CHAPTER 1
INTRODUCTION

Electricity is a major driving force for the rapid growth and development of an economy. It is also regarded as the most versatile form of energy in the modern economy. Every sector of the economy right from manufacturing, agriculture, communication, industry, service sector, use electricity as a major input in the production process. Among other sources of energy like petroleum, wood fuel, wind, solar and coal, electricity proves to be the most convenient source of energy that can be used to drive the economy into higher growth and development. It provides incentives for investment in small business activities both in rural and urban areas which increases employment leading to increased purchasing power of the citizens.

It is through the rural electrification programme that rural areas can get developed at a much faster rate. The empirical studies show that through rural electrification, small business activities can be encouraged and revolutionized through the new medium of communication to rural farms and households. This kind of business trade improves the economic status of the rural population. Moreover, the human capital increases as the access to electricity influences rural population to buy domestic appliances such as TV, Radio, Cell phone, Computers and other appliances which are sources of education on many social and academic issues. All these are imperative in narrowing the cultural, educational and commercial divide between the urban and rural population worldwide (Pamela 2012, KERB 2005, and Bonuke, 2008). Lack of access to an affordable and reliable source of energy such as electricity is a major impediment to sustainable development in any developing country and to the harmonious progress of the global world.

Due to the important role that electricity plays to boost growth and development, many governments in the world have prioritized energy infrastructure in their economic planning. A major portion of their public expenditure in the national budgets is spent on finding strategies and in creating policies which ensure sustainable supply of energy at affordable prices to meet the growing demand. To increase expenditure on energy infrastructure governments have made macro-economic
reforms so as to incorporate structural reforms in the energy sector. Kenya is one of the countries that have considered energy infrastructure as key to boost growth and development. This is because they realized that in the past decade, infrastructure contributed 0.5 percent to Kenya’s annual per capita GDP growth. Raising the country’s infrastructure endowment to that of Africa’s middle-income countries could increase that contribution by 3 percent (World Bank, 2011).

Kenya as a country has undertaken significant strides to improve her macroeconomic environment through reforms since the mid 1980s with the aim of improving economic performance, attracting investments, increasing employment opportunities, incomes, productivity and efficiency in public utilities. Most of these reforms came as a result of pressure from the key financial institutions such as World Bank and International Monetary Fund (IMF) to the developing countries to introduce structural reforms on their public owned enterprises in the early 1990s. This idea was mooted by the World Bank and the International Monetary Fund (IMF) because of the poor economic performance of most of the developing countries, whose public utilities performed poorly. The World Bank was unable to recover her loans. Hence the World Bank and IMF forced these countries to introduce structural reforms as one of the conditions to access further loans.

Kenya as any other developing country is among many countries which faced this challenge. Most of her public sector utilities like railways, telecoms, transport, energy etc were performing poor financially. They required a large sum of funds to lay down much needed infrastructure for development. To turn around the financial health of electricity supply industry, the government of Kenya restructured the sector by partially eliminating government control through vertical unbundling of the sector whereby transmission and distribution was taken over by Kenya Power and Lighting Company (KPLC) while Generation was left with Kenya Generating Electricity Company (Ken Gen) (Government of Kenya, 2002). The sole objective of enacting these reforms was to improve the operational efficiency in the sector, eliminating distortions that existed, to induce competition and allow energy prices to move in consonance with market forces so as to attract investments, to mobilize private sector resources for electricity generating capacity addition to meet the increasing demand and also to deal with the problem of poor revenue norms.
To modernize and expand Kenya’s productive capacity, the government outlined a number of policy initiatives with specific reference to infrastructural development. It encouraged the private public participation (PPP’s) model. The model was discussed as one of the three crosscutting issues under the government private sector Development Strategy 2006-10. The Ministry of Finance was charged with responsibility of developing a PPP’s policy legal and regulatory frameworks and institutional structures to support them (Republic of Kenya/ Ministry of Trade and Industry 2005, p.61). The government of Kenya later on adopted a long-term development blueprint for the country in the year 2008. The main aim of this vision 2030 is to have a globally competitive and prosperous country with high quality of life by 2030; it aims to transform Kenya into a newly-industrialized, middle-income country providing a high quality of life to all her citizens in a clean and secure environment.

