



**Rural**  
Electrification Authority

# STRATEGIC PLAN

**2008 - 2012**





**Rural**  
Electrification Authority

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# Foreword

This Strategic Plan which covers the period 2008-2012 has been prepared through a consultative process involving stakeholders. The plan provides a road map towards achievement of the Rural Electrification Authority's objective by the year 2012.

The Strategic Plan is based on Vision 2030 and Sessional Paper No.4 of 2004 on Energy. Under the first five year (2008-2012) implementation plan of Vision 2030 the target for rural electrification is to provide electricity to all public facilities including trading centres, secondary schools, primary schools, health centres, community water works and one million households. To this end, the Rural Electrification Authority's target over the period 2008-2012 is to provide electricity to all public facilities and domestic households within the vicinity of such facilities.

Sessional Paper No.4 of 2004 on Energy provides a framework towards provision of quality, adequate, sustainable, cost-effective and affordable energy services for socio-economic development. Preparation of this Strategic Plan has taken into account policies and strategies articulated in the Paper relating to rural electrification.

I would like to thank all those who participated in the preparation of this Strategic Plan for their valuable assistance that enabled the Authority to complete this detailed Plan towards the provision of electricity to all Kenyans and contribute towards sustainable socio-economic development of the country.



## Foreword by

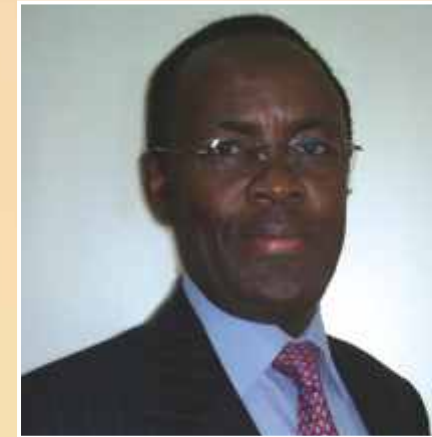
**Mr. Faisal Abass**

**Chairman Board of Directors**

## MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

This Strategic Plan has been prepared through the concerted efforts of the Board of Directors, Staff of the Rural Electrification Authority (REA) and Consultants from the Ministry of Public Service in the Office of the Prime Minister. Dissemination of the Plan to the public coincides with the official launch of Authority on 29th October, 2008 by the Hon. Minister of Energy, Hon. Kiraitu Murungi, EGH, MP.

The focus of this Strategic Plan is provision of electricity to all public facilities and domestic households within the vicinity by 2012. This is expected to provide the backbone for increasing access and connectivity from the current 63% and 10% to 100% and 22%, respectively. The goal though appearing ambitious is achievable. Both REA Board of Directors and staff are committed towards achieving this objective with the continued support of the Government, Development Partners and Kenyans at large.



### Message

**Mr. Zachary O. Ayieko**

**Chief Executive Officer**

## List of Acronyms

ASAL	Arid and Semi Arid Land
BOD	Board of Directors
CDF	Constituency Development Fund
CSR	Corporate Social Responsibility
E.A.P.L	East African Power and Lighting Company
HR/A	Human Resources and Administration
ICT	Information Communication and Technology
IEC	Information Educational and Communication
IMIS	Integrated Management Information System
ITIL	Information Technology Infrastructure Library
K.P.L.C.	Kenya Power & Lighting Company
KenGen	Kenya Electricity Generation Company
KM	Kilo Meters
KV	Kilo Volt
LATF	Local Government Transfer Fund
MOE	Ministry of Energy
MTEF	Medium Term Expenditure Framework
MW	Megawatts
PPP	Public Private Partnership
PV	Photovoltaic
R.E.A	Rural Electrification Authority
SLA	Service Level Agreement
SWOT	Strengths Weaknesses Opportunities and Threats

## BOARD OF DIRECTORS



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Chairman



**Mr. Patrick Nyoike**  
PS Energy



**Mr. Joseph Kinyua**  
PS Finance



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**Eng. Richard Muiru**  
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**Ms. Anne Mwalonzi**  
Alternate Director - PS Finance

