

# INFLUENCE OF PROJECT MANAGEMENT SKILLS AMONG STAFF AT KPLC ON THE SUCCESSFUL ELECTRICITY INSTALLATION IN CENTRAL RIFT REGION

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## Abstract

The availability of electricity is a key pillar of the economic development and achievement of Kenya's vision 2030 development milestone. However, despite the efforts made by the government to increase electricity installation across the country, connectivity remains relatively low. Some of the efforts undertaken to increase electricity installation include Umeme Pamoja, Stima Loan, and rural electrification programmes amongst others. This study objective of the study was to establish the effects of project management skills among staff at KPLC on the successful electricity installation in Central Rift Region. The study was guided by a descriptive research design and structured questionnaires were used for data collection. The sample size used for the study was 100 respondents consisting of the KPLC electricity installation customers and staff. The SPSS version 21 was used for the data analysis. There were also no statistically significant relationships between project management skills and electricity installation timelines. The findings led to acceptance of the null hypothesis that there is no significant statistical relationship between project management skills and electricity installation timelines. The study concluded that the project management skills have a statistically significant influence on successful electricity installation by KPLC. The study also concluded that there needs to be an improvement in the project management skills of KPLC staff which will enable them to address arising issues throughout the electricity installation process. The study recommends that KPLC staff be taken through on-the-job training to facilitate them to have adequate and comprehensive information to address the customer's concerns. Additionally, KPLC should come up with a system with clear cut processes and timelines provided to enable better planning from the customer's perspective and reduce anxiety in the electricity installation process.

**Keywords:** Project, Project Management

## I. INTRODUCTION

It is estimated that 40% of Kenya's population is urban and nearly half of the entire population will be urban by the year 2020 (Ogutu, 2014)). The country is expected to achieve a gross domestic product (GDP) growth rate of 10% by the year 2030 as well as provide electricity connectivity to 40% of the rural population by 2020 (Oketch, 2013). The contribution of the energy sector to the overall tax revenue is about 20%, equivalent to 4% of GDP (Ngatia, 2013). The country is experiencing major challenges in the energy sector due to the high expectations and demand in the manufacturing, agricultural, tourism, transport and other sectors due to sharp increase in population, rural urban migration and economic growth (Wepukhulu, 2014). Statistics from the Kenya Institute of Public Policy and Analysis (KIPPRA) shows that the electricity demand is projected to grow from 5035Gwh in 2003/04 to 8561 Gwh in 2013/14 (Ngumbau, 2013).

Responding to the limited access to electricity, many governments have adopted the rural electrification programs (Ogutu, 2014). Rural electrification is the process of bringing electrical power to rural and remote areas. Electricity is used, not only for lighting and household purposes but it also allows for mechanization of many farming operations such as threshing, milking and hoisting grain for storage. In areas facing labour shortages, this

allows for greater productivity at reduced cost. The Rural Electrification Authority (REA) that is mandated with implementing the rural electrification programme in Kenya came into operation in July 2007 (Ngatia, 2013) This agency was also expected to increase the speed of implementation of several electricity projects had been lined up for implementation throughout the country including the development of a comprehensive rural electrification master plan which provided crucial information for selecting projects for funding at a given time (Omuoso, 2013). The Kenya Power and Lighting Company (KPLC) projected over 150,000 connections annually by the year 2010 (Kutswa, 2011). The high grid expansion costs, high connection costs, upfront investments, low threshold demand and low population densities affected electricity connections (Kitungu, 2014).

The other efforts that KPLC has undertaken in order to increase the electricity installations include the provision of the stima loan, umeme pamoja initiative, maximization, pre-investment, and slum upgrading (Wambugu, 2010). The KPLC Stima Loan is a facility that has been introduced to enable needy customers' access credit from an internally managed Revolving Fund (RF) for payment of electricity connection. This facility joined the flagship brand, Stima Loan, which was being executed through Equity Bank. The company has benefited positively through creation of a customer base, increase in connectivity and increase in revenue collection. The general public benefited from the Stima Loan and fully supported it as they also found it affordable since the connection cost was low. The process of applying for Stima Loan was also not complicated hence catering for both literate and illiterate customers.

