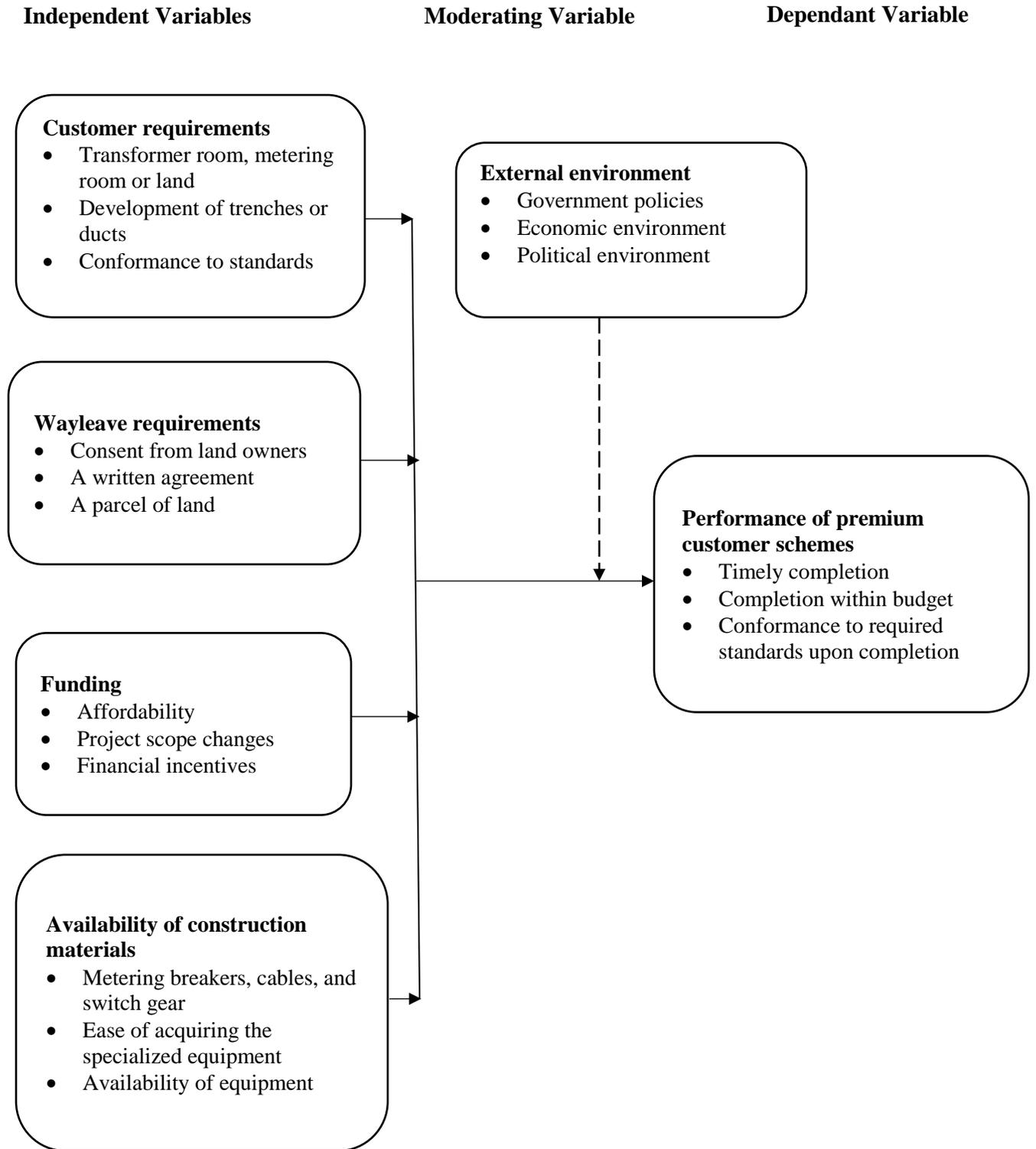


Figure 1: Conceptual Framework

2.9 Research Gap

There are some studies, though few, that have sought to determine factors that affect the performance of power projects in Kenya. For example, a study by Kariungi (2014) on factors affecting execution of power projects in Kenya Power in Thika area found that funding and procurement delays are the main factors that contribute to stalling of such projects. Another study by Masila (2016) on the factors that contribute to delays in timely execution of power projects in Kenya Power found that funding difficulties is the key factor.

However, the studies are limited to primarily domestic consumers who constitute the bulk of the Kenyan citizens. No emphasis is placed on premium customers who despite being a small percentage of the consumers contribute significantly to the social and economic development of the state. Also, there is limited literature on the topic under study.

This study seeks to investigate factors which affect the performance of premium customer schemes and give recommendations on how their performance can be improved. The recommendations can potentially result in improved power supply connectivity and socio-economic growth in the state in line with Kenya's Vision 2030.

2.10 Summary

This chapter has reviewed literature that is relevant to the topic under study. First, factors which influence the performance of power projects in various countries globally and in Kenya were examined. Also, factors which influence the performance of premium customer schemes in Kenya Power were studied.

The stakeholder participation theory and theory of constraints were studied in the context of the topic under study. The stakeholder participation theory was applied since execution of premium customer schemes involves various key parties such as the Kenya power project staff, the customer or applicant, and the parties or entities required to provide a wayleave trace. The participation of each of the parties is vital for success of the schemes (projects). The theory of constraints was applied since execution of premium schemes involves resources which can be human, financial or technical. The schemes can stall due to constraints of resources such as funds and construction materials. Improvement of processes by the utility and the state is necessary to 'break' the constraints. Finally, the research gap that the study seeks to fill is examined.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

A research methodology refers to systematic procedures or steps which are followed while carrying out an investigation. It has a broader scope than methods or techniques which are adopted in a study. It encompasses various concepts such as sampling, research instruments, data collection, data analysis, ethical considerations and research designs (Khan, 2008). This chapter seeks to examine the various mentioned concepts which are applied to the topic under study. Also, ethical considerations are discussed, and the operationalization of variables is depicted.

3.2 Research Design

A research design can be defined as a detailed strategy or plan of action on how an investigation will be conducted in order to obtain answers on a particular topic under study. It guides on how data will be collected, what type of instruments will be employed, how the instrument will be used and the methods for analyzing the collected data. Various research designs are available, but they are adopted depending on the nature of the problem or phenomena that is being investigated (Kothari, 2004). This study adopted a cross-sectional exploratory research design and a mixed approach.

A cross-sectional design is adopted when a study requires findings from multiple groups that interact with each other (Kothari, 2004). In this study, various key parties such as the Kenya power project staff, the customer, and the parties required to provide a wayleave trace interact and work together for successful execution of premium customer schemes. The exploratory research design is useful when there are limited or no prior studies on a topic. This can be characterized by limited literature concerning a particular topic. The design also aids in gaining insights and familiarity concerning a topic under investigation (Creswell, 2014). In addition, new information generated through application of the design can be useful for planning purposes and forming the basis for further research. However, there are drawbacks associated with the design. Most of the data generated in many studies is primarily qualitative which can be subject to bias. Also, such a design is usually employed to small samples and consequently the findings may not be applicable to the general population (Gorard, 2013).

This study has mentioned that previous studies on performance of power projects in Kenya have focused primarily on domestic consumers at the expense of premium customers in addition to limited literature on the topic under study. Also, various parties are involved in execution of premium customer schemes. Therefore, this makes a cross-sectional exploratory research design suitable for this situation. Understanding how various factors influence the performance of premium customer schemes will go a long way into providing solutions that will improve the power connectivity rate in the country and consequently increased socio-economic growth in line with Vision 2030.

3.3 Target Population

A target population refers to the entire set of units for which a researcher is interested in. Populations are usually large making it very expensive and time consuming to analyze each single unit. Consequently, samples are usually analyzed in practice to make inferences on the entire population (Johnson & Christensen, 2014) . This study involved internal and external parties (stakeholders).