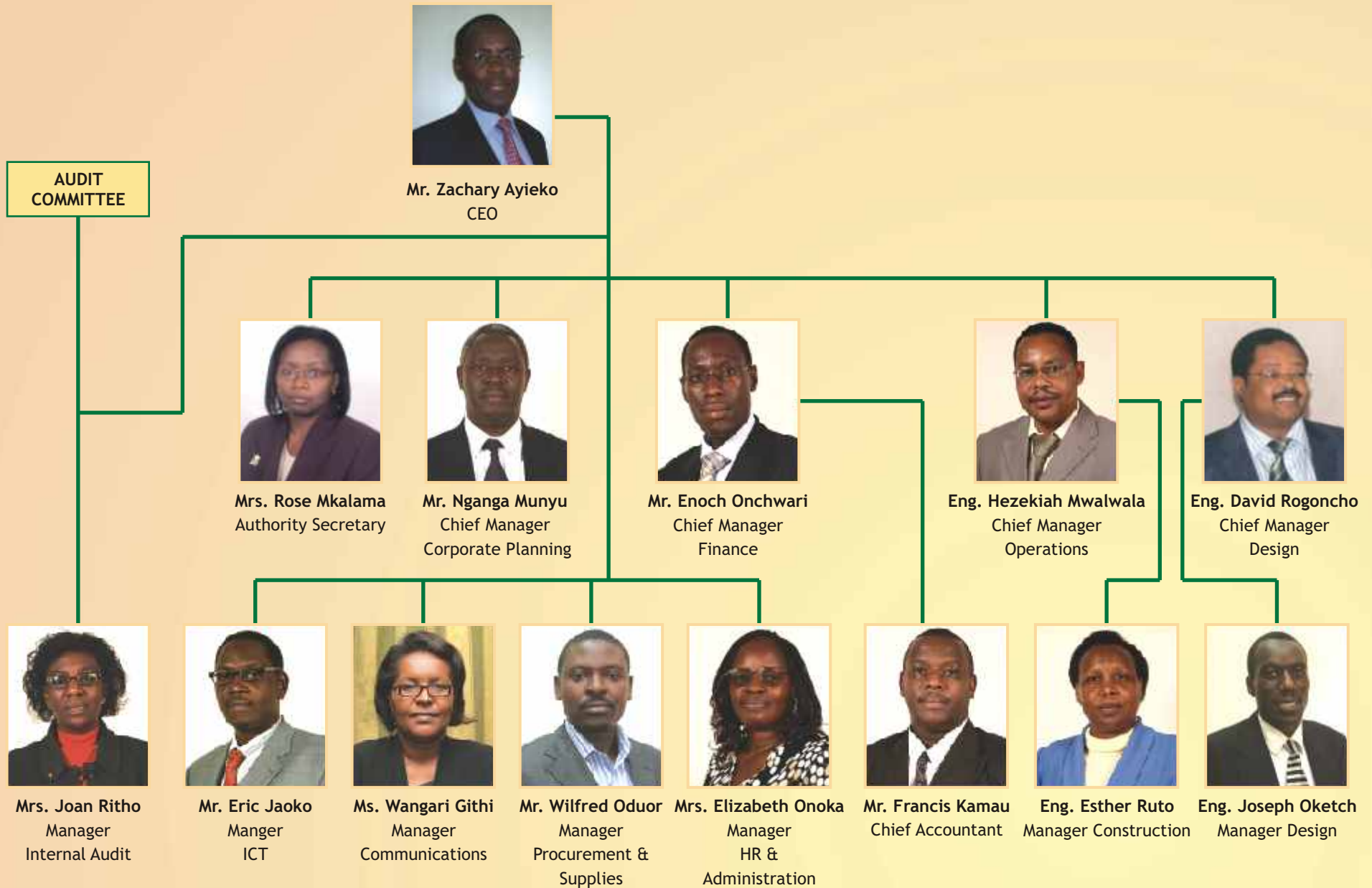


**Mr. Zachary Ayieko**  
CEO



**Mrs. Rose Mkalama**  
Authority Secretary

## MANAGEMENT BOARD





## INTRODUCTION

The Government established the Rural Electrification Programme in 1973 for purposes of subsidizing electricity supply in the rural areas. This was upon realization that although electricity is an important input to the socio-economic development of the country, many parts of the country could not get electricity on commercial basis.

