

PROJECT MANAGEMENT PRACTICES AND IMPLEMENTATION OF POWER PROJECTS IN KENYA

Rehema Nyanhoka Ocharo

Masters of Business Administration (Project Management), Kenyatta University,
Kenya

Gladys Kimutai

Lecturer, Department of Management Science, Kenya

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ABSTRACT

The project management practices are those fundamental issues inherent in the project, which must be maintained in order for team work to take place in an efficient and effective manner. They require day to day attention and operate through the life of the project. It is interesting to find out whether project managers in the power sector are aware of the project management practices and how the factors under their control impact on the outcomes. The objectives of this study were to establish the effect of project planning, monitoring, evaluation and stakeholder's participation in power sector projects in Kenya. The study used explanatory survey research design. The study was anchored on stakeholders and resource based view theory. The population of study involved the organization top managers, project managers, project engineers, consultants, procurement and accountants who were involved in construction projects in the power sector. A census of 380 respondents involved in

projects from the companies was carried out. The primary data was collected by use of self-administered survey questionnaire. Data analysis was done by use of descriptive statistics such as frequencies, percentages, mean scores and standard deviation. The study concluded that most power projects in Kenya are well planned but those plans were not well implemented and did not fully involve all the stakeholders when they were in the project design stage and that project monitoring, assessment; follow up, evaluation and feedback were not adhered to making the project implementation process below expectations. The study recommends that project planners need to involve all stakeholders in designing the project, monitoring it, controlling it and evaluation. Evaluation need to be applied in every project via participatory method which facilitates communication of challenges and successes in the project implementation process.

Key Words: *project management practices, implementation, power projects, Kenya*

INTRODUCTION

The power sector in Kenya is currently unbundled into Generation, Transmission and Distribution. Generation comprises of Kenya Electricity Generating Company (KenGen) and Independent Power Producers (IPPs) which are involved in electrical energy production. Transmission and distribution is done by Kenya Power and Lighting Company (KPLC) and involves transportation of the electrical energy from the generating stations to the load centers and retailing it to the customers. The dynamic nature of the environment and increasing competitiveness is forcing many profit and non-profit organizations to rethink on how to remain competitive. Developing countries are also looking into ways to realize a higher and sustainable growth of the economy in a more equitable environment. In order to create business value, more organizations/public sector is turning to project management to help them move beyond positions of competitive disadvantage or parity.

Project success is a topic frequently discussed and yet rarely agreed upon. The views of project success have changed over the years from the definitions that were limited to the implementation phase to definitions that reflect an appreciation of success over the project and product life cycle. The traditional project success has viewed narrowly as the achievement of intended outcomes in terms of specification (quality), time and budget i.e. the 'Iron triangle'. According to Cavarec, Y (2012), you cannot entirely rely on the scope, time and cost to measure project success or failure of projects. Projects can be a success for certain stakeholders and a failure for others, because the point of view matters. This tends to give the project manager an "operational mindset". The definitions of project management success have since become more inclusive and emphasize the importance of working with stakeholders to define needs, expectations, and project tasks. Cavarec, Y (2012) suggests that project managers should be measured on a wider set of objectives and not just the achievement of time, cost and functionality goals.

Project management success focuses upon project process and in particular the successful accomplishment of cost, time and quality objectives. It also considers the manner in which the management process was conducted. Project success deals with the effects of the final product. There is need for the power sector project stakeholders to understand what constitutes project success in view of the many capital intensive projects they implement.

Project Implementation

Effective project implementation or simply put, project success can be measured on the basis of time, cost and quality (performance), commonly known as the triple constraint. These three factors represent the Key Performance Indicators (KPIs). To establish whether a project has been effectively implemented, or better still, if the project has been successful, one has to go back to the initial project goals of time, cost and quality (performance) and be able to measure the extent of their individual achievement.

Kimalu (2011) noted that project implementation in the public entities generally lack clear policies to guide the process and encourage suppliers who can do business with them. For instance, the existing guidelines discourage supplier development and collaborations due to the short term nature of most corporations. Secondly, the payment procedures for goods supplied and work done takes long time to be made thus exposing procurement performance to a very high risk. To implement its projects, KenGen is committed to efficient generation of reliable, safe, quality and competitively priced electric energy to the satisfaction of their customers.