Another initiative promoting electricity access in the rural areas is "Umeme Pamoja", which translates as "Electricity Together". This campaign aims to establish a joint group of households, so as to connect them collectively to the grid, thus saving costs. This scheme is financed by the group settlement electrification schemes created by the Kenya Power. According to Nyakoe (2014), this scheme is aimed at making electricity connection easier, affordable and faster. It is set to enable as many Kenyans as possible get electricity. It involves organizing potential customers in the same neighbourhood to team up and apply jointly so as to reduce individual costs.

The energy sector has been restructured through the sessional paper number of 2004 and the energy act number 12 of 2006 to create diverse institutions with specialized roles. These institutions include the Ministry of Energy (MOE), Energy Regulatory Commission (ERC), Kenya Generating Company (KenGen), Kenyan Power and Lighting Company (KPLC), the Rural Electrification Authority (REA), Kenya Electricity Transmission Company (KETRACO), Geothermal Development Company (GDC) and Independent Power Producers (IPPs) (Mutuku, 2013). Kenya Power owns and operates most of the electricity transmission and distribution system in the country and sells electricity to over 2.6 million customers (Ngumbau, 2013). The Company's key mandate is to plan for sufficient electricity generation and transmission capacity to meet demand; building and maintaining the power distribution and transmission network and retailing of electricity to its customers (Oketch, 2013). The Government has a controlling stake at 50.1% of shareholding with private investors at 49.9% (Nyakoe, 2014). Kenya Power is listed on the Nairobi Securities Exchange. The KPLC is divided into nine regions that is Central Rift, Coast, Mount Kenya, Nairobi North, Nairobi South, Nairobi West, North Eastern, North Rift and West Kenya regions. The central rift region is composed of Naivasha, Nyahururu, Molo, Ravine, Narok, Maralal, and Nakuru sub branches.

## II. LITERATURE REVIEW

### Theoretical Review

The theoretical review was examined using the Theory of Constraints.

### Theory of Constraints

The study was based on theory of constraints. This theory has been applied to production planning, production control, project management, performance measurement as well as in not for profit facilities (Kuria, 2013). This theory helps in identifying the most important bottleneck in the processes and systems, so that performance can be improved (Mawia, 2013). Theory of constraints is based on the fact that, like a chain with its weakest link, in any complex system at any point in time, there is most often only one aspect of that system that is limiting its ability to achieve more of its goals (Oketch, 2013). For that system to attain any significant improvement that constraint must be identified and the whole system must be managed with it in mind. This theory is based on five steps which include; identify the system constraints; decide how to exploit the system constraints; subordinate everything else to the above decision; elevate the system constraints; and if in the previous steps a constraint has been broken, go back to the first step, and do not allow inertia to cause a system's constraint (Wepukhulu, 2014). Typically, all projects are managed by focusing on the delivery of the tasks that make up the project, in the seemingly reasonable belief that if these tasks are done on time, the project will be done on time as well (Kuria, 2013). But all too often, project management becomes a chaotic exercise, resulting in inordinate pressure to meet task due dates and frequent re-planning of the project. Apparently, in too many cases, and for a variety of reasons, the long established strategy of focusing on task completion does not seem to work too well (Ogutu, 2014).

## III. OBJECTIVE OF THE STUDY

To establish the effects of project management skills among staff at KPLC on the successful electricity installation in Central Rift Region.

## IV. RESEARCH HYPOTHESIS

**H<sub>0</sub>:** There is no significant statistical relationship between project management skills among staff and successful electricity installations by KPLC in Central Rift.

**H<sub>A</sub>:** There is a significant statistical relationship between project management skills among staff and successful electricity installations by KPLC in Central Rift.