The key internal parties were the Kenya Power project staff who constituted of business development engineers, design engineers, construction engineers, project managers, wayleave officers and procurement officers. On the other hand, the key external parties were the customers and parties required to provide wayleave trace for development of power facilities. The customers were in some instances represented by electrical contractors. The target population of this study was 90 and it is outlined in table 3.1.

Table 3.1: Target Population

Internal Parties	Population
Business development engineers	7
Design engineers	10
Construction engineers	10
Project managers	3
Wayleave officers	5
Procurement officers	5
External Parties	
Customers/applicants/contractors	25
Parties or entities required to provide wayleave trace	20
Total	90

3.4 Sample Size and Sampling Procedure

This section discusses the sample size and sampling procedure adopted during the investigation.

3.4.1 Sample size

A sample is a portion of the target population on which information is obtained during an investigation. Generally, the sample size is usually smaller than the target population. The samples must capture or represent the characteristics of the entire target population. (Levy & Lemeshow, 2008). This is because findings that are based on it can be applied to or generalized for an entire population. Researchers usually collect data to test a hypothesis or to provide explanations and predictions for a particular topic under study (Lohr, 2009).

Sample size refers to the number of units in a drawn sample from a target population. Having the right sample size ensures that the sample is representative of the entire population and sampling errors are reduced (Lohr, 2009). There are many theories concerning the appropriate sample size. For instance, according to Mugenda and Mugenda (2003), the sample size should be at least thirty percent of the target population to adequately capture its characteristics. Another proponent of this sample size is Newman (2007) but he stresses that the population should have less than 2,500 individuals. This study adopted a sample size of 100% of the target population which is more than

adequate based on the outlined theories. This translates to 90 respondents. The size adequately captured the characteristics of the both the internal and external stakeholders.

3.4.2 Sampling procedure

Sampling refers to a process used in statistical analysis in which a predetermined number of observations are taken from a larger population. The process can be done using two techniques: probability and non-probability sampling. Probability sampling involves use of laws of chance in drawing of sample. Here, every sampling unit has an equal chance of being drawn resulting in a much representative sample. However, there are instances where a large sampling error results in sample that is not representative (Thompson, 2012). On the other hand, non-probability sampling involves drawing of samples based on personal judgement of the researcher rather than scientific laws. In this technique, a desired number of sample units is selected deliberately or purposely depending upon the object of inquiry so that only the important items representing the true characteristics of the population are included in the sample. Failure to use scientific methods in drawing sampling units can easily result in samples that are not representative. Another drawback is that the technique can result in bias especially when a researcher selects only the sampling units that will fit his or her context (Johnnie, 2012).

A census refers to an investigation of every item or member of a population. Both the census and sampling approaches provide information which can be used to make inferences to the entire population. For instance, errors associated with sampling are eliminated. Also, the information gathered during study may be used as a yardstick for future investigations. In addition, all participants get an opportunity to give input. However, there are drawbacks which include high costs of carrying out the study especially for large populations, long periods being required to obtain information and difficulty itemizing members of the population (Johnnie, 2012).

In this study a census approach was adopted in a bid to obtain information from both the internal and external stakeholders. The approach was suitable for this study due to key advantages associated with it such as elimination of sampling errors and the potential of the data gathered during the investigation being used as a point of reference in future studies. Also, the number of respondents is small, and they can be easily contacted in their offices in the Nairobi region. A detailed outline of the sample obtained from the target population is shown in table 3.2.

Table 3.2: Sample of Key Parties Involved in Execution of Premium Customer Schemes

Internal Parties	Population	Sample
Business development engineers	7	7
Design engineers	10	10
Construction engineers	10	10
Project managers	3	3
Wayleave officers	5	5
Procurement officers	5	5
External Parties		
Customers/applicants/contractors	25	25
Parties or entities required to provide wayleave trace	20	20
Total	90	90

3.5 Research Instruments

A research instrument is a measurement tool designed to obtain data on a topic of interest from research subjects. The instrument can be completed by the respondent or the researcher. Some of the tools completed by respondents include questionnaires, aptitude tests, and inventories. On the other hand, tools completed by an investigator include observation guides, check lists, interview schedules, flow charts, rating scales, among others (Wilkinson & Birmingham, 2003).

Since a mixed approach has been adopted, this study used a questionnaire which has both open-ended and closed ended questions. The questionnaire consisted of two parts. The first part sought to establish demographic details of the respondents. The second part sought to obtain information on the relationships between the dependent and independent variables that the study is based on.

Questionnaires have many advantages when used in data collection. This include: reduction in bias, they can easily be deployed to a large population, they are cheaper than face to face interviews, they are easy to analyze, a respondent can complete them at his or her convenience and it provides a sense of anonymity to the respondent. There are also drawbacks associated with it

which include: low response rates, failure by the respondent to answer some questions, need for the subjects to be literate, potential of duplicate responses, inability to capture feelings or attitudes, and inability to probe responses (Wilkinson & Birmingham, 2003). However, the drawbacks can be dealt with by adopting measures such as ensuring the questionnaire is not very lengthy, promising privacy to the subjects, promising monetary incentives to those who complete in time, ensuring the questionnaire is simple to understand and setting closing dates for survey returns (Pasian, 2015). The various advantages mentioned and outlined measures for reducing low return rates made the questionnaire an appropriate tool for data collection in this study. A structured questionnaire was adopted for the study. All questions were standardized in terms of wording and sequence for all respondents.

3.5.1 Pilot Testing of the Research Instruments

Pilot testing of a research instrument refers to testing of a research tool before full scale investigation commences. Here, the tool is administered to sample of the target population in a bid to determine its adequacy, weaknesses and gather any other relevant information necessary for the full-scale study (Mitchell & Jolley, 2010). According Mugenda and Mugenda (2003), the sample size for pilot testing is recommended to be ten percent of the target population.

The testing is also useful in determining if the respondents understand the research questions and what was not captured in line with the research objectives. In addition, logistical challenges associated with a full-scale study such as funds, required human resource, ease of administration of the research instrument and the appropriate time required for study are easily identified. Finally, information obtained from the study can be helpful in making improvements to the procedures for carrying out full scale investigation (Taylor, Sinha, & Ghoshal, 2008).

In this study a sample size of 10% of the target population was used for pilot testing in line with Mugenda and Mugenda (2003) recommendations. This translated to 9 participants who were drawn randomly from the population using simple random sampling technique. The information obtained from the testing was used to identify weaknesses and adequacy of the research tool and any relevant information necessary for this study. Appropriate improvements on the procedures of carrying out this study and the research instrument were made based on the data obtained from the test.

3.5.2 Validity of the Research Instruments

Validity of a research instrument refers to the degree to which a research tool provides data or information that accurate, suitable and meaningful conclusions or inferences can be based on. For instance, if a manager seeks to know whether a management information system is effective, he or she will require a tool that records relevant data and the data obtained must be able to provide accurate conclusions (Colton & Colvert, 2007).

The validity of the questionnaires was determined partly by outcome of the pilot test that was done. Also, the tools were scrutinized by other researchers.

3.5.3 Reliability of the Research Instrument

Reliability of a research instrument refers to the extent to which a research tool provides regular information or data with repeated trials on the same subject or object. Here, emphasis is on consistency of the provided results. A reliable instrument is not necessarily valid. For instance, a tool can measure the height of a person but less a centimeter regularly after repeated measurements. The tool in this case is reliable but not valid since it provides information that is not accurate and meaningful. A research tool must be valid and reliable in order to carry out a proper study (Calmorin & Calmorin, 2007).

Various methods that can be used to test reliability of research instruments include: test-retest, inter-rater, parallel forms, internal consistency and split-half (Mugenda & Mugenda, 2003). This study adopted the test-retest method of testing reliability of a research tool. The questionnaires were administered to the pilot sample at two different times. The second time was after a period of one week. The reliability coefficient was calculated to determine the relationship between the two sets of results obtained. A value of 0.85 was obtained which indicated adequate reliability.

