

**ENVIRONMENTAL CHALLENGES FACING KENGEN IN THE ENERGY
INDUSTRY**

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DECLARATION

STUDENT'S DECLARATION

I declare that this research project is my original work and has not been presented to any other university for the award of a degree.

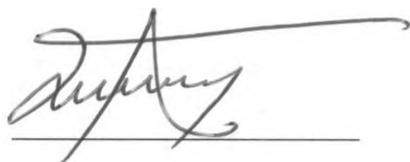
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SUPERVISOR'S DECLARATION

This research project has been submitted with my permission as the University Supervisor.

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DEDICATION

This research is dedicated to all my family members and friends for their inspiration, support, encouragement and understanding throughout the research period.

God bless you all.

ACKNOWLEDGEMENT

It is not easy to thank everyone who had an input into this research, for the list is almost inexhaustible. However, there are those individuals and institutions, without whom, the research consultation and interviews would have been near impossible to take place.

I wish to register my sincere gratitude to the contributors to this project including my supervisor, Dr. J. M. Munyoki and moderator, Dr. John Yabs, and all the other School of Business lecturers for the light they shed on me and the encouragement since we met and all along, for the success of this research.

ABSTRACT

In Kenya, the drive to deregulate and liberalize the power generation market has led to attempts at more precise economic definitions of what constitutes a natural monopoly: taking cost as exogenous. KenGen is in direct competition with four Independent Power Producers who between them produce about 18 percent of the country's electric power. The company utilises various sources to generate electricity ranging from hydro, geothermal, thermal and wind. The objective of this study was to determine the environmental challenges facing KenGen in the energy industry. This study adopted a case study since the unit of analysis was based on one organization. The research utilized primary data which was collected using in depth face to face interviews with the relevant top management.

The study found out that the challenges brought about by the environmental changes has brought about stiff competition, especially competition for resources like human capital, funding from both the government and donors, the changes have resulted to loss of goodwill with the public because of the spiraling cost of electricity as they are not able to appreciate the challenges posed by the reduced water levels as a result of prolonged draught. The study further concludes that the challenges on human resource recruitment, training and development have affected the financial performance of the company due to reduced revenues as a result of reduced water levels and increased costs of operations in recruitment, training and development costs and there is inefficient use of information sources and poor communication link between policy planning and budgeting by discouraging communication between the different stakeholders and reorientation of communication and training involving a wide range of stakeholders working in partnership needs to continue on a long-term basis of energy production in the company. The study recommends that the company should conduct consumer awareness and education campaigns to enlighten them on the activities carried out by KenGen, the challenges that KenGen faces in its operations and in so doing enlighten the consumers on the similarities and differences between KenGen, KPLC, GDC and other players in the energy industry. The study also recommends that the company should also reach out to the relevant bodies such as government bodies and donors to emphasize on the relevance and the importance of supporting KenGen through adequate funding.

TABLE OF CONTENTS

Declaration ii

Dedication iii

Acknowledgement iv

Abstract v

CHAPTER ONE: INTRODUCTION 1

 1.1 Background of the Study1

 1.2 Research Problem.....4

 1.3 Research Objective6

 1.4 Value of the Study.....6

CHAPTER TWO: LITERATURE REVIEW..... 7

 2.1 Introduction7

 2.2 Environmental Challenges7

 2.3 Open Systems Theory15

 2.4 Environment and Strategy.....17

CHAPTER THREE: RESEARCH METHODOLOGY..... 18

 3.1 Introduction18

 3.2 Research Design.....18

 3.3 Data Collection Method18

 3.4 Data Analysis19

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION 20

 4.1 Introduction.....20

 4.2 Environmental Challenges in the Energy Industry20

 4.3 Solutions to the Challenges.....23

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 24

 5.1 Introduction24

 5.2 Summary of the Findings24

 5.3 Conclusions of the Study26

5.4 Recommendations of the Study27

5.5 Recommendations for Further Studies.....27

REFERENCES..... 29

APPENDIX..... 33

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The environment in which organizations operate is constantly changing with different factors influencing them. Since the turn of the millennium, the general business environment has become more volatile, unpredictable and very competitive. Coping with the increasingly competitive environment has called on firms to rethink their marketing strategies (Pearce and Robinson, 2005).

An organization's external environment is defined by Pearce and Robinson (2005), as to include all those factors beyond the control of the firm that influence its choice of direction, action, organizational structure and internal processes. The environment is what gives organizations their means of survival (Johnson and Scholes, 2002). These changes in the environment pose various challenges to organizations. However, the environment is also the source of threats and environmental change can be fatal. It is therefore vital that managers analyze their environments carefully in order to anticipate and if possible, influence environmental change.