## V. METHODOLOGY

The study adopted the descriptive research design. The target population of this study was the people that KPLC Central Rift region targeted for connection in the 2014-2015 period. The study utilized a sample size of 100 respondents. Therefore, 100 structured questionnaires were distributed to the respondents and 85 questionnaires were found to be complete, which formed the basis of the data analysis in this study. In this context, the response rate for this study was 85.0% which was deemed sufficient for data analysis. According to Mugenda (2003), a response rate of above 80% is deemed sufficient for the study and therefore this response rate at 85.0% was considered sufficient for the study.

## VI. FINDINGS AND DISCUSSIONS

The project management skills are critical in electricity installation as they determine the process flow in the electricity installation process from planning, execution, and monitoring and evaluation bit. The project management skills checked for the KPLC staff included the definition of the customer needs, provision of adequate and comprehensive information to customer's concerns, and clear timelines in electricity installation process. Others are flexibility in undertaking emerging issues during electricity installation process. In the context of the KPLC staff defining the customer's needs, a cumulative figure of 39.6% were in agreement that KPLC did define their electricity installation needs compared to 2.3% of the respondents that were uncertain and 58.2% who disagreed. There is often a need for the service provider such as the KPLC during the electricity installation process to provide adequate and comprehensive information on the customer's concerns. This enables the customers to better plan and to make provisions for arising matters. In this context, it's only a cumulative percentage of 30.33% of the respondents who strongly agreed and agreed that they were provided with adequate and comprehensive information. The ability of the service provider (KPLC) to provide clear cut processes and timelines enables better planning from the customer's perspective and reduces anxiety in the electricity installation process. However, a majority of the respondents (55.8%) felt that there were no clear cut processes and timelines in the installation process. In the context of the KPLC staff being proactive in undertaking the required process in electricity installation, 69.7% of the respondents felt that the KPLC staff were not proactive during electricity process installation. This contributes towards the electricity installation taking a lengthy time executing. Finally, in relations to the flexibility of the KPLC staff dealing with emerging issues, 11.6% of staff strongly agreed that the KPLC staff were flexible, 19.8% chose agree while 20.9% were uncertain, 32.6% disagreed and 15.1% strongly disagreed.

**Table 1: Distribution Frequencies on Project Management Skills**

Statement	SA	A	U	D	SD
The KPLC staff defined my needs in the electricity installation process at my building	29.1%	10.5%	2.3%	23.3%	34.9%
The KPLC staff provided adequate and comprehensive information on all my concerns about the electricity installation process	7.0%	23.3%	29.1%	26.7%	14.0%
There was clear cut processes and timelines during my electricity installation process	7.0%	14.0%	23.3%	29.1%	26.7%
The KPLC staff were proactive in undertaking all the processes required during the electricity installation	0%	7%	23.3%	43.0%	26.7%
The KPLC staff were flexible in dealing with emerging issues during the electricity installation process	11.6%	19.8%	20.9%	32.6%	15.1%

## VII. HYPOTHESIS TESTING

The table above shows the relationship between project management skills and electricity installation. It is clear from the findings that the relationship between project management skills and electricity installation is not statistically significant ( $r = -0.073$ ;  $p > 0.05$ ). The findings led to acceptance of the null hypothesis ( $H_0$ ) that there is no significant statistical relationship between project management skills and electricity installation timelines.

**Table 2: Pearson Correlation between Project Management and Electricity Installation**

		<b>Electricity Installation</b>
Project Management	Pearson Correlation	-.073
	Sig. (2-tailed)	.506
	N	86

## VIII. CONCLUSION

The study concluded that the project management skills have a statistically significant influence on successful electricity installation by KPLC. The study also concluded that there needs to be an improvement in the project management skills of KPLC staff which will enable them to address arising issues throughout the electricity installation process.

## IX. RECOMMENDATION

The study recommends that KPLC staff be taken through on-the-job training to facilitate them to have adequate and comprehensive information to address the customer's concerns. Additionally, KPLC should come up with a system with clear cut processes and timelines provided to enable better planning from the customer's perspective and reduce anxiety in the electricity installation process.

## X. SUGGESTIONS FOR FURTHER STUDIES

The study recommended for further studies an examination of the role of project management in successful electricity installation by KPLC in Kenya.

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