Project Management Practices

Project management practices are those fundamental issues inherent in the project, which must be maintained in order for team working to take place in an efficient and effective manner. They require day to day attention and operate through the life of the project." It is interesting to find out whether project managers in the power sector are aware of the project management practices and how the factors under their control impact on the outcomes.

Development projects recommended under vision 2030 and overall economic growth will increase the demand on Kenya electricity supply. Kenya must therefore generate, transmit and distribute enough energy and improve efficiency. The power sector will therefore have to plan and implement various projects as scheduled in the Updated Least Cost Power Development Plan (ULCPDP) 2008/2028 (GOK 2007). The challenges facing the implementation of projects in this sector include: the long lead times, high costs in the development of energy infrastructure and inadequate specialized skills and tools required for planning and forecasting energy needs. There is need for a radical rethink of the process of project planning and implementation to increase the chances of successful project implementation. This study focused on establishing the project management practices; their effect on stakeholder participation, their influence on monitoring of projects, their effect on project planning, and their effect on the evaluation of power projects and also determine the project management techniques used in the projects.

Implementation of Power Projects in Kenya

The power sector in Kenya is currently unbundled into Generation, Transmission and Distribution. Generation comprises of Kenya Electricity Generating Company (KenGen) and Independent Power Producers (IPPs) which are involved in electrical energy production. Transmission and distribution is done by Kenya Power and Lighting Company (KPLC) and involves transportation of the electrical energy from the generating stations to the load centres and retailing it to the customers. There are future plans of unbundling transmission and distribution to enhance competition at the distribution level. The installed generation capacity in the country is approximately 2,295 MW. The IPP's contribute 606 MW to the national grid. The bulk of the installed capacity is hydro based (60%) while the rest is thermal and geothermal.

The current national access to electricity in Kenya is estimated at 15% with rural penetration of 4 % (GOK 2008). Demand for Electricity in Kenya is projected to grow from 6,203 GWh (FY 2006/07) to 30,999 GWh (FY 2029/30) representing an annual growth rate of 6.5 %. This translates to peak demand of 5,282 MW (FY2029/30) from 1,082MW (FY2006/07) (GOK 2007). There is urgent need to invest in new projects in generation, transmission and distribution.

The Ministry of Energy (MoE) and Kenya Power and Lighting Company have come up with Updated Least Cost Power Development Plan (ULCPDP) 2008/2028. It is imperative for the power sector stakeholders to ensure that the success rate of these power projects is increased given the high cost and long implementation time for power projects. It is important to increase efficiency and effectiveness of the energy development process at all levels including planning, contracting and construction. This should be done while enhancing the local content (materials and services) and also human resources.

For successful implementation of power projects within budget, scope and time, project planning, stakeholder participation, monitoring and evaluation must be efficiently and effectively

conducted. This study, therefore, sought to find out the success factors for the power generation, transmission and distribution projects in Kenya.