Environmental analysis is concerned with examining those forces not under the direct control of the organization or its industry but which can profoundly influence the industry and organizations within the industry. Analysis of the environment is a critical component of strategic management because it produces much of the information required to assess the outlook for the future. The environment being of significant source of change, (Maina, 2008), points that some organizations become victims of change,

while others use change to their advantage. Organizations are more likely to be able to turn change to their advantage if they are forewarned and this forms the major purpose of the environmental analysis process.

1.1.1 Environmental challenges in the energy industry

In Kenya, the drive to deregulate and liberalize the power generation market has led to attempts at more precise economic definitions of what constitutes a natural monopoly: taking cost as exogenous. This has led to the opening of these markets, which previously were thought to be natural monopolies, to competition. Theoretically, vertical separation taunts for competition between generators: KenGen, Geothermal Development Company (GDC) and other small scale producers like Mumias Sugar Company Limited. This is because it allows entry, therefore putting pressure for downward trend in prices, human capital and contract terms. This means that it enhances contestability in the market. Generators compete to supply the transmission grid under long-term contracts. This has caused the one time monopoly in power generation, KenGen to rethink their strategic approach to these challenges posted by the changing operating environment.

KenGen is in direct competition with four Independent Power Producers who between them produce about 18 percent of the country's electric power (www.kengen.co.ke). In 2008, a new player in the power Generation was introduced. The Geothermal Development Company (GDC) which is a state-owned company, formed by the Government of Kenya as a Special Purpose Vehicle to fast track the development of geothermal resources changed completely the operating environment of KenGen. The creation of GDC was based on the government's policy on energy as clearly articulated in

Sessional paper No. 4 of 2004, and the energy Act No.12 of 2006 which un-bundled the key players in the electricity sector to ensure efficiency.KenGen has a workforce of 1,500 staff located at different power plants in the country. With its wealth of experience, established corporate base and a clear vision, the company intends to maintain leadership in the liberalised electric energy sub-sector in Kenya and the Eastern Africa Region (www.kengen.co.ke).

1.1.2 Energy industry in Kenya

Before 1997, The Kenya Power and Lighting Company Limited (KPLC) was charged with generation, transmission and distribution of electricity in Kenya. The Electric Power Act put in place in 1997 saw the separation of generation from transmission and distribution functions. The restructuring of the sector brought five key players. These are Kenya Electricity Generating Company Limited (KenGen), The Kenya Power and Lighting Company Limited (KPLC), Electricity Regulatory Board (ERB), Independent Power Producers (IPPs), and Ministry of Energy.

KenGen is charged with managing all public power generation facilities in the country. The company generates about 80% of the total country power output. It sells power to KPLC.KPLC is responsible for transmission and distribution of electricity. It is currently the sole distributor of electricity in the country(www.kengen.co.ke).

1.1.3 Kenya Electricity Generating Company (KenGen) Ltd

Kenya electricity generating company limited was incorporated in 1954 under the companies Act (Cap 486) of the laws of Kenya as a private limited company (registration

number C20/55) in the name of Kenya Power Company limited. It was converted into a public company with limited liability pursuant to a special resolution passed in 1955. It subsequently changed its name to Kenya Electricity-Generating Company (KenGen) in 1998 following the reforms implemented by the then government of Kenya in the energy sector. The company uses the trade name “KenGen”, which is duly registered as a business name under the registration of business names act (Cap 499). KenGen’s core business is to develop, manage and operate power generation plants to supply electric power generation plants to supply electric power to the Kenyan market and Eastern Africa Region. KenGen was a monopoly hence the sole supplier of electric power generation company in Kenya (www.kengen.co.ke).

Kenya Electricity Generating Company Limited, KenGen is the leading electric power generation company in Kenya, producing about 80 per cent of electricity consumed in the country. The company utilises various sources to generate electricity ranging from hydro, geothermal, thermal and wind. Hydro is the leading source, with an installed capacity of 677.3MW, which is 72.3 per cent of the company’s installed capacity (www.kengen.co.ke).

1.2 Research Problem

Environment has been characterized as complex, dynamic, multi-faceted and having far reaching impact (Kazmi, 2002). As a result of these characteristics, the environment is composed of various factors, events, conditions and influence which interact with each other to create an entirely new set of influences to organizations leading to constant

environmental change in its shape and character. The changes in the operating environment pose great challenges to organizations that have to be dealt with.

Studies on challenges facing organizations as a result of changes in the operating environment have been conducted by various researchers. For instance, Chepkwony (2002) studied strategic responses of petroleum firms in Kenya to challenges of increased competition in the industry. Similarly Ngene(2002) did an empirical investigation into portfolio performance measures by pension fund managers and the challenges they face in portfolio management in Kenya. On the other hand, Koima(2003) did a study on the challenges in the regulation of the insurance industry in Kenya.

The restructuring of the energy sector in Kenya, thereby incorporating five key players brought about a lot of challenges for KenGen. These other players are; The Kenya Power and Lighting Company Limited (KPLC), Electricity Regulatory Board (ERB), Independent Power Producers (IPPs), and Ministry of Energy.