1.1: Electricity and Development in Kenya

The main objective of Vision 2030 document is to have a country firmly interconnected through a network of roads, railways, ports, airports, waterways, and telecommunications. Electricity connection, water, and modern sanitation facilities to the urban and rural population in Kenya is another area that the document stressed on. The target is to ensure that, by 2030 no region in Kenya is to be referred to us as ‘remote’ (GOK Bulletin, 2009 and Government of Kenya, 2012). To ensure that the main projects under the economic pillar of the Vision 2030 are to be implemented, and investment in the nation’s infrastructure will be given the highest priority. It was believed that the demand for electricity supply will increase drastically as the development projects recommended under Vision 2030 were implemented and overall economic growth commenced. The various economic policy reforms that have been initiated by the government coupled with the current population of 44 million people are likely to push demand upward in future.

In line with the expanding economy, Kenya has experienced a substantial increase in energy demand, estimated at 7 percent per year on average over the last six years (Ajodhia, Muller & Slot, 2012). Despite the efforts made by the government through policy reforms to increase installed capacity, electricity generation has not kept pace with the increase in demand and power continues to be a constraint on
growth. This could be because of over reliance on hydro-power which depends on distribution of rainfall which sometimes is unpredictable. There is a need for the government to diversify resources to other sources of electricity in order to improve installed capacity to meet the demand.

**Figure 1.1: Installed Capacity Relative Share as in 2014**

![Installed Capacity Relative Share as in 2014](image)


Kenya depends heavily on hydro-power for electricity generation, which accounts for 52 percent (4435 MW) of the total installed capacity, followed by thermal, geothermal and other energy sources which accounts for 26 percent (2162 MW), 21 percent (1781 MW) and 1 percent (71 MW) respectively as shown in Figure 1.1. All consumer categories recorded an increased demand in electricity with domestic and commercial (small), commercial, industrial (large medium), and rural electrification increasing by 5.2 percent, and 12.3 percent respectively (Government of Kenya, 2014 pg.149-150). The Kenya Electricity Generating Company (Ken Gen) was the main player in the wholesale electricity market accounting for 70.52 percent of installed Capacity as of 2012. It sells power to the retail distributor under several power purchase agreements. In addition, Kenya has five private independent power producers that account for about 23.72 percent of installed capacity (KPLC, 2012, pg. 17-26).
The Kenya Power and Lighting Company (KPLC) are responsible for transmission and distribution of electricity. Both Ken Gen and KPLC were expected to operate on commercial basis and are listed in the Nairobi Stock Exchange. There is a need for Kenya to invest in other sources of energy like solar energy since Kenya is exceptionally well endowed with solar energy resources, receiving an average daily sunshine ranging between 4.0 and 6.0 Kwh/m² of energy and the equator passing through the country (Arne Jacobson, 2007, pg. 144-162). Wind energy is another source which Kenya needs to invest on. There is a need to utilize the micro wind turbines in Ramba Island in Homabay County, Kajiado County, and Kipeto in Marsabit. The coal that has been discovered at Kilifi can play a major role to increase electricity supply. All these improvements and policy changes are likely to change the consumption pattern of energy in Kenya.