STATEMENT OF THE PROBLEM

Power development projects in the government are of great interests to the people who are beneficiaries (World Bank, 2010). For a project to be successful, it must be conducted within the stipulated or planned budget, meet the planned timelines and have an end product that conforms to the quality and standards established by the procuring entity. To add onto that, the deliverables must be procured within the given time duration. (Education for All Global Monitoring Report 2010). This clearly depicts the complexity involved in undertaking government funded projects. Despite the big volume of government funded projects, there is a lot of challenges that are encountered and that threaten the effectiveness of development projects. Therefore, it is safe to say that a lot of government funded projects must have teams that assist in the monitoring and evaluation and production of reports. These reports are for informing the involved stakeholders of the challenges and achievements encountered or to be encountered during the implementation phase. Such project reports lack content to show lessons learnt during previous project. This calls for the project teams to come up with ways of ensuring that such information is shared to all involved stakeholders for future success in the implementation of power projects in the power sector. According to Waweru (2010) KenGen failed to realize one of its key strategic objectives which were to be realized through the Construction of Hydro Plaza Building in Seven folks within a certain timeline due to delayed payments, procurement process in inspection of works, and unforeseen but necessary works associated with the project. Kariuki (2003) did a survey of revenue enhancement practices by local authorities in Kenya, and Mwirichia (2003) studied financing local authorities in Kenya: a case study of Meru Municipality. Muema (2013) investigated the project management practices and challenges at Safaricom Limited, Kenya while Mangi (2009) undertook a survey of the Project Management Practices Adopted by Local Authorities in Kenya using case studies of Thika, Ruiru, Kiambu and Mavoko Local Authorities. In Kenya Power, two studies have been done namely “Responses of the Kenya Power and Lighting Company Limited to changes in the environment (Maina, 2006)” and “Strategic Change Management Practices in the Kenya Power and Lighting Company Limited (Mugo, 2006)”. Maina (2006) focused on how KPLC responds to the changes in the external environment in her study. The findings of her study showed that KPLC is dependent on the environment, and responded to changes for its own survival through expanding its customer base, renegotiating bulk pricing, organization restructuring and pursuing a market driven bulk and retail tariff. There is lack of proper and structured information on how such practices affect implementation of power projects in Kenya. From the above, little research has been conducted to show the effect of project practices on implementation of power projects in Kenya. KenGen however, uses these practices to implement its projects on a day to day basis. This study therefore sought to show the impact of project practices on the overall implementation of power projects by government agencies in Kenya.

GENERAL OBJECTIVE

To investigate the effects of project management practices and implementation of power projects by government agencies in Kenya.

SPECIFIC OBJECTIVES

1. To determine the effect of stakeholder participation on the implementation of power projects in Kenya
2. To investigate the influence of monitoring on implementation of power projects in Kenya
3. To determine the effect of project planning on the implementation of power projects in Kenya
4. To determine the effect of evaluation on the implementation of power projects in Kenya

THEORETICAL REVIEW

Stakeholders Theory

This theory developed by Friedman (2006), states that the organization in itself is thought of as a group of stakeholders and the purpose of the organization should be to manage their interests, needs and viewpoints. A stakeholder is defined as any group or individual who can affect or is affected by the achievement of the organizations objectives (Freeman, 1984: 56). Stakeholder management is thought to be fulfilled by the managers of a firm. The general idea of the stakeholder concept is a redefinition of the organization. In general the concept is about what the organization would be and how it should be conceptualized. The managers should on one hand manage the corporation for the benefit of its stakeholders in order to ensure their rights and the participation in decision making and on the other hand the management must act as the stakeholder's agent to ensure the survival of the firm and safeguard long-term stakes of each group (Friedman, 2006).

This theory shows how an organization is comprised of social attributes by stakeholder interaction. Harrison, Bosse et al. (2007) argues that an organization's value is created when it meets the needs of the firm's important stakeholders in a win-win fashion by attending to the interests of all their stakeholders – not just their shareholders. The organization is made as the grouping of stakeholders, exchanging information, services, and other resources (Sloan, 2009). Stakeholders are grouped into two major categories; primary and secondary. A primary stakeholder is a person or groups of people who are affected either positively or negatively by the organizations actions such as shareholders, suppliers, employees and customers. Secondary stakeholders are groups who indirectly affect or are affected by the organizations actions such as the non-governmental organisations, funding agencies and the public.

The stakeholder theory therefore is relevant in showing the effects the various stakeholders have in successful implementation of power projects, the effect of monitoring on the performance of power projects in Kenya and the effects of evaluation on the implementation of power projects in Kenya.

Resource Based Theory

Resources are inputs into a firm's production process, such as capital, equipment, skills of individual employees, patents, finance, and talented managers. Resources are either tangible or intangible in nature. With increasing effectiveness, the set of resources available to the firm tends to become larger. Individual resources may not yield to a competitive advantage. It is through the synergistic combination and integration of sets of resources that competitive advantages are formed. The Resource-based Theory (RBT) is a project management theory that is widely used in project management. It examines how resources can drive competitive advantage (Killen et al., 2012). The RBT has become one of the most influential project management theories cited in project management literature due to its immediate face validity, appealing core message, and ease to grasp and teach (Kraaijenbrink et al., 2010). However, these advantages don't come without criticism. Those who are against the application of the RBT are criticizing areas that are mainly related to the state of the definitions that RBT is based on, the conceptual and empirical methodology, and so-called deficiencies of the concept (Truijens, 2013). With the help of this theory one can understand how to utilize the available resources, select our suppliers, do contract reviews to accomplish and implement a given project effectively by prioritizing the project needs.