Although the above studies have contributed immensely to theory, the issue of challenges facing KenGen has not been specifically addressed. In addition, the time period between these studies and now could have brought about other factors that necessitate a study to be carried out in this specific area.

This study therefore sought to determine the environmental challenges facing KenGen in the energy industry and was guided by the question: What are the environmental challenges facing KenGen in the energy industry?

1.3 Research Objective

The objective of this study was to determine the environmental challenges facing KenGen in the energy industry.

1.4 Value of the Study

The findings of the study would be important to advancement of theory, as it would form a basis for further research by researchers and scholars. The students and academics would also use this study as a basis for discussions on competition in the geothermal and general power generation industry.

The findings of the study would also be important in practice to KenGen, as it would be able to identify the challenges facing its operations and come up with strategies on how to deal with them.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the information from other researchers who have carried out their research in the same field of study. The specific areas covered here are challenges posted by: environmental changes and challenges, environmental economic factors, social factors, political/legal factors, technological factors, ecological factors, environment and strategy, strategic responses, competitive strategies, diversification strategies, focus strategies, operational strategies, differentiation strategies and empirical studies.

2.2 Environmental Challenges

As Ansoff and McDonnell (1990) argued, business firms are in a constant two way interaction with the environment. They receive an assortment of resources from the environment and after a transformation, deliver them back to the environment in the form of goods and services. In today's global environment, change rather than stability is the order of the day thus posing serious challenges to organizations. Increased trade liberalization reduces country-based trade barriers, thus increasing the opportunity for cross-border entry (Ellis and Williams, 1995). If new entrants have adopted new technologies and/or developed more efficient business operations systems, the competitive intensity will increase pressure of existing industry to internationalize by weakening their competitive position. To be successful overtime, an organization must be in tune with its external environment and respond to challenges posted by such actions.

The speed or response time to the environmental challenges has been identified as a major source of competitive advantage for numerous firms in today's intensely competitive global economy (Pearce and Robinson 2005). The environment is important and an organization has to respond to its dynamism, heterogeneity, instability and uncertainty (Thompson, 2005).

Economic factors: Economic factors concern the nature and direction of the economy in which a firm operates (Pearce and Robinson, 2005). Since consumption patterns are affected by the relative affluence of various market segments, each firm must consider economic trends in the segments that affect its industry. Some of the economic factors on both national and international level that managers must consider include general availability of credit, the level of disposable income, the propensity of people to spend, interest rates, inflation rates, and trends in the growth of the gross national product. The economic conditions affect how easy or hard it is for a firm to be successful and profitable at any time. A firm must therefore include these factors in its response strategies to challenges posted by changes in the operating environment.

Social factors: The social factors that affect a firm involve the beliefs, values attitudes, opinions and lifestyles of persons in the firms' operating environment, as developed from cultural, ecological, demographic, religious, educational, and ethnic conditioning (Pearce and Robinson, 2005). As social attitudes change so too does the demand of various types of products. Like other forces in the operating environment, social factors are dynamic with constant change resulting from efforts of individuals to satisfy their desires and needs by controlling and adapting to environmental factors. Dynamic social forces can significantly influence the demand for an organization's products or services and can

alter its strategic decisions to challenges posted by such forces (Byars and Rue, 2000). For managers, informed judgment of the impact of changes in social and cultural factors is paramount as they cause serious challenges to the existence of a firm.

Political factors: Political factors affect the operating environment of organizations. Pearce and Robinson (2005), reckon that, the direction and stability of political factors are a major consideration for managers on formulating company strategy. Political factors define the legal and regulatory parameters within which firms must operate. Political constraints are placed on firm's fair trade decisions antitrust laws, tax programmes, minimum wage legislation, pollution and pricing policies and administrative regulations. Byars and Rue (2000), avers the activities of the state through its legislature and law enforcement agencies impinge considerably on organizations. Some are meant to protect the firm and they include patents laws, government subsidies etc.

Technological factors: Pearce and Robinson, (2005) observed that a technological breakthrough can have a sudden and dramatic effect on a firms' operating environment. It may spawn new markets and products or significantly shorten the anticipated life of a manufacturing facility. Hence, for a firm to stay successful, it must strive to understand both the existing technological advances that can affect its products and services. The ability to forecast future technological advances helps alert strategic managers to both impending challenges and promising opportunities. Cole (2004), states that organizations which want to maintain a competitive advantage have to be ready to adopt and adapt technological developments to their production and administrative procedures in order to stay ahead. A study by Stewart and Champion (2007) found out that small enterprises in Ghana adapted to the competitive environment as a result of Structural Adjustment

Programmes (SAPs), by altering their product mixes. This enabled these firms to compete with imports. Changes in product mix were prevalent in those sectors whose products were more vulnerable to competition from standardized imports. Systems delay typically occurs in large firms due, in part, to the time consumed in observing, interpreting, collating and transmitting information to responsible managers. In another part, it is due to the time consumed by these managers in communicating with one another and establishing a common understanding as well as the time necessary for processing the decisions among the responsible groups and decision levels (Powell, 1995). They will opt for waiting a little longer to see if the threat will 'blow itself out.'