During the same year (1973) the Government entered into an agreement with the then East African Power and Lighting Company (EAPL), now the Kenya Power & Lighting Company (KPLC). Under the agreement KPLC was appointed as a contractor for planning, implementation, operation and maintenance of rural electrification schemes. The Government has been responsible for sourcing of funds for rural electrification and identifying projects to be implemented by KPLC.

Despite the Rural Electrification Programme having been in place for more than thirty (30 years), it is estimated that currently, only about 10% of the rural population in Kenya have electricity supply in their homes. On the other hand, access to electricity is about 63%<sup>1</sup>. This level of population with electricity is very low compared to the average for the developing world which is estimated at about 35% to 40%. Table 1 shows that the proportion of rural population with electricity in some countries is quite high compared to Kenya.

### CHAPTER ONE

# I

It is as a result of the low connectivity that the Government, through the Economic Recovery Strategy, launched in 2003 and Sessional Paper No. 4 of 2004 on Energy undertook to accelerate the pace of rural electrification through creation of a special purpose rural electrification agency with the objective of increasing provision of electricity as a means to promote sustainable socio - economic development of rural communities.

<sup>1</sup>Any administrative sub location served by 33/11KV distribution line is considered to have access to electricity.

**Table 1:**

## **ELECTRICITY CONNECTIVITY IN SELECTED COUNTRIES**

<b>Country</b>	<b>Proportion of Rural Population Connected to Electricity</b>
Thailand	85%
Phillipines	76%
Morocco	93%
Ghana	54%
Argentina	80%
Chile	94%
South Africa	70%

The goal set in the two policy documents is to increase electricity service connections from about 4% in 2003 to 20% by 2010 and 40% by 2020 taking into account economic cost effective criteria and emphasizing productive use of power and employment creation. To facilitate realization of this goal, the Rural Electrification Authority (REA) was established under the provisions of the Energy Act No. 12 of 2006 for purposes of enhancing rural electrification in the country. Upon becoming operational in July 2007 the Authority embarked on developing a strategic plan to help it realize its mandate under the Act.

### **Rationale for the Strategic Plan**

Vision 2030, the country's new development blueprint aims at providing a high quality of life to all citizens by 2030 and has singled out electricity as one of the drivers of high quality life. In this respect, the aspiration of Vision 2030 dictates that every citizen must have electricity by this time, i.e. 100% connectivity by 2030. In the medium term, the vision aims at increasing connectivity in the rural areas to 22% by 2012. These are therefore the targets which REA should aim at.

This Strategic Plan provides a road map on key strategies in the areas of design, operations, procurement, communication, legal framework, human and financial resource management that will support the realization of these targets. It has aligned REA's mandate, strategies, vision and mission with the Kenya's Vision 2030.



### **The Strategic Plan process**

The strategic plan was developed through a participatory and an all inclusive processes led by REA's Board of Directors and senior management working with consultants from the Ministry of State for Public Service. It involved a series of workshops and consultative meetings with stakeholders, with a view to ensuring that they also got the opportunity of articulating the issues affecting our customers.

## KENYA'S RURAL ELECTRIFICATION DEVELOPMENT AGENDA AND CHALLENGES

Vision 2030 being implemented during the next 22 years is a vehicle for accelerating the transformation of our country into a rapidly industrialized middle income nation by the year 2030. The vision will be implemented through five year medium term rolling plans. The first term covers the period 2008 - 2012 which corresponds with REA's five year plan period.

This long term national planning strategy is anchored on three main pillars, namely economic, social and political. Energy has been identified as one of the infrastructural enablers of the three pillars of Vision 2030. To this end, an energy sector policy framework (Sessional Paper No.4 of 2004 on Energy) upon which cost effective, affordable and adequate quality energy services will be made available to the domestic economy on a sustainable basis is in place.