1.2: Energy Consumption Patterns in Kenya

Energy sources in Kenya comprise commercial and non-commercial sources. Commercial energy sources mainly consist of petroleum products and electricity, while non-commercial sources comprise biomass, and to a lesser extent solar energy, wind power and biogas. Kenya depends on biomass, petroleum, hydro power, geothermal, wind and solar power as the major sources of energy. The biomass energy is derived from agricultural remains, industrial wastes, animal wastes and sewage wastes from municipal (Arne Jacobson, 2007, pg. 144-162). Recently, the country discovered commercial oil in the North East Turkana County which is yet to be exploited for commercial purposes. Till now the country has been depending on imports.
The share of biomass in total energy supply in the country was 68 percent whereas petroleum share was 22 percent of the total energy consumed in the country. The share of electricity in the total energy supply was just 9 percent. As electricity was the most preferred form of energy, its supply needs to be augmented at a large scale if the country is to industrialize and develop its economy.

1.3: Restructuring Electricity Supply Industry in Kenya

The restructuring of the electricity supply industry in Kenya started way back in the mid 1990s. This is after a government policy paper on economic reforms which was set with the motive to separate regulatory and commercial functions of the sector to pave way for private investment, was adopted (Government of Kenya, 2002). Initially, the sector was structured as an integrated monopoly under the public ownership. All the major functions-- generation, transmission and distribution were discharged by a single utility.

In 1997, unbundling of the sector took place. Two government companies were constituted; Kenya Power and Lighting Company (KPLC) took charge on transmission, distribution and the retail supply of electricity while Kenya Electricity Generating Company (Ken Gen) took responsibility in generation activities. During
the same period, the Electricity Power Act 1997 was passed which resulted in the formation of Kenya Electricity Regulatory Board which became functional in 1998. The government through the Ministry of Energy was left with only the primary function of policy formulation.

The functions of Electricity Regulatory Board were to regulate the operational activities of the electricity sector and also to recommend electricity tariff rates based on sound economic principles. The electricity sector faced challenges of governance, high tariffs, black outs, high transmission and distribution losses, high average cost, and commercial losses especially during the 1998 to 2002. This was as a result of severe drought which hit the country during this period. The situation warranted effective intervention to recover from such a bad state of affairs.

Despite the introduction of initial reforms, the financial performance of the electricity sector in Kenya continued to be poor and uncompetitive in the market. This compelled the government of Kenya to come up with a strategic document on Economic Recovery in 2003. The government adopted a New National Energy Policy 2003 which was meant to trigger off competition in the electricity sector through the introduction of more reforms in the power sector. There were suggestions that, the rural electricity authority be formed to take care of the rural electrification in order to facilitate connection of electricity to the rural population and to dissolve Kenya Electricity Regulatory Board (KERB) because of its failure to achieve its objectives and to form a new energy regulator by the name Energy Regulatory Commission (ERC) which was to be in charge of regulating the energy sector as a whole unlike the previous Kenya Electricity Regulatory Board (KERB) which was only in charge of electricity sub-sector. Along with these, there is one more idea that the Geothermal Development Company (GDC) should be established to carry out the assessment of Kenya’s geothermal resources including steam-field appraisal and development, and also to privatize Ken Gen partially up to 30 per cent of its equity through Nairobi Stock Exchange (Ministry of Energy, 2004, pg. 6-45).

Due to the recommendations made from the 2004 policy paper, there was an action plan from 2004 to 2007 which was instituted to ensure that all that was suggested in the 2004 Sessional Paper was met. In the year 2006, the Kenya Electricity Regulatory Commission was constituted under the new Electricity Act
2006. This replaced the earlier Kenya Electricity Board which was constituted in 1998 under the Energy Act 1997. After its constitution, the commission has enforced various regulations to regulate the generation, transmission, and distribution operation in Kenya. In order to ascertain the quantity of electricity energy supplied to consumers to avoid theft and to reduce Transmission and Distribution Losses, electronic metering was introduced.

In the recent developments, the Energy Regulatory Commission (ERC) has introduced post paid electricity billing 2010 to increase efficiency in bill collection and to reduce customer complaints. This has seen electricity Transmission and Distribution Losses come down from 22 Percent in the FY2000-01 to 17.3 Percent in the FY2013-14. There is also an improvement in the collection of electricity bills. However, even after initiating the reforms, the government of Kenya still owns a large share in all the two companies a stake of 40.4 percent.