3.6 Data Collection Procedure

First, consent to carry out this study was obtained from the Extramural Department which is part of the Open Distance and E-learning (ODEL) school in University of Nairobi. Also, a permit to carry out the study was obtained from National Commission for Science, Technology and Innovation (NACOSTI).

Four research assistants were engaged in data collection. But, before commencement of the exercise, they were be trained on key areas. This included: the purpose of the study, how the tools would be administered to respondents, how to communicate well with the subjects and ethics associated with carrying out the investigation. The assistants had at least a university education, good communication skills, and ability to work in team. This was necessary since most of the respondents are professionals in various fields.

The assistants first explained well the purpose of the study to the respondents before administering the questionnaires to them via electronic mail. There are currently many technological platforms that aid in electronic delivery and submission of questionnaires used in research. For instance, survey monkey and google forms. The google forms platform was be employed in this study. The platform allows questionnaires to be delivered to respondents via mail and the researcher can forward reminders to the subjects. The respondents are also able to submit their responses via mail at their convenience. In this study the respondents were given a fixed period of 7 days for responding to and submitting the questionnaires.

3.7 Data Analysis Techniques and Presentation

This study adopted a mixed approach that was facilitated by a questionnaire that had open-ended and closed-ended questions. The responses from the closed-ended questions were expressed quantitatively and analyzed using Statistical Package for Social Scientists (SPSS) version 20 software. Here, the relationship between the independent and dependent variables was analyzed using linear regression at a level of significance of 95%. Also, descriptive statistics of mean, sum and proportion were applied to summarize the obtained data. On the other hand, content analysis was used to analyze the qualitative data from the open-ended questions in a bid to understand relationships between the independent and dependent variable. The qualitative data provided insights on what requires improvement in execution of premium customer schemes.

In addition, quantitative data was organized and presented using tables while qualitative data was be outlined by themes.

3.8 Ethical Considerations

In this study, various ethical considerations were considered. First, the research assistants engaged had at least university education. They were also trained on how to handle the respondents and

administration of the research tools. This was necessary in building their competency to undertake research.

Ethical values and soft skills which are necessary while undertaking an investigation were also imparted during the training sessions. This include integrity, courtesy, respect, good communication and confidentiality. The imparted values and skills enabled the assistants to interact cordially with participants and understand the need to respect privacy.

In addition, consent was sought from the participants and they were well briefed any relevant information concerning the study. This was necessary in ensuring information was obtained voluntarily during the investigation.

3.9 Operationalization of Variables

A detailed outline of operationalization of variables adopted in this study is depicted in Table 3.3.

Table 3.3: Operationalization of Variables

Objective	Independent Variables	Indicators	Measurement	Measurement Scale	Data Collection Method	Data Analysis
To examine influence of customer requirements on the performance of premium customer schemes in Kenya Power in the Nairobi region	Customer requirements	<ul style="list-style-type: none"> • Transformer room, metering room or land • Development of trenches or ducts • Conformance to standards 	<ul style="list-style-type: none"> • Adequacy of the provided facilities • Conformance of the provided facilities to Kenya Power’s standards. • Level of participation and commitment by the parties in meeting the given requirements • Level of awareness on the standards and requirements that must be met by the customer 	Ordinal Nominal	Survey	Descriptive statistics Content Analysis
To assess influence of wayleave requirements on the performance of premium customer schemes in Kenya	Wayleave requirements	<ul style="list-style-type: none"> • Consent from land owners • A written agreement • A parcel of land 	<ul style="list-style-type: none"> • Level of participation of parties in wayleave acquisition • Wayleave agreements reached 	Ordinal Nominal	Survey	Descriptive statistics Content Analysis

Power in the Nairobi region

To determine influence of funding on the performance of premium customer schemes in Kenya Power in the Nairobi region	Funding	<ul style="list-style-type: none"> • Affordability • Project scope changes • Financial incentives 	<ul style="list-style-type: none"> • Sources of funds • Adequacy of funds • Ability to pay for power connection • Level of participation in financial planning • Existing financial incentives 	Ordinal Nominal	Survey	Descriptive statistics Content Analysis
To examine influence of availability of construction materials on the performance of premium customer schemes in Kenya Power in the Nairobi region	Availability of construction materials	<ul style="list-style-type: none"> • Metering breakers, cables, and switch gear • Ease of acquiring the specialized equipment • Availability of equipment 	<ul style="list-style-type: none"> • Effectiveness of procurement procedures. • Level of participation in sourcing of materials • Efficiency in inventory management and forecasting of construction materials 	Nominal	Survey	Descriptive statistics Content analysis

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents a discussion and analysis of findings obtained from site concerning the topic under study. The relationship between the independent and dependant variables is discussed in depth in a bid to understand the extent to which various factors influence the performance of premium customer schemes in Kenya Power.

4.2 Questionnaire Return Rate

This study targeted 90 respondents who were handed questionnaires over an online platform. The questionnaire rate of return of the respondents is outlined in Table 4.1

Table 4. 1: Questionnaire Return Rate

Responses	Frequency (f)	Percentage (%)
Response	52	58
No response	38	42
Total	90	100

The table shows a response rate of 58% was achieved which is above 50% that Mugenda and Mugenda (2003) recommends as adequate.

4.3 Demographic Characteristics

Demographics refers to statistical data about the characteristics of a population such as the age, gender and income of the people within the population (Kothari, 2004). Demographic details of the respondents involved in the study are discussed below.

4.3.1 Distribution of Respondents by Gender

In this research, 42 of the respondents indicated they were male while 10 indicated they were female. This translates to 81% and 19% respectively. Despite the unequal proportions of the gender, the research does not suffer from gender bias since the energy sector is primarily male-dominated.

4.3.2 Distribution of Respondents by Age

In this investigation, the respondents indicated their age as outlined in Table 4.2.

Table 4. 2: Distribution of Respondents by Age

Age Bracket	Frequency (f)	Percentage (%)
Below 20 years	0	0
20 -30 years	10	19
30- 40 years	32	62
50 years and above	10	19
Total	52	100

From Table 4.2, none of the respondents were below 20 years, 19% were between 20 to 30 years,62% were between 30 to 40 years and 19% were of 50 or more years. Majority of the respondents were between 30 and 40 years. In addition, those between 20 to 30 years and 50 years and above formed the minority.

4.3.3 Distribution of Respondents by Level of education

In this investigation, the respondents indicated their level of education as outlined in Table 4.3

Table 4. 3: Distribution of Respondents by Level of Education

Level of Education	Frequency (f)	Percentage (%)
Certificate	5	9
Diploma	15	30
Bachelor	20	38
Masters	12	23
PhD	0	0
Other	0	0
Total	52	100

From Table 4.3, 9% of the respondents had a certificate, 30% a Diploma, 38% had a Bachelors degree, 23% had a Masters degree and none had a PHD or any other professional certification. The distribution shows that the respondents generally are well educated and could answer the research questions well.

4.3.4 Distribution of Respondents by Level of Participation

In this study, both the internal and external parties involved in execution of premium customer schemes were targeted. Their distribution is outlined in Table 4.4.

Table 4. 4: Distribution of Respondents by Level of Participation

Level of Participation	Frequency (f)	Percentage (%)
Internal stakeholders (Kenya Power Staff)	28	54
External stakeholders (customer/electrical contractor/land owner)	24	46
Total	52	100

From table 4.4, it is clear that 54% of the respondents were internal stakeholders while 46% were external stakeholders. The proportion of both groups is almost equal hence the study does not suffer from bias towards one group.

4.4 Performance of Premium Customer Schemes in Kenya Power and Lighting Company

A successful project is one that is completed on schedule, done within budget and it meets the required standards. The measure of a successful project has no clearly defined criteria since it draws varied ideas across institutions and among individuals but generally it is seen as achievement of required goals and objectives (Project Management Institute, 2013). In this study, the respondents were asked to indicate their level of agreement concerning various indicators of the performance of premium customer schemes in Kenya Power. The responses given are shown in Table 4.5.