The theory supports the study in showing the effect of monitoring and evaluation on the implementation of power projects in Kenya and the effect of project planning on the implementation of power projects in Kenya. This is an important theory as resources are key components and in the centre of successful project implementation in the power sector.

Institutional Based Theory

Institutions are composed of cultural-cognitive and regulative elements that, together with associated activities and resources give meaning to life Scott (2004). According to this theory, the three pillars of institutions as regulatory, normative and cultural cognitive. The regulatory pillar emphasizes the use of rules, laws and sanctions as enforcement mechanism, with expedience as basis for compliance. The normative pillar refers to norms (how things should be done) and values (preferred or desirable), social obligation being the basis of compliance. The cultural-cognitive pillar rests on shared understanding (common beliefs, symbols, shared understanding).

This theory is very important when it comes to the implementation of sustainable procurement policy and practice in organizations that serve the public. This is a matter of organizational culture and the degree to which the prevailing climate in an organization is supportive of

sustainability and/or of change in general (Brammer & Walker, 2012). From this theory, one can understand the laws and regulations governing procurement practices in effective project implementation for instance from the Evaluation period, Award, Substantial Completion and End of Defects Liability period of project justifying its implementation. This is gained by considering the procurement practices like procurement planning, supplier selection, contract review and monitoring and evaluation towards project implementation. It is therefore imperative to say that this theory supports the effect of monitoring and evaluation in successful implementation of power projects in Kenya.

EMPIRICAL REVIEW

Project Implementation

This stage of management brings together the end product. In this stage, three items of the golden triangle, namely; the cost, the time and the scope have to be seriously considered. A number of authors say that there could be more advanced factors to influence the success of a project. Baker, Murphy (1974) and Fisher (1988) says that the variables for the success of a project are commitment of the team in the project, efficient cost allocation; required set of skills for the managing team, availability of financing; proper planning and governing practices, proper documentation and well laid out guidelines to run the project. Pinto and Slevin (1988), added support form management. Setting informed visions and mission, procuring entity involvement and properly set practices adds up to the success of a project. There is a different opinion form one scholar, Lechler (1998), argues that if a team has in place proper strategies for communication, and properly approved technology, then the project will be successful.

Project Planning and Implementation of Power Projects

Complex projects require a proper and approved plan. This is important because, without this platform, project implementation and completions will not happen. This is according to Chandra (2010). The strategic plans must contain a detailed breakdown of all the levels involved in all the project life cycle.

These plans entail goal setting with properly formulated policies and objectives. This will form the decision making framework by the project teams. According to Hyer and Brown (2010), the components of a proper plan are purpose identification, scope definition, defined user needs, task identification, proper time and cost allocation and responsibility allocation. For proper planning, the following must be adhered to; what the organization intends to achieve and the expected results. Planning requires entails a detailed evaluation of the implementation process on a stage by stage basis and examining in detail the key timelines of every task, the milestones to be achieved, the alternative plan incase fallback and re-planning phase (Frese et al (2013)). Essentially this shows that planning is a continuous process that does not stop until the project is successfully implemented.

Monitoring and Implementation of Power Projects

The scope, cost and time forms the key areas around which a project should be based on. Hyer and Brown (2010) asserts that monitoring is a tracking system that is used in the identification of variances of the original project plan. It is imperative for a project team to be on the same page of the approach to take monitoring the KPIs of the whole project cycle. They defined project control as a group of processes, decisions, and action that assist to solve the project differences that arise in projects.

In their discussions, Meredith and Mantel (2012) say that the most important considerations in planning, monitoring and control are time, cost and scope. The planning, monitoring and control are always a continuous process in a project life cycle and it should be integrated into the project structure. According to Chandra (2010), the project characteristics has posed as a major challenge in determining the success and effectiveness of monitoring and control in a project environment. It encompasses the size of the project and expenditure project activities. Therefore, a well-executed project plan will give a clear and initial indication of the well-being of the project.