The utility has made some progress in improving its technical and financial performance. There is an improvement in the plant load factor (PLF) and revenue recovery from consumers. However, there is still much to be done in the sector. About 56 Percent households are without electricity. Per capita consumption of electricity is very low and was reported to be 157 Kwh per capita in the FY2012-13. As per the Rural Electricity Master Plan, the target was to ensure universal access and increase household connections connecting 200,000 households annually. The current electricity demand is 1,191 MW and is projected to grow to about 2,500 MW by 2015 and 15,000 MW by 2030 which requires installed capacity to increase gradually to 19,200 MW by 2030.

1.4: Current Status of the Sector

It is claimed that reforms have brought some achievements which include rendering both the generation and transmission/distribution, the company is financially viable, and there is increased investment in generation capacity, including some private sector’s involvement. Reforms have resulted in some significant operational improvements including increase in revenue collection (World Bank, 2011). It is claimed that, the revenue collection for Kenya Power and Lighting Company (KPLC) improved from 81 percent in 2004 to 100 percent by 2006 before dropping back to about 98 percent (Bonuke 2008, Electric Act, 1998 and 2006). The
annual rate of new electricity connections increased from 43,000 in 2003/2004 to 453,544 in 2013/2014. Distribution losses in the power system also declined gradually from 21 percent in 2000 to 17.3 percent in 2013.

The rural electrification programme has helped to increase the number of customers connected to the national grid from 643,274 in 2003 to 2,330,962 in 2013. A total of 932 institutions are installed with solar PV Systems. There are 16 major electric power energy projects also which are under implementation currently. They include a coal thermal plant at Kilifi with capacity of 960 Mw, liquefied natural gas thermal plant at Mombasa with installed capacity of 700 Mw and 7 geothermal power generation projects in Olkaria with a capacity of 745Mw. All these are meant to increase the installed generating capacity to bridge the gap between demand and supply.

Despite all these, access to electricity continues to be a challenge particularly in rural areas where access rates were estimated at 5 percent in 2012 compared to 51 percent for urban locations. Briceno-Garmendia and Shkaratan (2011a) argued that Kenya will need to double its current installed capacity over the next decade and will need to reinforce cross-border transmission links with neighbouring countries to increase access to cheaper hydroelectric power and improve overall system security despite the fact that countries in the East Africa power pool are still small.

1.5: Significance of the Study

Since the establishment of Kenya power sector in 1948, the performance of the power sector has never been up to the mark though the sector has taken steps from time to time to improve its performance. Various studies indicate that the sector still struggles to deal with challenges like high cost of production of electricity, high tariff rates, demand and supply gaps, market competition, low rural electrification, and frequent blackouts. Hence, the need for this study is to evaluate the economic impact of these reforms on the electricity supply industry in Kenya so as to fill the gaps that have not been filled by other studies especially on the rural electrification. Attempt has also been made to identify institutional and other constraints which need to be removed to accelerate development process in the country. A new tool to monitor progress on reforms has been developed.
1.6: Scope of the Study

In view of the specific objectives put forth the study is focused mainly on evaluation of electricity supply industry in Kenya and its reform process. The progress of the reforms and the economic impact of the reforms on the power sector in terms of operational performance, financial performance, pricing policy, regulatory process and rural electrification will be subject to in-depth study.

1.7: Objectives of the Study

The main aim of this study is to analyze the economic impact of reforms on electric supply industry in Kenya. The aim is achieved by analyzing the performance of electricity supply industry in Kenya before and after reform process, using specific objectives, specifically:

1. To examine technical performance in the operation of Kenya Power Sector before and after reform process.
2. To evaluate the financial performance of Kenya power sector during the period 1993-2013.
3. To examine the impact of reforms on rural electrification.
4. To examine the role of the independent regulatory in ensuring good governance in terms of transparency, accountability and performance.
5. To assess the impact of reforms on the quality of services available to consumers.
6. To study the tariff policy followed by Kenya Energy Regulatory Commission (KERC) in relation to sound principles of public utility pricing.