Table 4. 5: Performance of Premium Customer Schemes

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Total (%)
	1	2	3	4	5	
Premium customer schemes are completed within the required time	0	48	38	4	0	100
Premium customer schemes are completed within the planned budget	10	0	58	32	0	100
Premium customer schemes are completed within the required standards	0	12	20	48	20	100

From the data of Table 4.5, it was inferred that a significant number of premium customer schemes are not completed within the required time as indicated by majority of the respondents who agreed. This prompts the need for Kenya Power to come up with more forums which seek to address any issues of challenges related to execution of premium customer schemes. For instance, there can be more stakeholder meetings and workshops for discussing any relevant issues concerning the schemes and coming up with mitigation measures. Also, some of the premium customer schemes are completed within budget but there is still a reasonable number that is not completed within budget. This was indicated by a small proportion of respondents who agreed and as sensible number of respondents who were either neutral or strongly disagreed. This is an area that requires improvement as far as execution of premium customer schemes is concerned. Kenya Power can adopt a strategy of involving the key stakeholders in all phases of project execution especially during the planning and design phase. Finally, premium customers schemes are completed within the required standards as indicated by most of the participants who agreed.

Also, participants were asked the extent to which delivery of premium customer schemes meets the desired expectations/results. From the findings, 0% of the respondents indicated that it was at

a very low extent, 0% indicated that it was at a low extent, 67% indicated that it was at a moderate extent, 33% indicated that it was at a great extent and 0% indicated that it was at a very great extent. The data clearly indicated that delivery of premium customer schemes meets the desired expectations or results at a moderate extent.

The findings prompt the need to improve execution of premium customer schemes. For instance, Kenya Power should streamline its internal processes especially material forecasting, procurement procedures and interdepartmental communication. Also, the organization must involve stakeholders in all phases of implementation of premium customer schemes in bid to identify and address any issues or challenges arising during the process. In addition, the government can provide incentives which stimulate connectivity of premium customers. For instance, low tariffs can be applied to power equipment sourced from foreign markets, premium customers can benefit from subsidies and local producers of power equipment can be given tax relief. The public procurement act may be reviewed to minimise procurement restrictions imposed on specialized power equipment being sourced from external markets, competition in the energy sector can be promoted and more efforts can be channelled towards further privatization of the energy sector.

4.5 Influence of Customer Requirements on the Performance of Premium Customer Schemes in Kenya Power and Lighting Company.

The first objective of this study sought to examine the influence of customer requirements on the performance of premium customer schemes in Kenya Power in the Nairobi region. The participants responded to the various indicators of the objective as outlined in Table 4.6

Table 4. 6: Customer Requirements

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Total (%)
	1	2	3	4	5	
Customer requirements are well communicated by Kenya Power to the customer (applicant for power supply)	0	10	0	80	10	100
Customers generally provide adequate facilities on time	0	33	48	19	0	100
Facilities provided by the customer generally meet Kenya Power’s standards	0	42	20	38	0	100
Customers (applicants for power supply) are aware of the standards that their facilities should meet.	19	28	19	25	9	100
Customers are committed in providing facilities which meet Kenya Power’s standards	0	52	10	38	0	100
Customers have the ability to provide the facilities required by Kenya Power	0	29	9	33	29	100

From the data of Table 4.6, it was determined that customer requirements are well communicated by Kenya Power to the customer as indicated by majority of the respondents who agreed. Also, customers do not generally provide adequate facilities on time as indicated by a large proportion of the respondents. This is an area that requires improvement as far as execution of premium customer schemes is concerned. Thirdly, delivery of facilities that meet Kenya Power’s Standards is not adequate. This was indicated by almost equal proportions of respondent who either “Agreed” or “Disagreed”. This is another area that requires improvement. Fourthly, there is limited awareness on the Kenya Power standards that should be met when developing facilities as

shown by almost equal proportions of respondents who either “Agreed” or “Disagreed”. This prompts the need for Kenya Power to increase awareness of the required standards for development of facilities. In addition, customers are not committed in providing facilities which meet Kenya Power standards as shown by a large proportion of respondents. Finally, some customers can provide the required facilities while others don’t have ability do the same as indicated by almost equal proportions of respondents who either “Agreed” or “Disagreed”. This calls for initiatives to be carried out in a bid to improve the customer’s capacity to develop facilities that meet Kenya Power’s standards.

Also, participants were asked the extent to which customer requirements influence the delivery of premium customer schemes. From the findings, 0% of the respondents indicated that it was at a very low extent, 9% indicated that it was at a low extent, 29% indicated that it was at a moderate extent, 43% indicated that it was at a great extent and 19% indicated that it was at a very great extent. The data clearly indicated that customer requirements have a great influence on the performance of premium customer schemes.

The findings support the stakeholder participation theory that is based on the idea that a project company or an entity has relationships with individuals or parties or groups or institutions (stakeholders) who are affected by it or can affect its decisions. The stakeholders can influence directly or indirectly the outcome of the project due to their roles, motives, influences and interests. The ability to identify, assess and manage key stakeholders is critical for the success of any project. A project manager should be able to understand the roles, influence, motives, interests, objectives, strengths, weaknesses and abilities of the various parties involved in a project in order to come up with a plan of action of dealing with issues before the occur .He or she must also communicate well to all key stakeholders so that they understand the project requirements, available resources and risks associated with the project (Heldman, 2013). Commitment by the customers in meeting requirements given by Kenya Power is critical in successful implementation of premium customer schemes.

In addition, the respondents were asked to give suggestions on how issues related to customer requirements can be addressed. The recommendations given include: customers engaging professionals in development of power facilities, more effort being put in raising awareness of standards required by Kenya Power as far as development of power facilities is concerned, Kenya

Power developing the power facilities instead of the customer and forums being set up to discuss issues related to customer requirements.

4.6 Influence of Wayleave Requirements on the Performance of Premium Customer Schemes in Kenya Power and Lighting Company

The second objective of this study sought to assess the influence of wayleave requirements on the performance of premium customer schemes in Kenya Power in the Nairobi region. The participants responded to the various indicators of the objective as outlined in Table 4.7.

Table 4. 7: Wayleave Requirements

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Total (%)
	1	2	3	4	5	
Wayleave requirements are well communicated by Kenya Power to the customer (applicant for power)	0	10	19	42	29	100
Wayleave consent (permission) is easily obtained from land owners and institutions such as road agencies, railway agencies, county offices, among others	0	42	19	29	10	100
Kenya power actively involves the customer and land owners or institutions during wayleave acquisition in an effort to get mutual agreements	0	10	19	71	0	100
Delays in getting approvals or consent from land owners and institutions such as road agencies, railway agencies, county office, among others affects delivery of premium customer schemes	0	10	0	52	38	100

From the data of Table 4.7, it was deduced that wayleave requirements are well communicated by Kenya Power to the customer as indicated by majority of the respondents who agreed. Also,

obtaining wayleave consent can be difficult in some instances and easier in other cases as indicated by almost equal proportions of respondents who either “Agreed” or “Disagreed”. This is an area that requires improvement as far as execution of premium customer schemes is concerned. Kenya Power may initiate interagency forums and promote awareness on the need of providing consent on land required for development of infrastructure. In addition, Kenya Power actively involves customers, land owners and institutions during wayleave acquisition in a bid to obtain mutual agreements. This was indicated by most of the respondents who agreed. Finally, delays in getting approvals or consent from land owners and institutions affects delivery of premium customer schemes as indicated by most of the respondents. This calls for initiatives to be carried out in a bid to improve the wayleave acquisition process. For instance, Kenya Power can hold regular meetings and workshops with land owners or institutions in a bid to create beneficial relationships and sorting out any emerging challenges in the wayleave acquisition process.