In line with this policy objective, the Vision and Mission of the Ministry of Energy, the Government organ responsible for energy policy formulation are as follows:

Vision:

**“To have quality energy for all Kenyans”**

Mission:

**“To facilitate provision of clean, sustainable, affordable, reliable and secure energy services at least cost while protecting the environment.”**

The Ministry's mandate as contained in the Presidential Circular No. 1/2008 of May 2008 is as follows:

- i) Energy Policy Development
- ii) Hydropower Development
- iii) Geothermal Exploration and Development
- iv) Thermal Power Development
- v) Petroleum Products, Import/Export/Marketing Policy
- vi) Renewable Energy Development
- vii) Energy Regulation, Security and Conservation
- viii) Fossil Fuels Exploration and Development
- ix) Rural Electrification Programme

The Rural Electrification Authority was created and charged with the mandate of implementing the rural electrification programme. To facilitate enhancing connectivity, the Ministry, jointly with some development partners, has formulated an Energy Access Scale-up Programme through which all public facilities and one million households will be connected to electricity over the next five years at an estimated cost of Ksh. 114 billion<sup>2</sup>. This target has been adopted in Vision 2030. Equally, the Ministry has in recent years undertaken institutional reforms in the energy sector, including the introduction of a strong regulatory framework and the separation of generation, transmission and distribution of electricity.

In addition to creation of the Rural Electrification Authority, other strategies contained in Sessional Paper No.4 of 2004 on rural electrification are as follows:

- Development of small hydro and/or hybrid off-grid systems comprising of renewable energy and oil-fired components in areas where grid extension may not be economically feasible,
- Provision of a one-off financial subsidy to support implementation of rural electrification projects either by local communities or the private sector,
- A conducive regulatory framework including cost reflective tariff structures for small power utilities, and
- Privatization or concessioning of the isolated diesel stations on the basis of tariff price cap and a committed programme for network expansion.

<sup>2</sup>This amount covers only electricity distribution and excludes the associated generation and transmission costs.

### CHAPTER TWO

# 2

## Challenges in rural electrification

Some of the challenges encountered in rural electrification are:

- ◆ Perceived high electricity tariffs
- ◆ High connectivity charges
- ◆ Limited number of transformers installed along distribution power lines
- ◆ Limited use of renewable energy
- ◆ Limited transformer reach of up to 600 meters radius
- ◆ Over reliance on hydro electric power
- ◆ Long lead times to get connected
- ◆ Lack of credit facilities to facilitate connectivity for rural electricity customers
- ◆ Weak power transmission and distribution network leading to power outages
- ◆ Inadequate marketing to drive connectivity
- ◆ Inefficient use of electricity
- ◆ Low per capita electricity consumption
- ◆ Population distribution in the rural areas
- ◆ Demand outstripping supply
- ◆ Inadequate design and other technical staff
- ◆ Inadequate entrepreneurship schemes for rural electricity
- ◆ Inadequate funding
- ◆ Low income in the rural areas
- ◆ Inadequate data on access and connectivity
- ◆ Harsh terrains in most of the rural areas
- ◆ Vandalism of power infrastructure
- ◆ Lack of a land use master plan



Some of the measures put in place to address these challenges include;

- ◆ Continued funding from the Government for rural electrification,
- ◆ Payment of connection charges in installments,
- ◆ Formulation of an appropriate policy and regulatory framework,
- ◆ Encouraging private generators of power (IPPs),
- ◆ Introduction of feed-in-tariff to attract investment in renewable energy,
- ◆ Continued support by Development Partners ,
- ◆ Training of designers by the Ministry of Energy,
- ◆ Separating electricity generation, distribution, and transmission,
- ◆ Exploring new sources of energy through exploitation of geothermal power, coal, renewable energy sources, and
- ◆ Undertaking to connect Kenya to energy surplus countries in the region to boost the connectivity and availability of power to meet demand.

These measures are expected to enhance access and connectivity to electricity in the rural areas and spur economic development in line with the goals of Vision 2030.

## Lessons Learned

Key lessons learnt in implementation of rural electrification in Kenya and in other parts of the world include:

- ◆ Electricity is an essential infrastructure for development and should therefore be made available to all.
- ◆ Substantial Government funding and political support is crucial to the success of rural electrification.
- ◆ Community participation and ownership is essential for sustainability of rural electrification.
- ◆ Enabling institutional framework is vital in achieving rural electrification objectives.
- ◆ Success of rural electrification requires an appropriate land use policy
- ◆ Growth of the economy drives demand for power.