Ecological factors: Ecology as Pearce and Robinson (2005) define is the relationship among human beings and other living things and the air, soil and water that support them. Specific concerns in this area include global warming, loss of habitat, and biodiversity as well as air, water, and pollution. Firms are increasingly being called upon to pay attention to this by protecting the environment. They further observed that despite cleanup efforts, the job of protecting the stakeholders is entrusted on the organizations. Hence any effort to attain success through competitive advantage must be fully aware of all the external environmental factors and their impact on the day to day operations of the business.

Challenges due to competition: Competition is one of the major challenges affecting performance of companies in Kenya. The effects of competition can be measured in terms of number of competitors, the labour force and market size. It is evident that organizations, for instance insurance firms, mainly compete for the subscription from the working class like motor vehicle, domestic package and personal accident and the business risks from the property owners. They also face stiff competition from other

companies which normally have competitive advantage over them as they can even finance premiums for their clients or they have negotiated better credit terms with underwriters. The environment in which organizations operate is constantly changing with different factors influencing the organizations. Since the turn of the millennium, the general business environment has become more volatile, unpredictable and very competitive. Coping with the increasingly competitive environment has called on firms to rethink their marketing strategies (Pearce and Robinson, 2005). The days when firms could simply wait for clients to beat a path to their door are long gone. Organizations must realize that their services and products, regardless of how good they are, simply do not sell themselves (Kotler, 2000).

An organization can shift production from one base to another, in order to take advantage of the foreign exchange rate fluctuations and access the best factors of production (Porter, 1990). Similarly, the competitive flexibility of an organization arises from its ability to coordinate its global competitive moves. This helps the organization to have a large number of competitive points and a bigger strategic space to build appropriate offensive and defensive moves that may often include cross-subsidization and sequential competitive entries.

Challenges brought about by organizational leadership: Leadership is the process of persuasion, where an individual induces a group to pursue certain objectives. One aspect of effective leadership involves restructuring organizational architecture in a manner that motivates employees with the relevant knowledge to initiate value-enhancing proposals. Jay argues that differentiation is an expression of creativity of individuals and groups within firms and is limited only to opportunities that exist, or that can be created, in a

particular industry and ability of firms to creatively explore ways to take advantage of those opportunities (Kazmi, 2002). This ability can only be achieved if we have an enabling leadership that empowers their followers to go for exemptions on aspects such as being visionary and a team player in all that takes place (Musyoka, 2008).

The role of appropriate leadership in organizational management is highly significant. It has been observed that leadership plays a critical role in the success or failure of an enterprise (Kazmi, 2002). Leadership has been considered to be one of the most important elements affecting organizational performance. For the manager, leadership is the focus of activity through which the goals and objectives of the organization are accomplished (Sziglayi, 1980). Leadership is the moral and intellectual ability to visualize and work for what is best for the company and its employees. It can be interpreted simply as 'getting others to follow' or 'getting people to do things willingly'. The most vital thing the leader does is to create team spirit around him and near him and its effectiveness has to be seen and is best seen in action (Mullins, 2005). Leadership is proactive, goal oriented and focused on the management of constructive change. Leaders unlike managers do the right thing while managers do things right.

Drucker captures an environmental scanning analysis that depicts leadership as that, which should manage the fundamentals like people, inflation among others (Peter Drucker, 1994). Strategic leadership should ensure that values and culture within an organization are appropriate for satisfying key success factors. This should lead to environmental-value-resources congruence. For organizations to be successful in the turbulent environment, it is important that the leadership is well versed with the changes happening in the environment.

Technological challenges: Thompson (1990) explains that it is difficult to establish the true relationship between information technology and organizational performance. Once an organization has acquired competence in making a certain product, it can maximize productivity by procuring the latest and modern technology. Johnson et al, (2005) describes Japan as unforgiving economy, where thousands of corporations are destroyed every year as a result of failing to invest in new technological innovation. Competitive advantage depends on the human resource practices adopted within the organization. People are able to create and implement strategies in a supportive culture. It is not always about marketing practice to identify and interact with very precise target markets. Traditionally, marketers who gain processing efficiencies, create databases, and perform various forms of customer analysis have used technology (Michelle Lane Heine et al, 2003). Marketing automation is the next logical step, because it helps one to do something with that insight (Johnson et al, 2005).