Also, participants were asked the extent to which wayleave requirements influence the delivery of premium customer schemes. From the findings, 10% of the respondents indicated that it was at a very low extent, 10% indicated that it was at a low extent, 21% indicated that it was at a moderate extent, 30% indicated that it was at a great extent and 29% indicated that it was at a very great extent. The data clearly indicated that wayleave requirements have a very great influence on the performance of premium customer schemes.

The findings further support the stakeholder participation theory that is based on the idea that a project company or an entity has relationships with individuals or parties or groups or institutions (stakeholders) who are affected by or can affect its decisions (Heldman, 2013). Successful execution of projects is dependent upon proper management of the stakeholders involved. Kenya Power must step up efforts of creating beneficial relationships and working together with all parties involved in wayleave acquisition. This is critical for successful implementation of premium customer schemes.

In addition, the respondents were asked to give suggestions on how issues related to wayleave requirements can be addressed. The recommendations given include: increasing awareness of the need to provide consent for land required for development of power facilities and initiation of forums which seek to create beneficial relationships among the stakeholders.

4.7 Influence of Funding on the Performance of Premium Customer Schemes in Kenya Power and Lighting Company

The third objective of this study sought to determine the influence of funding on the performance of premium customer schemes in Kenya Power in the Nairobi region. The participants responded to the various indicators of the objective as outlined in Table 4.8

Table 4. 8: Funding

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Total (%)
	1	2	3	4	5	
Kenya power communicates well payment terms for power connection to the customer (applicant for power)	0	10	10	42	38	100
Customers pay the full cost of power within the required time	10	52	38	10	0	100
Customers have the ability to pay for the full cost of power connection	10	33	27	20	10	100
Kenya power actively involves the premium customer in planning for the payment of cost power connection	10	40	30	20	0	100
Kenya power has incentives which aid the premium customer pay for the cost of power connection	10	40	20	30	0	100
Scope changes such as change in the design, variation in the cost of materials over time, change of the power line route, among others affect the delivery of premium customer schemes	0	0	38	33	29	100

From the data of Table 4.8, it was determined that Kenya Power communicates well payment terms for power connection to the customers as indicated by majority of the respondents who agreed. Also, customers do not pay the full cost of power on time as indicated by a large proportion of the respondents. This is an area that requires improvement as far as execution of premium customer schemes is concerned. Thirdly, a significant number of the customers cannot afford the cost of

power connection. This was indicated by almost equal proportions of respondent who either “Agreed” or “Disagreed”. This prompts for initiatives which will enable customers pay for the cost of power. For instance, the government can offer subsidies to premium customers. Fourthly, there is limited involvement by Kenya Power in aiding the customer plan for payment of the cost of power as indicated by most of the respondents. This prompts the need for Kenya Power to actively involve the customer in forums where the customer can be advised on how to best plan for payment of the cost of power. In addition, Kenya Power has limited incentives as shown by a large proportion of respondents. This prompts the need for Kenya Power to raise awareness of any financial incentives it has and development of more facilities that aid the customer pay for the cost of power. Finally, project scope changes such as change in the design, variation in the cost of materials over time and change of the power line route affect delivery of premium customer schemes. This was indicated by most of the respondents who agreed. This calls for Kenya Power to come up with a strategy of managing project scope changes. For instance, all key stakeholders being involved in all phases of execution of premium customer schemes.

Also, participants were asked the extent to which funding influences the delivery of premium customer schemes. From the findings, 0% of the respondents indicated that it was at a very low extent, 0% indicated that it was at a low extent, 23% indicated that it was at a moderate extent, 29% indicated that it was at a great extent and 48% indicated that it was at a very great extent. The data clearly indicated that funding has a very great influence on the performance of premium customer schemes.

The findings support the theory of constraints that is based on the idea that any system (organization or company) is restricted from achieving its goals or objectives by one or more constraints (Levinson, 2007). The theory focuses on improving organization processes by identifying and exploiting constraints until they are no longer a limiting factor. This may involve resources being employed to improve a constraint, review of existing processes and even restructuring of an organization. Once a constraint is ‘broken’ and is not impeding throughput, focus shifts to the next constraint (Woeppel, 2001). Funding is critical for successful execution of premium customer schemes. Kenya Power and the government can come up with strategies and incentives which aid the customer pay for the cost of power. For instance, the government can initiate measures such as offering subsidies and providing tax incentives to premium customers.

Kenya Power can also come up with forums which seek to advise the premium customer on how to plan for payment of the cost of power.

In addition, the respondents were asked to give suggestions on how issues related to funding can be addressed. The recommendations given include: Kenya Power raising awareness of any available financial incentives and the government offering subsidies to the premium customers.

4.8 Influence of Availability of Construction Materials on the Performance of Premium Customer Schemes in Kenya Power and Lighting Company

The fourth objective of this study sought to evaluate the influence of availability of construction materials on the performance of premium customer schemes in Kenya Power in the Nairobi region. The participants responded to the various indicators of the objective as outlined in Table 4.9

Table 4. 9: Availability of Construction Materials

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Total (%)
	1	2	3	4	5	
Lengthy procurement procedures affect availability of construction materials	0	0	0	33	67	100
Kenya power accurately forecasts materials required for construction works of power facilities	0	38	38	24	0	100
Materials required for construction works are easily obtained in the local and foreign markets	33	10	27	30	5	100
Lack of construction materials influences delivery of premium customer schemes	0	9	0	62	9	100
Kenya Power actively engages the customer in cases where construction materials are not available and offer short or medium-term solutions	10	20	27	23	10	100

From the data of Table 4.9, it was deduced that lengthy procurement procedures affect availability of construction materials as indicated by majority of the respondents who agreed. This is an area that requires improvement. Kenya Power may adopt much shorter procurement methods such as direct and restricted procurement for critical materials in a bid to increase availability. Though this is subject to the existing public procurement act which may require adjustments in order to reduce restrictions on importation of key equipment required for power facilities. Also, Kenya Power is not effective in accurately forecasting materials required for construction works of power facilities as indicated by a large proportion of the respondents. This is prompts for improvement of internal processes in Kenya Power. Thirdly, some construction materials are available in the local market

while others must be sourced from foreign markets. This was indicated by almost equal proportions of respondent who either “Agreed” or “Disagreed”. This prompts for initiatives which will build capacity for manufacture of equipment in the local economy. For instance, the government can offer cheap tariffs for materials imported abroad and provide a conducive environment for local manufacturing of specialised power equipment. Fourthly, lack of construction materials affects delivery of premium customer schemes as indicated by most of the respondents. This prompts the need for Kenya Power to improve its internal procurement processes and the government to offer incentives for equipment sourced from foreign markets. In addition, Kenya Power needs to put in more effort in engaging customers in cases where construction materials are not available and offer short or medium-term solutions. This was indicated by almost equal proportions of respondent who either “Agreed” or “Disagreed”. This prompts the need for Kenya Power to come up with forums which address various issues associated with availability of construction materials.

Also, participants were asked the extent to which availability of construction materials influences the delivery of premium customer schemes. From the findings, 9% of the respondents indicated that it was at a very low extent, 0% indicated that it was at a low extent, 10% indicated that it was at a moderate extent, 33% indicated that it was at a great extent and 48% indicated that it was at a very great extent. The data clearly indicated that availability of construction has a very great influence on the performance of premium customer schemes.

The findings further support the theory of constraints that is based on the idea that any system (organization or company) is restricted from achieving its goals or objectives by one or more constraints (Levinson, 2007). The theory focuses on improving organization processes by identifying and exploiting constraints until they are no longer a limiting factor (Woeppe, 2001). Availability of construction materials is vital for successful execution of premium customer schemes. Kenya Power needs to streamline its processes especially the procurement procedures and interdepartmental communication. The government can also provide incentives such as low tariffs being charged on power equipment sourced from external markets and local producers of power equipment getting tax relief.

In addition, the respondents were asked to give suggestions on how issues related to availability of construction materials can be addressed. The recommendations given include: Kenya Power

streamlining its internal processes especially procurement and the government creating an enabling environment for local producers of power equipment.