Evaluation and Implementation of Power Projects

Most organizations don't possess ways and methods of assessing how projects have been run and ways not to repeat same mistakes in the future project. Most organisations lack a framework in place for evaluating completed projects. Evaluation of a project should be based on indicators that have been built on a sound and thought process keeping in mind the project plan. This calls for assessment, follow up, evaluation and feedback.

There are many methods that can be employed for monitoring and evaluation to provide full participation of key personnel in project decisions. One of the methods is the participatory method. It ensures ownership of a project (World Bank, 2004). For accountability purposes, the challenges and success of a project should be well documented and shared amongst stakeholders. Therefore, according to Moynihan, 2005, evaluation should be incorporated and form a basis for accountability. This is a good way to show project compliance with required parameters and demonstrate.

Stakeholders Participation and Implementation of Power Projects

According to Wixom et al (2011), the participation of all stakeholders and the skills inherent in a team are very important factors. For proper communication, stakeholders should be assigned roles that will ensure successful implementation. To have the proper set of skills for the team members is also a very important factor.

Proper and continuous communication in the project entails ensuring that the stakeholders are properly informed of the progress, changes and goals of the project. This gives the stakeholders a

timely opportunity to give their input on the key issues involving a project. It is important to ensure that the stakeholders accept that the project is important and for them to provide the necessary support required in implementation; Hyer and Brown (2010).

Meredith & Mantel (2012), state that it is important that all the stakeholders involved in a project be in the loop on project reporting according to the level of involvement in the project. This should be an ongoing process from project inception to project completion. For the benefit of proper understanding of project goals, activities and setbacks in the project, the project contract documents should be reviewed in good time.

RESEARCH METHODOLOGY

Research Design

Research design is normally based on the problems that the research aims to solve. It is also defined as a grasp of the elements used in collection and analysis of data. This researcher chooses the explanatory research design method. This method will be used in establishing the connections of project practices and implementation of the projects in Kenya. This method was chosen for the purpose of ensuring that the researcher will be able to group the findings and especially for a huge population. The general rule of the method is to ensure that a target population is selected and analyzed.

Target Population

In this study, the target population was composed of employees at power generating, distributing and transmission agencies in the government of Kenya. The study involved Kenya Power Lighting Company, Kengen, Independent Power Producers, Rural Electrical Authority (REA) managers and 100 Contractors, 80 Consultants/Specialists and 200 Ministry of Energy employees who were involved in construction projects in the power sector. The population included the organization top managers, project managers, project engineers, consultants, procurement and accountants who are involved in construction projects in the power sector. A total population of 384 was targeted.

Sample Design

The sampling design comprises of the sample unit, procedure and frame. This section describes the frame, which is a combination of the population unit where the sample has been selected from. All the managers in the selected organisations were used as a sample population. According to Cooper and Schindler (2006), a representative sample is one which is at least 30% of the population, thus the choice of 50% of the 384 which is equal to 390 was considered as representative.

Data Collection, Procedures and Instruments

For this particular research, questionnaires were employed as a method of collecting primary data. Information on secondary data is found in the company's history archives, research centres, libraries, and the internet. The survey questionnaire used comprised of open-ended and close-ended questions. The difference in the two types of questionnaires is the way the questions are structured. The open-ended questionnaires are structured in a way that allows the respondent to give additional information while the close-ended have structured responses. They are used to rate a number of attributes for the purposes of obtaining varied responses.

Data Analysis and Presentation

The data was organized and cleaned of errors made during data collection. It was coded and keyed into the computer and analyzed using descriptive statistics with the aid of the Statistical Package of Social Sciences (SPSS). The data was broken down into the different aspects of relationship between project management practices and project implementation in Kenya. This offered a quantitative and qualitative description of the objectives of the study. The descriptive result data was presented using as frequency distribution diagrams such as tables frequency, percentage, pie chart, bar graphs. The researcher carried out a multiple regression analysis so as to determine the relationship between project management practices employed and implementation of power projects in Kenya. This is because it looks at the relationships between the variables and analyzing the project management practices and project implementation with the use of multivariate regression analysis done on the data collected. The model took the following structure:

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_i$$

Where: Y = Effective Project Implementation; α_0 = Constant; X_1 = Project Planning; X_2 = Project Monitoring; X_3 = Evaluation; X_4 = Stakeholders participation; While, ϵ = error term.