Challenges brought about by organizational resources: All organizations have at least four types of resources namely: financial, physical, human resources and technological resources (Thompson, 1990). These resources are available to an organization as simple tangible resources (money, human resources and infrastructure) or intangible resources such as public power e.g. in law enforcement and tax collection or knowledge base. Resource based view to strategy management view knowledge, skills and experience of human resource as a key contributor to firm's bundle of resource and capabilities (Musyoka, 2008). Johnson et al (2005) argues that putting strategy into action is concerned with ensuring that strategies are working in practice. It involves structuring an organization to support successful performance by organizations. Management of the

environmental changes is key. This includes organizational structures, processes and relationships. It also involves enabling success through the way organization resources such as people, information, finances and technology support strategies.

As companies change and as skills expertise become recognized as a major asset of the firm, the heightened efforts in cultivating and enhancing them becomes significant part of development strategy (Saunders, 1994). During the process of strategy implementation, how relationships beyond the organization are fostered and maintained will influence performance further. While organizations and groups may be assumed as taking strategic actions, it is individuals who ultimately, in practical terms take action and are responsible for driving an organization or a group towards objective. Perhaps the most important resource of an organization is its people (Johnson and Scholes, 2002). Furthermore, organization is a social system relationship (formal and informal) among the people who individually and jointly subscribe to same goal(s) and to which they direct their actions. Where the needs of the individual and the demands of an organization are incompatible frictions and conflict are bound to occur and strategy implementation cannot be achieved (Mullins, 2005).

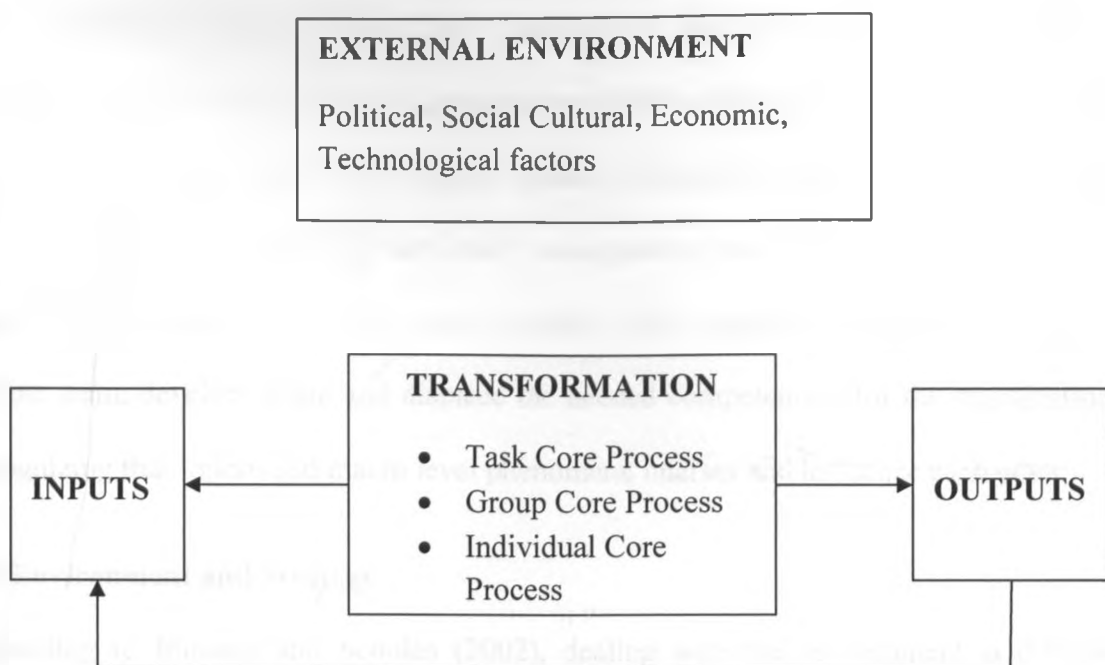
Recruitment and staff development strategies need to support the other factors. In addition aspects of job design, reward package and conditions of the labour market and the hopes and expectations of people need to be considered. (Saunders, 1994). Audits to assess human resources requirements to support strategies identify goal setting and performance appraisals, reward systems, competence based recruitment, training and development as key human resources activities known to help liable successful strategy implementation. Performance management is not only essential but its processes should

be adjusted to support changing strategies. Yasemin and Hussen (2005) found out that systems process and routines for organizing, allocating and developing new programs during implementation directly depend on human resources.

A number of factors prohibit effective resource allocation. These include an overprotection of resources, too great an emphasis on short run financial criteria, organizational politics, vague strategy targets, a reluctance to take risks and a lack of sufficient knowledge (David, 1997). Identifying the appropriate resources and competencies to support strategy implementation unless the organization is also able to allocate resources and control performance in line with strategy (Daft. 2000, Musyoka, 2008).