4.9 Regression Analysis

Regression analysis is a statistical technique that is useful in analysing the relationship between two or more variables. It is a way of mathematically sorting out which variables indeed have an impact (Project Management Institute, 2013). This investigation adopted linear multiple regression in a bid to establish the relationship between independent variables (customer requirements, wayleave requirements, funding and availability of construction materials) and dependant variable (performance of premium customer schemes). The Statistical Package for Social Scientists (SPSS) version 20 was used for analysis. The research also used a level of significance of 95%.

The model summary and regression coefficients are shown in Table 4.10 and Table 4.11.

Table 4. 10: Regression Model Summary

	R	R Square	Adjusted R Square	Standard Error of the Estimate	F Change	Sig. F Change
1	0.780	0.616	0.601	3.10	2.18	0.001

The regression model shown in Table 4.10 predicts the performance of premium customer schemes. R is a coefficient indicating the correlation between the variables. Its value was 0.78 indicating a high and positive linear relationship between the variables.

The model had a significance value (p-value) of 0.001 which is less than 0.05 (5%). This indicates it is statistically significant. Consequently, it was deduced that customer requirements, wayleave requirements, funding and availability of construction materials influence the performance of premium customer schemes in Kenya Power.

R Square is a coefficient which indicates the variation in performance of premium customer schemes due to changes in the four independent variables (predictors). Its value was 0.616 indicating there was a variation of 62% in performance of premium customer schemes due to

changes in customer requirements, wayleave requirements, funding and availability of construction materials at 95% confidence interval.

Adjusted R Square indicates how accurate our model is in predicting performance of premium customer schemes which can be inferred to the entire population of premium customers. Its value was 0.601 (60%) which gives a more realistic indicator of its predictive power.

Table 4. 11: Regression Coefficients

Model	B	Std. Error	Beta	T	Significance
Constant	0.321	5.235		2.190	0.006
Customer requirements	0.701	0.146	0.241	4.412	0.005
Wayleave requirements	0.740	0.102	0.312	3.188	0.003
Funding	0.827	0.046	0.401	2.123	0.000
Availability of construction materials	0.772	0.274	0.351	2.432	0.002

From Table 4.11, it was deduced that the regression equation was $Y = 0.321 + 0.701X_1 + 0.740X_2 + 0.827X_3 + 0.772X_4$. Consequently, performance of premium customer schemes = $0.321 + (0.701 \times \text{customer requirements}) + (0.740 \times \text{wayleave requirements}) + (0.827 \times \text{Funding}) + (0.772 \times \text{availability of construction materials})$. All the regression coefficients were statistically significant since they all had p-values less than 0.05 (5%).

The data revealed that holding the independent variables (customer requirements, wayleave requirements, funding and availability of construction materials) at a constant zero, performance of premium customer schemes in Kenya Power would be at 32.1%. A unit increase in customer requirements being met would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.701. Also, A unit increase in wayleave requirements being met

would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.740. In addition, a unit increase in funding would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.827. Finally, a unit increase in availability of construction materials would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.772.

The findings showed that the most significant factor was funding with a p-value of 0.000. The second most significant factor was availability of construction materials with a p-value of 0.002. The third most significant factor was wayleaves with a p-value of 0.003 while the least significant factor was customer requirements with a p-value of 0.005. Some of the findings collaborate with investigations done by other researchers. For instance, a study by Kariungi (2014) on factors affecting execution of power projects in Kenya Power in Thika area found that funding and procurement delays are the main factors that contribute to stalling of such projects. Another study by Masila (2016) on the factors that contribute to delays in timely execution of power projects in Kenya Power found that funding difficulties is the key factor.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND
RECOMMENDATIONS

5.1 Introduction

This chapter presents the findings of the study as per the research objectives. Also, conclusions based on the entire study and recommendations for improvement on the performance of premium customer schemes in Kenya Power are discussed. In addition, a discussion of areas which require further research is presented.

5.2 Summary of Findings

Given below is a summary of the key study findings.

5.2.1 Performance of Premium Customer Schemes

The investigation revealed that a significant number of premium customer schemes are not completed within the required time as indicated by majority of the respondents who agreed. Also, some of the premium customer schemes are completed within budget but there is still a reasonable number that is not completed within budget. This was indicated by a small proportion of respondents who agreed and as sensible number of respondents who were either neutral or strongly disagreed. Finally, premium customers schemes are completed within the required standards as indicated by most of the participants who agreed.

In addition, participants were asked the extent to which delivery of premium customer schemes meets the desired expectations/result. From the findings, 0% of the respondents indicated that it was at a very low extent, 0% indicated that it was at a low extent, 67% indicated that it was at a moderate extent, 33% indicated that it was at a great extent and 0% indicated that it was at a very great extent. The findings clearly indicated that delivery of premium customer schemes meets the desired expectations or results at a moderate extent.

Finally, the investigation revealed that holding the independent variables (customer requirements, wayleave requirements, funding and availability of construction materials) at a constant zero, performance of premium customer schemes in Kenya Power would be at 32.1%.

5.2.2 Customer Requirements and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

The study revealed that customer requirements are well communicated by Kenya Power to the customer as indicated by majority of the respondents who agreed. Also, customers do not provide adequate facilities on time as indicated by a large proportion of the respondents. Thirdly, delivery of facilities that meet Kenya Power's Standards is not adequate. This was indicated by almost equal proportions of respondent who either "Agreed" or "Disagreed". Fourthly, there is limited awareness on the Kenya Power standards that should be met when developing facilities as shown by almost equal proportions of respondents who either "Agreed" or "Disagreed". In addition, customers are not committed in providing facilities which meet Kenya Power standards as shown by a large proportion of respondents. Finally, some customers can provide the required facilities while others don't have ability do the same as indicated by almost equal proportions of respondents who either "Agreed" or "Disagreed".

In addition, participants were asked the extent to which customer requirements influence the delivery of premium customer schemes. From the findings, 0% of the respondents indicated that it was at a very low extent, 9% indicated that it was at a low extent, 29% indicated that it was at a moderate extent, 43% indicated that it was at a great extent and 19% indicated that it was at a very great extent. The findings clearly indicated that customer requirements have a great influence on the performance of premium customer schemes.

Finally, the study revealed that a unit increase in customer requirements being met would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.701.

5.2.3 Wayleave Requirements and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

The investigation revealed that wayleave requirements are well communicated by Kenya Power to the customer as indicated by majority of the respondents who agreed. Also, obtaining wayleave consent can be difficult in some instances and easier in other cases as indicated by almost equal proportions of respondents who either "Agreed" or "Disagreed". In addition, Kenya Power actively involves customers, land owners and institutions during wayleave acquisition in a bid to obtain mutual agreements. This was indicated by most of the respondents who agreed. Finally,

delays in getting approvals or consent from land owners and institutions affects delivery of premium customer schemes as indicated by most of the respondents.

In addition, participants were asked the extent to which wayleave requirements influence the delivery of premium customer schemes. From the findings, 10% of the respondents indicated that it was at a very low extent, 10% indicated that it was at a low extent, 21% indicated that it was at a moderate extent, 30% indicated that it was at a great extent and 29% indicated that it was at a very great extent. The findings clearly indicated that wayleave requirements have a very great influence on the performance of premium customer schemes.

Finally, the investigation revealed that a unit increase in wayleave requirements being met would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.740.

5.2.4 Funding and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

The research revealed that Kenya Power communicates well payment terms for power connection to the customers as indicated by majority of the respondents who agreed. Also, customers do not pay the full cost of power on time as indicated by a large proportion of the respondents. Thirdly, a significant number of the customers cannot afford the cost of power connection. This was indicated by almost equal proportions of respondent who either “Agreed” or “Disagreed”. Fourthly, there is limited involvement by Kenya Power in aiding the customer plan for payment of the cost of power as indicated by most of the respondents. In addition, Kenya Power has limited financial incentives as shown by a large proportion of respondents. Finally, project scope changes such as change in the design, variation in the cost of materials over time and change of the power line route affect delivery of premium customer schemes. This was indicated by most of the respondents who agreed.