RESEARCH RESULTS

The general objective of the study was to find out how project practices and implementation of power projects in Kenya affect project success. The study was founded on specific objectives that included the following: to determine the effect of project planning on the implementation of power projects by government agencies in Kenya, to determine how monitoring affects the implementation of power projects by government agencies in Kenya, to determine how evaluation affects the implementation of power projects by government agencies in Kenya and to determine the effect stakeholder participation on the implementation of in Kenya

Project Planning and Implementation of Power Projects in Kenya

The study discovered that 72% of the power projects had strategic plans to guide their project activities and vision. Further, 75% of them had mission statements, vision and core values. This

were key is determining project implementation. The study realized that project planning points out the project goals, communication matrix, risk management plan, budget, project reporting, project monitoring and implementation targets and sets out roles and obligations of each player in the implementation process. This was indicated by a mean of more than 4. Due to poor planning the projects have not been successful and meeting user and funding agency parameters.

Project Monitoring and Implementation of Power Projects in Kenya

From the findings conducted, 85% of the projects had a monitoring plan and tools to enable project monitoring, schedule, budget and scope management. This enabled managers to attain project goals have a workable communication matrix, facilitate project reporting and feedback mechanism. However a significant number of them didn't have a working monitoring plan hence project cost overruns and rescheduling. Monitoring was found to be weak and not systemic among the power project which makes checks and balances not standard. Successes and challenges were not being communicated in most projects which affected the implementation of power projects negatively affected.

Project Evaluation and Implementation of Power Projects in Kenya

From the findings, 73% of the power projects in Kenya were found to have an evaluation plan and tools. Participatory methods were mainly used to evaluation. Questioning approach was used to ensure compliance and stakeholder confidence in facilitating the projects. Given the close relationship between evaluation and monitoring, given poor monitoring mechanism, evaluation was also not given the weight it deserved. Assessment, follow up, evaluation and feedback were not relayed to the stakeholders, funding agencies and even employees which made it hard to demand for results and accountability.

Stakeholders' Participation and Implementation of Power Projects in Kenya

The study realized that the main stakeholders in terms of priority were government officials, project managers, project engineers, community members and donor agencies. There was minimal stakeholder participation hence poor project implementation. Stakeholder participation promotes needs of users, allows users to assume some responsibility and be accountable for some tasks. It encourages shared project ownership and offers opportunities to users. However, stakeholder participation was below expectation and this deprived the stakeholders' ownership, participation in decision making, accountability, awareness and hence poor relationship between implementers and stakeholders.

REGRESSION ANALYSIS

From the findings, R was 0.932, R square was 0.921 and adjusted R squared was 0.718. An R square of 0.921 implies that 92.1% of changes in implementation of power projects by government agencies in Kenya are explained by the independent variables of the study. While

the adjusted R square is 0.718 which significantly adjusts the statistic based on the four independent variables in the model. There are however other factors that influence implementation of power projects in Kenya that are not included in the model which account for 7.9%. An R of 0.932 on the other hand signifies strong positive correlation between the variables of the study.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.932	0.921	0.718	0.395

The value of F calculated is 576.015 while F critical is 379.465. Since the value of F calculated is greater than F critical, the overall regression model was significant and therefore a reliable indicator of the study findings.

Table 2: ANOVA Results

Model	SS	df	MS	F	Significance
Regression	438.04	5	470.4	576.015	0.0812
Residual	251.40	331	0.950		
Total	689.44	336			

The resultant regression equation becomes;

$$Y = 8.28 + 0.955X_1 + 0.876X_2 + 0.745X_3 + 0.860X_4$$

Where: Y is the implementation of power projects by government agencies in Kenya; $\beta_0, \beta_1, \beta_2, \beta_3$ and β_4 are the regression coefficients and X_1, X_2, X_3 and X_4 represent project planning, monitoring, evaluation and stakeholder participation respectively.