2.3 Open Systems Theory

Systems theory is premised on the assumption that organizations have similar characteristics with other living organisms (Analoui and Karami, 2003; Analoui, 1998; Hanna, 1997). A system is generally defined as an arrangement of interrelated parts. The words arrangement and interrelated describe interdependent elements forming an entity that is the system (Jackson and Schuler, 1999; Von Bertalanffy, 1950). In using a systems approach to understand a phenomenon, it is important to begin to identify the individual parts and then seek to understand the nature of their collective interaction to make the whole unique - it is the whole, not the parts alone that counts. An open system depends on its external environment for inputs that are transformed during throughput to produce outputs that are exchanged in the environment. The key elements of a typical open system model with its basic interrelated parts are summarized in figure 1 below.



Source: Adapted from Hanna (1997:16)

The general view is that managing organizations with the view to contributing towards socio-economic development requires effective deployment of three resources: economic (monetary), physical (material) and human (social). However, the most vital asset to any organization is ‘the people’ (human resources). Many contributors to the HRD literature are of the view that the development dimension of HRM is conceptualized as a sub-system of HRM, which is embedded in a larger organizational system (Analoui and Karami, 2003; Armstrong, 2001; Analoui, 1998; Kanungo and Mendunca, 1994). Analoui (2002) in his discussion of the ‘choice’ model of HRM, in the context of open system organisations, views the HR policies, including the HRD, as input to the process which will be expected to result in ‘change’ as a planned and desired output.

Wright and Snell (1991) for instance, have used the open system theory to describe a competent management model of organizations. They treated the ‘skills and abilities’ of

employees as 'inputs' from the environment; employee behaviours as 'throughput/transformation' and their satisfaction and performance as 'outputs'. Chalofsky and Reinhart (1988:31) argue that an effective HRD function as a sub-system of an organization should have a highly trained professional staff; demonstrating close working relationships with line and staff management; and develop a track record of delivering high quality products and/or services. This implies the capacity to acquire, utilize, train, develop, retain and displace the needed competencies for the organization, recognizing that 'micro and macro level phenomena interact and influence each other'.

2.4 Environment and Strategy

According to Johnson and Scholes (2002), dealing with the environment is difficult because of three factors. First is the diversity of the different influences that affect a business. Identifying the environmental influences may be possible but it may not be of much use because no overall picture emerges of the really important influences on the organization. The second difficulty is the speed of change. Managers typically feel that the pace of technological change and the speed of global communications mean more and faster changes than ever before. Third is the problem of complexity. Managers are no different from other individuals in the way they cope with complexities; they try to simplify what is happening by focusing on those few aspects of the environment which have been important historically. It is important to avoid these tendencies whilst achieving an understanding of the environment which is both usable and oriented towards the future.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out various stages and phases that were used in the study. In this stage, most decisions about how research was executed and how interviewees were approached, as well as when, where and how the research was conducted is addressed. Specifically the following subsections are included; research design, data collection method and procedures and finally data analysis.

3.2 Research Design

Orodho (2003) defines a research design as the scheme, outline or plan that is used to generate answers to research problems. Orodho further notes that a research design is the structure of the research, it is the “glue ” that holds all the elements in a research project together. This study adopted a case study since the unit of analysis was based on one organization (KenGen). It aimed at getting detailed information regarding the environmental challenges facing the organization and strategic responses to these challenges posted by the operating environment.

3.3 Data Collection Method

The research utilized primary data which was collected using in depth face to face interviews with the relevant top management of the organization who deals directly with the area under research. To ensure consistency of the information collected, the researcher had the University supervisor and moderator verify the validity and reliability of the interview guide. This was because the population of interest was small and would

not allow for a pilot study. The interviewees of this study included some of the heads of divisions namely, the head of the Human Resources Division, head of Corporate Development, head of Public Relations Division and head of Finance Division. These respondents were appropriate because they are well versed and form part of the decision making body. The data was collected with the help of an interview guide.

3.4 Data Analysis

A content analysis was employed in data analysis. According to Mugenda and Mugenda (2003), content analysis uses a set of categorization for making valid and replicable inferences from data to their context. The content analysis was used to analyse the interviewees' views about the environmental challenges facing Kengen in the energy industry in Kenya. The data was then presented in a continuous prose as a qualitative report on the environmental challenges facing KenGen in the energy industry in Kenya.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis and interpretations of the data from the field. It presents analysis and findings of the study as set out in the research methodology on the environmental challenges facing KenGen in the energy industry. The data was gathered exclusively from an interview guide as the research instrument. The interview guide was designed in line with the objectives of the study. To enhance quality of data obtained, unstructured questions were used whereby respondents indicated their views and opinions about the environmental challenges facing KenGen in the energy industry.