In addition, participants were asked the extent to which funding influences the delivery of premium customer schemes. From the findings, 0% of the respondents indicated that it was at a very low extent, 0% indicated that it was at a low extent, 23% indicated that it was at a moderate extent, 29% indicated that it was at a great extent and 48% indicated that it was at a very great extent. The

findings clearly indicated that funding has a very great influence on the performance of premium customer schemes.

Finally, the research revealed that a unit increase in funding would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.827.

5.2.5 Availability of Construction Materials and Performance of Premium Customer Schemes in Kenya Power and Lighting Company

The study revealed that lengthy procurement procedures affect availability of construction materials as indicated by majority of the respondents who agreed. Also, Kenya Power is not effective in accurately forecasting materials required for construction works of power facilities as indicated by a large proportion of the respondents. Thirdly, some construction materials are available in the local market while others must be sourced from foreign markets. This was indicated by almost equal proportions of respondent who either “Agreed” or “Disagreed”. Fourthly, lack of construction materials affects delivery of premium customer schemes as indicated by most of the respondents. In addition, Kenya Power needs to put in more effort in engaging customers in cases where construction materials are not available and offer short or medium-term solutions. This was indicated by almost equal proportions of respondent who either “Agreed” or “Disagreed”.

In addition, participants were asked the extent to which availability of construction materials influences the delivery of premium customer schemes. From the findings, 9% of the respondents indicated that it was at a very low extent, 0% indicated that it was at a low extent, 10% indicated that it was at a moderate extent, 33% indicated that it was at a great extent and 48% indicated that it was at a very great extent. The findings clearly indicated that availability of construction has a very great influence on the performance of premium customer schemes.

Finally, the study revealed that a unit increase in availability of construction materials would result in the performance of premium customer schemes in Kenya Power increasing by a factor of 0.772.

5.3 Conclusion

This study concluded that delivery of premium customer schemes in Kenya Power meets the desired expectations or results at a moderate extent. Premium customers schemes are completed

within the required standards. However, a significant number of the schemes are not completed within the required time. Also, some of the schemes are completed within budget but there is still a reasonable number that is not completed within budget.

This investigation determined that customer requirements have a great influence on the performance of premium customer schemes in Kenya Power. Customer requirements are well communicated by Kenya Power to the customer. However, there are still areas requiring improvement. First, customers do not provide adequate facilities on time. Also, delivery of facilities that meet Kenya Power's Standards is not adequate. Thirdly, there is limited awareness on the Kenya Power standards that should be met when developing facilities. Fourthly, customers are not committed in providing facilities which meet Kenya Power standards. Finally, some customers can provide the require facilities while others don't have the ability do the same.

This research concluded that wayleave requirements have a very great influence on the performance of premium customer schemes in Kenya Power. Wayleave requirements are well communicated by Kenya Power to the customer. Also, the utility actively involves customers, land owners and institutions during wayleave acquisition in a bid to obtain mutual agreements. However, there are still areas requiring improvement. First, there is difficulty in obtaining consent from land owners or institutions where in some instances it is tough and easier in other cases. In addition, delays in getting approvals or consent from land owners and institutions affects delivery of premium customer schemes.

This study concluded that funding has a very great influence on the performance of premium customer schemes in Kenya Power. The utility communicates well payment terms for power connection to the customers. However, there are still areas requiring improvement. First, customers do not pay the full cost of power on time. Also, some of the customers cannot afford the cost of power connection. Thirdly, there is limited involvement by Kenya Power in aiding the customer plan for payment of the cost of power. In addition, Kenya Power has limited financial incentives. Finally, project scope changes such as change in the design, variation in the cost of materials over time and change of the power line route affect delivery of premium customer schemes.

This investigation determined that availability of construction materials has a very great influence on the performance of premium customer schemes in Kenya Power. This factor revealed need for

improvement in many areas. First, lengthy procurement procedures affect availability of construction materials. Also, Kenya Power is not effective in accurately forecasting materials required for construction works of power facilities. Thirdly, some construction materials are available in the local market while others must be sourced from foreign markets. Fourthly, lack of construction materials affects delivery of premium customer schemes. In addition, Kenya Power needs to put in more effort in engaging customers in cases where construction materials are not available and offer short or medium-term solutions.

5.4 Recommendations

This study recommends that issues related to customer requirements can be dealt with by adopting various strategies. First, Kenya Power should increase awareness of the required standards for development of facilities through various forums such as meetings, workshops and the social media. Also, the utility should carry out initiatives seeking to improve the customer's capacity to develop facilities that meet its standards. For instance, customers can be linked with professional contractors who have vast experience in developing power facilities. In addition, the utility may opt to develop the facilities on its own rather than relying on the customer.

This investigation recommends that issues related to wayleave requirements can be dealt with by adopting various measures. Kenya Power should increase awareness of the need to provide consent for land required for development of power facilities. Also, the utility should initiate forums such as stakeholder meetings which seek to create beneficial relationships among the stakeholders.

This research recommends that issues related to funding can be dealt with by adopting various strategies. First, Kenya Power should actively involve the customer in forums where the customer can be advised on how to best plan for payment of the cost of power. Also, the utility should raise awareness of any financial incentives it has and develop more facilities that aid the customer pay for the cost of power. Thirdly, a strategy should be formulated by the utility to manage project scope changes. In addition, all key stakeholders should be involved in all phases of execution of premium customer schemes for them to understand any critical and emerging issues. Finally, the government in collaboration with development partners can come up with a subsidy program which seeks to make the cost of power connection affordable to premium customers.

This research recommends that issues related to availability of construction materials can be dealt with by adopting various measures. First, Kenya Power may adopt much shorter procurement methods such as direct and restricted procurement for critical materials in a bid to increase availability. Though, this is subject to the existing public procurement act which may require adjustments to reduce restrictions on importation of key equipment required for power facilities. Also, the utility should improve its internal processes especially material forecasting, procurement and interdepartmental communication. Thirdly, initiatives should be initiated to build capacity for manufacture of specialised power equipment in the local economy. For instance, the government can offer cheap tariffs for specialized materials imported abroad and provide tax relief to local manufacturers. In addition, the utility should put in more effort in engaging customers in cases where construction materials are not available and offer short or medium-term solutions. More effort should be put in facilitation of forums which address various issues associated with availability of construction materials.

In a nutshell, delivery of premium customer schemes in Kenya Power can be improved by adopting various key strategies. First, Kenya Power should streamline its internal processes especially material forecasting, procurement procedures and interdepartmental communication. Also, the organization must involve stakeholders in all phases of implementation of premium customer schemes in bid to identify and address any issues arising during the process. In addition, the government can provide incentives which stimulate connectivity of premium customers. For instance, low tariffs can be applied to power equipment sourced from foreign markets, premium customers can benefit from subsidies and local producers of power equipment can be given tax relief. The public procurement act may be reviewed to minimise procurement restrictions imposed on specialized power equipment being sourced from external markets, competition in the energy sector can be promoted and more efforts can be channelled towards further privatization of the energy sector

5.5 Areas for Further Research

Areas which I recommend for further research include introduction of competition in the energy sector and further privatization of the energy sector.

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APPENDIX 1
QUESTIONNAIRE

Good morning/ afternoon,

I am conducting a research on factors which influence the performance of premium customer schemes in Kenya Power in the Nairobi region and would be very grateful if respond to take your time to participate in this study. The survey is being done for academic purposes only. Any information given shall be held in confidence and not used for any other objective contrary to the stated purpose.