## ROLE OF THE RURAL ELECTRIFICATION AUTHORITY

As mentioned above, the slow pace of rural electrification over the years necessitated the creation of the Rural Electrification Authority, a Government agency with a specific mandate to speed up the implementation of rural electrification. As per Section 67 of the Energy Act No. 12 of 2006, the functions of the Authority are:

- Management of the rural electrification programme fund,
- Development and updating of the rural electrification programme master plan,
- Implementing and sourcing of funds for the rural electrification programme,
- Promotion of use of renewable energy sources including but not limited to small hydros, wind, solar, biomass, geothermal, hybrid systems and oil fired components taking into account specific needs of certain areas including the potential for using electricity for irrigation and in support of off-farm income generating activities,
- Management of the delineation, tendering and award of contracts for licences and permits for rural electrification, and
- Perform any other function as the Board may direct

The Authority's vision, mission, and core values are as follows:

### Vision

To be the leading provider of quality and affordable electricity to all in the rural areas

### Mission

To efficiently provide high quality and affordable electricity service in all rural areas

and

To achieve high standards of customer service through advancing community participation to ensure long term sustainability and socio-economic development.

## Organizational Structure

To achieve its mandate the Authority has an interim organization structure in place configured into the following departments: Communications, Corporate Planning, Finance, Internal Audit, Human Resource and Administration, Legal, Procurement, Design, ICT Operations and Renewable Energy. The interim Organizational Structure is contained in Annex I. This structure will be reviewed by June 2009 to ensure that the Authority has the required human capital to drive and achieve its mandate.

## Core values

- **Professional Integrity and Excellence:** REA staff shall carry out their duties with integrity and excellence, in a professional manner and always seek to improve professional standards and ethics required by the respective professional duties.
- **Customer Focus:** REA staff shall perform their duties with total commitment and deliver timely quality services to their customers in order to build and maintain public confidence in service delivery.
- **Team Work:** REA staff shall remain open and proactive in identifying any issues and recommendations that contribute to empowering them and enhance their motivation to serve the people of Kenya as a team.
- **Respect for People:** REA staff will all times treat other people with utmost respect, courtesy and fairness in their service delivery to the people.
- **Passionate:** REA staff shall be driven by the passion of ensuring that every Kenyan gets electricity.
- **Commitment to Staff welfare.** The REA Board of Directors will provide a conducive working environment to the staff in order to ensure efficient service delivery to customers.

## Goal

The overall goal of the Authority is two-fold: to increase access to electricity in the rural areas from 63% currently to 100% by 2012, and to achieve 100% connectivity by 2030. Achievement of 100% connectivity by 2030 will be implemented in three phases as shown in Table 2. This Strategic Plan focuses on Phase I. During this Phase REA's target will be to connect all public facilities including trading centres, Secondary Schools,

Health Centres, Primary Schools, Community Water works, Administrative Facilities and Domestic Households within the vicinity of such public facilities. This will serve as the back bone through which Phases II and III will be implemented targeting domestic households that are far away from the public institutions.

Vision 2030 targets connecting one million households between 2008 and 2012. It is projected that out of the one million households, 650,000 households will be in the rural areas and the balance of 350,000 households in the urban areas. As shown in Table 2, the total number of rural electricity customers by 2012 is projected to be about 1,400,000 from a current estimate of 750,000. Of the 650,000 rural customers to be provided with electricity between 2008 and 2012, REA's share is 200,000 rural customers while the remaining 450,000 rural customers will be for KPLC.

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**Table 2: RURAL ELECTRICITY ACCESS AND CONNECTIVITY TARGETS**

Phase	Period	Access Level	Proportion of Rural Population with Electricity	Projected Number of Rural Electricity Customers	Cumulative Additional Power Demand (MW)**
	2008	63%	10%	750,000*	
Phase I	2008-2012	100%	22%	1,400,000	325
Phase II	2013-2022	100%	65%	5,050,000	2,150
Phase III	2023-2030	100%	100%	9,060,000	4,155

\* These include estimated grid customers totaling 450,000 as per the estimate contained in the Rural Electrification Masterplan Report dated September 2008 and a further 300,000 using solar PVs. The estimate for solar is based on Sessional Paper No. of 2004 on Energy which estimated that there were 200,000 households with solar PVs in 2004 and projected future growth of 20,000 solar PVs per year.