Table 3: Regression Coefficients

Model	Unstandardized coefficients		Standardized Coefficients	t	Sig
	B	Std Error	Beta		
Constant	8.28	0.574		8.012	0.000
Project planning	0.955	0.022	0.811	14.15	0.00
Project Monitoring	0.876	0.033	0.120	11.04	0.000
Project evaluation	0.745	0.029	0.127	1.15	0.000
Stakeholder participation	0.860	0.031	0.384	4.42	0.000

This implies that when all the variables of the study are held constant, implementation of power projects by government agencies in Kenya will be at the intercept which is 8.28. A unit

improvement in project planning while all other factors held constant results in 0.955 increase in implementation of power projects, a unit increase in project monitoring with other factors *ceteris paribus* leads to 0.876 increase in implementation of power projects in Kenya. Similarly a unit increase in project evaluation while other factor at *ceteris paribus*, translates to a 0.745 increase in implementation of power projects in Kenya while a unit increase in stakeholder participation with other factors held constant leads to a 0.860 improvement in implementation of power projects in Kenya. The study further indicates a close and strong correlation between project management policies or practices and implementation of power projects especially in the government or public sector in Kenya as concluded by other authors like Chandra (2010) and Murel and Hagens (2012). Other factors like source of funds, good will and project implementation procedure are all captured by the intercept which also indicates that they significantly influence the ultimate fate of a project.

CONCLUSIONS

The study concluded that the power projects in Kenya were not implemented on schedule. The projects were also mostly implemented above and beyond their planned budget. A few of them had achieved project goals and objectives. This indicates a weakness in the implementation of power projects since they did not meet the intended goals. It was further indicated that the projects they implemented were being used by the beneficiaries. This implies a small number of the projects were implemented and became of use to the beneficiaries. It was realized that project planning is essential in project implementation.

From the studies conducted above, the researcher concluded that project planning essential in power project implementation. It is important to note that project planning points out the project goals, communication matrix, risk management plan, budget, project reporting, project monitoring, and implementation targets and above all it sets out roles and obligations of each player in the implementation process. Without a proper plan, execution is a mirage and hence implementation. It was evident from the study that most power projects are planned well, however, the implementation of these plans poses a challenge to power project stakeholders throughout the project life cycle.

From the study it was concluded that project monitoring is also a key part in successful power project implementation. The study proved that there was existence of monitoring that enabled managers to work towards attaining project goals, and it enables the organization to have a communication matrix and also establishes feedback mechanism to the organization. There is therefore need to improve monitoring within the organization so as to prevent cost overruns and re-scheduling of power projects. The study concluded that project monitoring, assessment; follow up, evaluation and feedback were not adhered to making the project implementation process below expectations.

In terms of stakeholder participation in the implementation of power projects, stakeholder participation allows users to assume their responsibility over the project. It was further concluded that stakeholder involvement makes project users accountable for results of tasks assigned to them, encourages shared project ownership, offered opportunities for stakeholders to benefit either directly or indirectly from the project implementation and facilitate stakeholders to influence the decision and policy making processes. There was a clear indication of minimal involvement of stakeholder participation in project implementation which contributes negatively to project implementation and therefore power project failure. It was therefore concluded that all power projects by government agencies which include KERRA, KPLC, KETRACO and KENGEN and IPP did not embrace sufficient stakeholder participation which makes them not have a sense of ownership, accountability, awareness and mutual effect on power project goals.

The study concluded that evaluation exists in their organizations. It enables managers in attaining project objectives, it enables an organization to have a communication matrix, facilitates project reporting and review and also enables establish a feedback mechanism after identifying successes and challenges in power project implementation. This indicates that an evaluation and procedure exists among these government agencies in the power sector in Kenya.

RECOMMENDATIONS

The study recommends that project planners need to involve all stakeholders in designing the project, monitoring it, controlling it and evaluation. Project planning and implementation need to check each other to ensure the project is on schedule, budget and scope. Monitoring and Evaluation need to be applied in every project via participatory method which facilitates communication of challenges and successes in the project implementation process. This also assists in the continued improvement of future upcoming project through the rigorous process of understanding the lessons learnt from these projects. Questioning approach also needs to be employed to promote project orientation, culture and practice all aimed at proper implementation of the project.

Stakeholder participation is key in project success. It should be enhanced to create mutual understanding of project goals between implementers and stakeholders, create awareness on project targets and significance, improve relationships between them and also enhance communication of early warning signals of problems or delays.

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