1.8: Research Methodology and Data Base

This study attempted to investigate long-term (20 years) growth trend data. The long term trend captures the changes better than short intervals of time because of the poor quality of available statistical material, where specific annual totals and rates increases and declines do not have much significance. While examining and establishing trends in various indicators of power sector in Kenya, twenty years constitute a convenient stretch of time for identifying a pattern progress and the impact of reforms on the sector. However, the major impediment of this long term analysis of trends in Kenya is the absence of good quality of data for various
measuring indicators. This study, therefore, uses myriad sources of data: Published Annual Reports of the selected company Kenya Power and Lighting Company (KPLC), Kenya Electricity Regulatory Commission (KERC) Annual Reports, Ministry of Energy Reports, National Energy Policy Documents; Tariff Orders passed by (KERC), National Household Surveys, AFREPREN Research Studies, AFREPREN Energy Database, National Development plans, World Bank Reports, National Development Reports and Annual Economic Surveys for various years.

For the purpose of review of literature various studies have been consulted. Some studies include the studies made by independent researchers while some other studies were conducted by consultants of the government and the international financial institutions like World Bank and IMF.

I: Period of Analysis

In order to conduct the study and achieve the objectives as stated, time-series data on the relevant variables of last 20 years has been obtained from 1993 to 2013. The entire period of 20 years has been divided into two sub-periods i.e. first period (1992-93 to 2002-03) is taken as pre-reform period and second period (2002-03 to 2012-13) is taken as post-reform period. The initial time period when reforms were initiated began from 1996-1997; however, because of the slow implementation process the study has included the period 2002-2003 as the reform period. Some information of the period 2012-13 and 2013-14 has also been included in this study.

II: Analytical Techniques

For analysis of the data and inferences, standard technical parameters to measure technical and financial performance have been computed and subjected to analysis and interpretation, using an innovative procedure termed as ‘Change-Point Analysis.’ The procedure is explained below:

A. Changes-Point Analysis

In this study, we have used ‘change-point analysis’ technique to assess the critical and multiple change-points over the long-term performance indicators of electricity supply industry in Kenya. The word ‘change-point’ indicates ‘the time at which a change began to occur’ Taylor W, (2011). However, a critical change-point
is the point at where a major shift in the trend is recognized. The change-points highlighted in this study are critical change-points. A critical change will not appear immediately; rather an accumulative growth or decline will result into a critical change for a given indicator. However, the time period resulting to a change into a critical change depends on sensitivity nature of the indicators to its external factors. ‘Change-point analysis’ technique provides detailed information including volume of change, confidence levels and change-wise error rate during the trend period. “The procedure of performing a ‘change-point analysis’ is very flexible, it can be carried out on all types of time series data as well as attribute data, data from non-normal distributions, ill-behaved and complaint data, and data with outliers”. However, the change-point analysis yield better results on long period data because on long period data, we can observe the pattern and time shifts more clearly (Taylor W, 2011).

There are several approaches to performing a trend analysis and change point analysis (Taylor W, 2011, pg.46-54). However, we used the method proposed by Taylor for performing the ‘change-point analysis’ which generally use a combination of ‘Cumulative Sum’ (CUSUM) Charts and bootstrapping to detect changes (Hinkey D Schechman E 1998, pg.85-90). “The outliers in any indicator data create additional distinction in the data making it more complicated to detect a change. The ‘change-point analysis’ technique is more robust to such outliers. These estimates can be made even more robust by analyzing the ranks of values as an alternative of the values (Taylor W, 2011). We have adopted the procedure of analyzing the ranks of values instead of the values. Change-point analysis begins with the construction of the CUSUM chart shown in Figure1. CUSUM charts are built by estimating cumulative sum based on the data. Let \( y_1, y_2, ..., y_{20} \) be the 20 data points. From this, the cumulative sums \( y_1, y_2, ..., y_{20} \) are calculated. The procedure for estimating the CUSUM proposed by Taylor (Taylor W, 2000 a) is given below:

- The first step in estimating CUSUM is to estimate the average

\[
\bar{y} = \frac{y_1 + y_2 + \ldots + y_{20}}{20}
\]

- In the second step one should begin the CUSUM at zero by setting \( S_0 = 0 \). Then estimate the other CUSUM by adding the difference between the
current value and the average to the previous sum, \[ S_i = S_{i-1} + Y_i - \bar{Y} \] for \( i = 1, 2, \ldots, 20 \).

Here, the CUSUMs are not the CUSUMs of the values; instead, they are the CUSUMs of differences between the values and average. “These differences sum up to zero so the CUSUM always ends at zero \( (S_{20} = 0) \)” (Taylor W, 2000). The CUSUM chart in Figure 1.3 appears to indicate that at least 1 and possibly 4 changes took place. However, the difficulty with CUSUM charts is that they require exceptional skill to understand correctly. Further, one cannot affirm convincingly that these changes took place. For this, the confidence level of each change-point estimate can be used to understand the apparent change by understanding a bootstrap analysis. Before understanding the bootstrap analysis, an estimator of the amount of change is required (Taylor W, 2000). One option, which works well in any case of the distribution and regardless of multiple changes (Taylor W, 2000), is \( S_{\text{diff}} \) defined as:

\[
S_{\text{diff}} = S_{\text{max}} - S_{\text{min}} \quad \text{where}
\]

\[
S_{\text{max}} = \max_{i=0, \ldots, 20} \{S_i\}
\]

\[
S_{\text{min}} = \min_{i=0, \ldots, 20} \{S_i\}
\]

Following this, bootstrap analysis can be performed when the estimator of the change has been fixed (Hinkey D Schechtman E 1998, pg.54-55). According to Taylor W, (2000) a single bootstrap is performed through the following steps:

1. A bootstrap sample of 20 units can be generated by randomly reordering the original 20 values and denoted… \( y_1^0, y_2^0, \ldots \), \( y_{20}^0 \). This is referred to as sampling without replacement (Taylor 2000a).

2. Once the bootstrap sample is generated, based on this bootstrap sample, the bootstrap CUSUM is calculated and denoted by \( S_0^0, S_1^0, \ldots, S_{20}^0 \).

3. In the next step, the difference of the bootstrap CUSUM is calculated by taking maximum, minimum, denoted by \( S_{\text{max}}, S_{\text{min}} \) and \( S_{\text{diff}} \).
4. And the last step involves determining whether the bootstrap difference $S_{diff}^0$ is less than or more than the original difference.

The rationalization behind generating the bootstrapping is that the bootstrap samples signify for the random reallocation of the data that mimic the behavior of the CUSUM if no change has occurred. With the help of number of bootstrap samples, one can calculate how much $S_{diff}$ would vary if there is no change that took place. This can be compared with the $S_{diff}$ value calculated from the data in its original order to determine if this value is consistent with what we would anticipate if no change occurred. The bootstrap CUSUM charts tend to stay closer to zero than the CUSUM of the data in its original order. This indicates that a change must have occurred (Taylor 2000a).

Further a confidence level of the estimate is calculated. If one assumes that ‘N’ is the number of bootstrap samples performed and let X be the number of bootstraps for which $S_{diff}^0 < S_{diff}$. Hence, the confidence level = 100 x/ N %. Typically 90 % or 95 % confidence is required to determine that a significant change has occurred. Out of 1,000 bootstraps, 995 had $S_{diff}^0 < S_{diff}$. This gives a confidence level = 100 x/N % = 99.5 %; this indicates strong evidence that a change did, in fact, occur (Taylor 2000a).