4.2 Environmental Challenges in the Energy Industry

The energy industry has been very dynamic over the past few years, for example with the introduction of the Geothermal Development Company (GDC) to the industry, and the spiralling cost of electricity. In light of the above, the interviewees were requested to indicate how the changes highlighted above have affected KenGen. The interviewees indicated that the introduction of Geothermal Development Company has brought about stiff competition, especially competition for resources like human capital, funding from both the government and donors among others. They also indicated that the changes have resulted to loss of goodwill with the public because of the spiraling cost of electricity as they are not able to appreciate the challenges posed by the reduced water levels as a result of prolonged draught. The interviewees also reiterated that KenGen mostly produces hydro power hence reduction in water levels at the various dams reduces amount of

electricity that can be fed into the national grid. There are also increased tariffs as a result of use of fuel to generate electricity and as a consequence of increased cost of operations.

The study sought to establish the challenges that KenGen is facing as a result of these environmental changes. From the interviewees, KenGen is facing challenges of competition for resources especially with GDC in terms of human capital, government funding and donor funding. The other challenges resulting from the changes include loss of customer goodwill, increased cost of electricity, loss of political goodwill as all attention has shifted to GDC, challenges of keeping up to date with the ever changing technological trends, challenges posed by increasing inflation levels and challenges brought about by the weakening shilling. This has been manifested in the increased costs of fuel used in generating electricity.

On whether these challenges have affected the operations of KenGen, the interviewees were unanimously in agreement that competition for human capital has seen KenGen lose key technical expertise to GDC therefore affecting its technical operations and delaying the drilling operations for geothermal energy. Funding challenges lead to inadequate human and financial capacity, loss of customer goodwill results to deteriorating public image, transparency and room for debate and discouraging public participation in KenGen activities, low capacity building; poor commitment to policy and budgetary process; and weakening of the voices of different stakeholders.

The interviewees were further requested to indicate what has been the effect of these challenges on human resource recruitment, training and development. They recoiled that there has been immense turnover of employees in the recent past. This has led to

increased costs of recruitment, in order to replace the lost employees, the energy sector is unique and training of technical staff is expensive. Training and development costs have skyrocketed in the recent past and recruitment, training and development and maintaining human capacity is a major challenge currently facing KenGen.

The study sought to establish how these challenges have affected the financial performance of the company. The interviewees indicated that the challenges on human resource recruitment, training and development and measures put in place to retain employees have affected the financial performance of the company, as well as reduced revenues as a result of reduced water levels and increased costs of operations.

On whether KenGen has attempted to respond to challenges posted by the environment, all the interviewees were in agreement that the company has made several attempts to cope and counter the environmental challenges faced by the energy industry.

The interviewees indicated that KenGen responded to these challenges by using fuel to generate electricity in the absence of enough water in order to ensure KenGen keeps powering the economy, marketing KenGen through the mass media to maintain customer goodwill, improving employee terms including offering better salaries and incentives, aggressively marketing KenGen to donors and lobbying with the government for funding.

The interviewees were requested to indicate how these challenges have affected communication process at KenGen. They indicated that inefficient use of information resources and poor communication link between policy planning and budgeting were challenges being experienced by the company. Encouraging communication between the different stakeholders and reorientation of communication and training involving a wide

range of stakeholders working in partnership needs to continue on a long-term basis to support energy production in the company.

4.3 Solutions to the Challenges

The study finally sought to establish the possible solutions to the challenges posted by changes in the external environment to KenGen. As such the interviewees reiterated that the challenges could be reversed by conducting consumer awareness and education campaigns on what exactly KenGen does, the challenges it faces in the course of its operations as well as the relationship between KenGen, KPLC, GDC and other players in the energy industry. They also indicated that educating the relevant government bodies on the importance of supporting KenGen through adequate funding would help solve the challenges posted by changes in the external environment to KenGen. Other possible solutions to the challenges would be improving employee remuneration and other terms of employment to sustain a competitive workforce and training employees on the need to own the processes and the company as well as establishing a communication channel between the general public and the company.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary of the findings from chapter four, and also it gives the conclusions and recommendations of the study based on the objective of the study. The objective of this study was to determine the environmental challenges facing KenGen in the energy industry.

5.2 Summary of the Findings

The study found that the the introduction of Geothermal Development Company has brought about stiff competition, especially competition for resources like human capital and funding from both the government and donors. The changes also have resulted to loss of goodwill with the public because of the spiraling cost of electricity as they are not able to appreciate the challenges posed by the reduced water levels as a result of prolonged draught, reduction in water levels at the various dams reduces amount of electricity that can be fed into the national grid and also increased tariffs as a result of use of fuel to generate electricity and as a consequence of increased cost of operations.