SECTION A: GENERAL INFORMATION

Please tick where appropriate

1. Please indicate your gender
Male ()
Female ()
2. Please indicate your age ()
Below 20 years () 20-30 years () 30-40 years () 50 years and above ()
3. Please indicate your level of education
Certificate () Diploma () Bachelor () Masters () PHD () Other
4. Please indicate your level of participation in execution of premium customer schemes
Kenya Power staff ()
External party such as customer/applicant for power/electrical contractor/land owner ()

SECTION B: CUSTOMER REQUIREMENTS

5. Kenya Power usually requires the customer (applicant for power) to provide facilities such as a transformer room or a metering room or land for development of a metering facility. The customer may also be required to do civil works such as providing cable conduits, trenches, among others. To what extent do you agree with the following statements with regard to customer requirements on a scale of 1-5 where 1 – strongly disagree 2- disagree 3- neutral 4- agree 5-strongly agree? Please tick only one code for each statement

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Customer requirements are well communicated by Kenya Power to the applicant for applying for power					
Customers generally provide adequate facilities on time					
Facilities provided by the customer generally meet Kenya Power's standards					
Customers (applicants for power supply) are aware of the standards that their facilities should meet.					
Customers are committed in providing facilities which meet Kenya Power's standards					
Customers have the ability to provide the facilities required by Kenya Power					

6. To what extent do customer requirements influence the delivery of premium customer schemes?
 To a very low extent () To a low extent () To a moderate extent () To a great extent
 To a very great extent ()
7. What other issues related to customer requirements apart from those listed above do you think have influence on delivery of premium customer schemes?
8. Give suggestions on how issues related to customer requirements can be addressed

SECTION C: WAYLEAVE REQUIREMENTS

During execution of premium customer schemes, Kenya Power must obtain consent or permission from land owners and other relevant institutions before developing power facilities. To what extent do you agree with the following statements with regard to wayleave requirements on a scale of 1-5 where 1 – strongly disagree 2- disagree 3-neutral 4-agree 5-strongly agree? Please tick only one code for each statement.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Wayleave requirements are well communicated by Kenya Power to the customer (applicant for power)					
Wayleave consent (permission) is easily obtained from land owners and institutions such as road agencies, railway agencies, county offices, among others					
Kenya power actively involves the customer and land owners or institutions during wayleave acquisition in an effort to get mutual agreements					
Delays in getting approvals or consent from land owners and institutions such as road agencies, railway agencies, county office, among others affects delivery of premium customer schemes					

9. To what extent do wayleave requirements influence the delivery of premium customer schemes?

To a very low extent () To a low extent () To a moderate extent () To a great extent

To a very great extent ()

10. What other issues related to wayleave requirements apart from those listed above do you think have influence on delivery of premium customer schemes?
11. Give suggestions on how issues related to wayleave requirements can be addressed.

SECTION D: FUNDING

12. What sources of funds do applicants use to pay for power supply?

Internally generated funds ()

External funds ()

Other sources of funds ()

13. Payment of the full quoted cost of connecting power by the premium customer is a necessary requirement before Kenya Power begins the wayleave acquisition process and construction works. Please indicate your level of agreement with the following statements concerning funding of premium customer schemes on a scale of 1-5 where 1 – strongly disagree 2- disagree 3- neutral 4-agree 5-strongly agree? Please tick only one code for each statement.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Kenya power communicates well payment terms for power connection to the customer (applicant for power)					
Customers pay the full cost of power within the required time					
Customers have the ability to pay for the full cost of power connection					
Kenya power actively involves the premium customer in planning for the payment of cost power connection					
Kenya power has incentives which aid the premium customer pay for the cost of power connection					
Scope changes such as change in the design, variation in the cost of materials over time, change of the power line route, among others affect the delivery of premium customer schemes					

14. To what extent does funding influence the delivery of premium customer schemes?

To a very low extent () To a low extent () To a moderate extent () To a great extent
To a very great extent ()

15. What other issues related funding apart from those listed above do you think have influence on delivery of premium customer schemes?

16. Give suggestions on how challenges or issues related to funding can be addressed.

SECTION E: AVAILABILITY OF CONSTRUCTION MATERIALS

17. During the construction phase, in delivery of premium customer schemes Kenya Power must carry out construction works using materials and equipment such as cables, conductors,

termination kits, metering breakers, among others. Please indicate your level of agreement with the following statements concerning availability of construction materials on a scale of 1-5 where 1 – strongly disagree 2- disagree 3-neutral 4-agree 5-strongly agree? Please tick only one code for each statement.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Lengthy procurement procedures affect availability of construction materials					
Kenya power accurately forecasts materials required for construction works of power facilities					
Materials required for construction works are easily obtained in the local and foreign markets					
Lack of construction materials influences delivery of premium customer schemes					
Kenya Power actively engages the customer in cases where construction materials are not available and offer short or medium term solutions					

18. To what extent does availability of construction materials influence the delivery of premium customer schemes?

To a very low extent () To a low extent () To a moderate extent () To a great extent
To a very great extent ()

19. What other issues related availability of construction materials apart from those listed above do you think have influence on delivery of premium customer schemes?

20. Give suggestions on how issues related to funding can be addressed.

SECTION F: PERFORMANCE OF PREMIUM CUSTOMER SCHEMES

21. To what extent does delivery of premium customer schemes meet the desired expectation/results?

To a very low extent () To a low extent () To a moderate extent () To a great extent ()
 To a very great extent ()

22. Please indicate the extent to which you agree with the following statements concerning delivery of premium customer schemes on a scale of 1-5 where 1 – strongly disagree 2- disagree 3-neutral 4-agree 5-strongly agree? Please tick only one code for each statement.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Premium customer schemes are completed within the required time					
Premium customer schemes are completed within the planned budget					
Premium customer schemes are completed within the required standards					

23. Give suggestions on how delivery of premium customer schemes can be improved

APPENDIX 2

LETTER FROM UNIVERSITY OF NAIROBI



UNIVERSITY OF NAIROBI
OPEN DISTANCE AND e- LEARNING CAMPUS
SCHOOL OF OPEN AND DISTANCE LEARNING
DEPARTMENT OF OPEN LEARNING
NAIROBI LEARNING CENTRE

Your Ref:

Our Ref:

Telephone: 318262 Ext. 120

Main Campus
Gandhi Wing, Ground Floor
P.O. Box 30197
NAIROBI

31st July, 2018

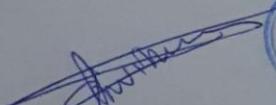
REF: UON/ODeL/NLC/29/075

RE: RONNY MWENGE NAMWONJA- REG NO.L50/87120/2016

The above named is a student at the University of Nairobi Open, Distance and e-Learning Campus, School of Open and Distance Learning, Department of Open Learning pursuing Master of Arts in Project Planning and Management.

He is proceeding for research entitled, **Factors Influencing the performance of Premium customer schemes in Kenya Power and Lighting Company in the Nairobi Region.**

Any assistance given to him will be appreciated.



CAREN AWILLY
CENTRE ORGANIZER
NAIROBI LEARNING CENTRE

APPENDIX 3

RESEARCH AUTHORIZATION LETTER



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/85047/25164**

Date: **15th September, 2018**

Ronny Mwenge Namwonja
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Factors influencing the performance of premium customer schemes in Kenya Power and Lighting Company in the Nairobi Region”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **14th September, 2019.**

You are advised to report to **the Managing Director, Kenya Power and Lighting Company, the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Managing Director
Kenya Power and Lighting Company Ltd.

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

APPENDIX 4

RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MR. RONNY MWENGE NAMWONJA
of UNIVERSITY OF NAIROBI, 0-100
Nairobi, has been permitted to conduct
research in Nairobi County

Permit No : NACOSTI/P/18/85047/25164
Date Of Issue : 15th September,2018
Fee Received :Ksh 1000

on the topic: FACTORS INFLUENCING
THE PERFORMANCE OF PREMIUM
CUSTOMER SCHEMES IN KENYA POWER
POWER AND LIGHTING COMPANY IN THE
NAIROBI REGION

for the period ending:
14th September,2019

Applicant's Signature

Director General
National Commission for Science,
Technology & Innovation