**Figure1.3: CUSUM Chart of Number of Customers Connected With Electricity in Kenya, 1993-2013.**
1.9: Limitation of the Study

The binding constraint of this study was the non-availability of reliable performance data of electricity generation as well as distribution companies. This study utilized the information available from the annual reports of Kenya power and other Government documents. Due to the focus on Economic Impact of Reforms on the Electricity Supply Industry in Kenya, the study was limited to the operational and financial performance of the power sector reforms. The study did not analyze the pure technical and engineering aspects of the power sector which is also very essential. There was serious problem of data availability to bridge the information gaps especially of the rural electricity sector in Kenya which does not publish separate information from the Kenya Power and Lighting Company. Because of these reasons the current study is relied on whatever data was available to undertake the present study. There are no specific limitations with the ‘Change-point analysis’ technique’. However, it will provide the best results with data of a long period of time.

1.10: Chapterization

The whole study is divided into seven chapters with References and bibliography at the end:

Chapter 1: Introduction

The chapter explains significance of electricity as an important input for economic growth and as a boost to development of Kenyan economy. It gives an overview on Kenya’s economic development goals and its relevance to the current study. The restructuring process is discussed. The current status of Kenya electricity supply industry is discussed by stating the current annual rate of electricity connections; transmission and distribution losses, revenue collection, number of customers connected with the national grid, and last but not least number of projects under implementation. The last part contains the significance of the study, scope of the study, objectives of the study, methodology adopted and data base, limitation of the study and lastly the scheme of chapters.
Chapter 2: Review of Literature

The chapter is divided into three sections; first section, explains the theoretical concepts related to the power sector. The second section examines the different studies undertaken by various researchers globally related to the study area, the last and third section focused only on the studies done by various researchers and other organizations based on Kenya Power Sector with a view to identify gaps in the studies undertaken in Kenya as it provides an academic basis for the present study.

Chapter 3: Electricity Supply Industry in Kenya

Basically, this chapter deals with overall electricity supply scenario in Kenya in part one, while part two deals with the reforms undertaken based on regulation of electricity supply industry in Kenya in terms of the structure, formation, functions, autonomy, financial sources of the commission, appointments and termination criteria, the regulators tenure in the office, accountability, transparency and decision making process, issues related to consumer services and satisfaction, and lastly the tariff orders passed since its inception.

Chapter 4: Operational Performance of Electricity Supply Industry in Kenya

In this chapter, we mainly discussed the impact of reforms on the operational performance of electricity supply industry in Kenya. We examined the trends and critical change-points of the parameters like installed capacity, generation of power, plant load factor, per capita consumption, consumption patterns, transmission and distribution network, energy losses, employee productivity to measure the technical performance.

Chapter 5: Financial Performance and Pricing Policy

This chapter focused on the impact of reforms on financial and pricing policy on electricity supply industry in Kenya. We analyzed the trends and critical change-points of a few key financial performance indicators of Kenya Power and Lighting Company such as electricity sales, revenue from sale of electricity, cost of supply, capital structure, and loan burden to the utility, commercial profit/loss. Finally in part II we discussed pricing policy adopted by Kenya power sector and issues of subsidies.
Chapter 6: Rural Electrification

In this chapter we examined the rural electricity in Kenya and its progress. We highlighted the sources of energy available for the rural population, discussed the rural electrification programme and its inception, the existence of rural electrification authority, sources of investments for rural electrification programme in Kenya, number of customers and number of households connected to the rural electricity. We also analyzed the number of rural electrification schemes for the period of study. Lastly, expenditure and revenue are discussed.

Chapter 7: Summary of the major findings, Policy Recommendations and Conclusion

This chapter discusses the summary of all the major findings, some policy recommendations and conclusion.