The study also found that KenGen is facing challenges of competition for resources especially with GDC in terms of human capital, government funding and donor funding. The other challenges resulting from the changes include loss of customer goodwill, increased cost of electricity, loss of political goodwill as all attention has shifted to GDC, challenges of keeping up to date with the ever changing technological trends, challenges posed by increasing inflation levels and challenges brought about by the weakening

shilling. This has been manifested in the increased costs of fuel used in generating electricity. Competition for human capital has seen KenGen lose key technical expertise to GDC therefore affecting its technical operations. Funding challenges lead to inadequate human and financial capacity, loss of customer goodwill results to deteriorating public image, transparency and room for debate and discouraging public participation in KenGen activities, low capacity building; poor commitment to policy and budgetary process; and weakening of the voices of different stakeholders.

The study further found that the challenges on human resource recruitment, training and development have affected the financial performance of the company. Profitability has also decreased due to reduced revenues as a result of reduced water levels and increased costs of operations in recruitment, training and development costs. KenGen responded to the environmental challenges by using fuel to generate electricity in the absence of enough water in order to ensure KenGen keeps powering the economy, marketing KenGen through the mass media to maintain customer goodwill, improving employee terms including offering better salaries and incentives, aggressively marketing KenGen to donors and lobbying with the government for funding.

The study found that as a result of the environmental challenges the communication process at KenGen has been affected in that there is inefficient use of information resources and poor communication link between policy planning and budgeting hence discouraging communication between the different stakeholders. Consequently, reorientation of communication and training involving a wide range of stakeholders working in partnership needs to continue on a long-term basis to aid energy production in the company.

5.3 Conclusions of the Study

The study concludes that the challenges brought about by the environmental changes has brought about stiff competition, especially competition for resources like human capital and funding from both the government and donors. The changes have also resulted to loss of goodwill with the public because of the spiraling cost of electricity as they are not able to appreciate the challenges posed by the reduced water levels as a result of prolonged draught. Reduction in water levels at the various dams reduces amount of electricity that can be fed into the national grid and also increased tariffs as a result of use of fuel to generate electricity and as a consequence of increased cost of operations. There has also been loss of political goodwill as all attention has shifted to GDC, challenges of keeping up to date with the ever changing technological trends, challenges posed by increasing inflation levels and challenges brought about by the weakening shilling.

The study further concludes that the challenges on human resource recruitment, training and development have affected the financial performance of the company as well as reduced revenues as a result of reduced water levels and increased costs of operations in recruitment, training and development costs and there is inefficient use of information resources and poor communication link between policy planning and budgeting by discouraging communication between the different stakeholders and therefore reorientation of communication and training involving a wide range of stakeholders working in partnership needs to continue on a long-term basis of energy production in the company.

5.4 Recommendations of the Study

From the study findings and conclusions, there are various challenges brought about by environmental changes that are seen to affect the operations of KenGen and the energy industry in Kenya as a whole. The study therefore recommends that the company should conduct consumer awareness and education campaigns to enlighten them on the activities carried out by KenGen, the challenges that KenGen faces in its operations and in so doing enlighten the consumers on the similarities and differences between KenGen, KPLC, GDC and other players in the energy industry.

The study also recommends that the company should also reach out to the relevant bodies such as government bodies and donors to emphasize on the relevance and the importance of supporting KenGen through adequate funding. This would help solve the challenges posted by changes in the external environment to KenGen. Other possible solutions to the challenges would be improving employee remuneration and other terms of employment to sustain a competitive workforce and training employees on the need to own the processes and the company as well as establishing a communication channel between the general public and the company.

5.5 Recommendations for Further Studies

This study has explored the environmental challenges facing the energy industry in Kenya where the focus was on KenGen. The study found and analyzed data with a focus on KenGen which is one of the players in the energy sector in Kenya. There are other players in the energy sector in Kenya whose orientation in the energy sector is close to that of KenGen but differ in their way of management especially with the challenges brought about by environmental changes. This warrants the need for another study which

would ensure generalization of the study findings for all the organizations in the energy sector in Kenya and hence pave way for new policies. The study therefore recommends another study be done with an aim to investigate the environmental challenges facing the energy industry in Kenya.

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APPENDIX

Appendix I: Interview Guide

ENVIRONMENTAL CHALLENGES FACING KENGEN IN THE ENERGY INDUSTRY

1. The energy industry has been very dynamic over the past few years, for example with the introduction of the Geothermal Development Company to the industry, and the spiralling cost of electricity. How have these changes affected KenGen?
2. What are the challenges KenGen is facing as a result of these environmental changes?
3. Has these Challenges affected the operations of KenGen?
4. What has been the effect of these challenges on Human Resource Recruitment, Training and Development?
5. How have these challenges affected the financial performance of the company?
6. Has KenGen tried to respond to challenges posted by the environment?
7. How exactly has KenGen responded to these challenges?
8. How has these challenges affected communication process at KenGen?
9. What are the other challenges you face at KenGen as a result of changes in the operating environment?
10. What are the possible solutions to the challenges posted by changes in the external environment to KenGen?