\*\* This assumes grid connection on the basis of 0.5KW per customer.

It is estimated that realization of the above connectivity targets will result in additional national power demand of about 325 MW, 2,150 MW and 4,155 MW by 2012, 2022 and 2030, respectively. It is anticipated that this demand will be met within the overall national power development plan. For example, projected national power demand by 2012/13 totaling about 1,715 MW will be met through the implementation of various committed projects with a combined capacity of 1,225 MW by 2012. In addition, six transmission lines with a combined total length of 2,308 KM are also committed and are projected to be commissioned over the period 2010-2013 (Annex II).

## Stakeholders Analysis

In order to realize its goal the Rural Electrification Authority will cooperate with the following key stakeholders:

Stakeholder	Expectation from REA	REA Expectation from Stakeholder
Customer	<ul style="list-style-type: none"> <li>• Faster provision of electricity</li> <li>• Quality service</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation in project implementation</li> <li>• Provision of security of rural electrification assets</li> <li>• Quick provision of wayleaves</li> </ul>
Parliament	Efficient utilization of allocated funds	Appropriation of substantial funding for rural electrification
Ministry of Energy	Provision of electricity to all public facilities	Provision of an enabling energy policy framework including adequate generation and transmission capacity
KPLC	Compliance with appropriate standards	Cooperation in project implementation and faster connection of customers
KENGEN / IPPs	Cooperation in planning for future electricity demand	Continued generation of adequate electricity
ERC	Compliance with appropriate regulations in the electricity sub-sector	Cooperation in formulation of regulations and award of licenses and permits for rural electrification
Ministry of Finance	Efficient utilization of allocated funds	Quick disbursement of allocated funds
Other Government Ministries / Departments	Cooperation in the implementation of development projects	Cooperation in the implementation of development projects
Development Partners	Efficient implementation of rural electrification projects	Financial support
Local Authorities	Provision of electricity to trading centres/institutions	<ul style="list-style-type: none"> <li>• Financial support</li> <li>• Timely provision of wayleaves</li> </ul>
Contractors	<ul style="list-style-type: none"> <li>• Timely provision of materials</li> <li>• Timely processing of contracts / payments</li> </ul>	<ul style="list-style-type: none"> <li>• Quality workmanship</li> <li>• Timely implementation of projects</li> </ul>
Constituency Development Committees	Provision of electricity to public facilities	<ul style="list-style-type: none"> <li>• Financial support</li> <li>• Cooperation in project implementation</li> </ul>
Suppliers	Timely processing of contracts / payments	Timely supply of materials
Public/Private Partners	Increased connectivity and efficient service	Injection of funds

## SITUATION ANALYSIS

### Current Status of Rural Electrification

This section highlights the current status of rural electrification in the country which will be the starting point for REA. Since inception in 1973, the Rural Electrification Programme has been financed from both internal and external sources. Between 1973 and fiscal year 2007/08 a total of Ksh.24 billion was spent in financing rural electrification projects in the country as detailed in Table 3. The table shows that about 70% of the total funds have been spent in the last five years and that, a similar proportion of 70% of the total funds have been raised from internal sources.

Internal funds largely comprise of direct Government contribution and the 5% Rural Electrification Programme levy paid by electricity consumers through the monthly bills. External financing is in form of credit facilities and to a limited extent grant funding. The table demonstrates Government commitment since 2003 to enhance rural electrification through increased funding. Funds spent in the past five years (2003/04-2007/08) have financed implementation of about 1,900 schemes resulting in connection of electricity to about 3,282 public facilities comprising of trading centres, secondary schools and health centres.

Table 3: Financing of Rural Electrification in the Past

Period	Internal Sources (Kshs. Mn)	External Sources (Kshs. Mn)	Total	%
1973 - 2002/03	4,271	2,994	7,265	30.3
2003/04 - 2007/08	12,626	4,116	16,742	69.7
<b>TOTAL</b>	<b>16,897</b>	<b>7,110</b>	<b>24,007</b>	<b>100</b>
%	70.4	29.6	100	

Current external funding is about Euro.43.5 million out of which Euro.42 million is in form of credit facilities from the Governments of France and Spain for financing network expansion while Euro.1.5 million is a grant from the Government of Finland for financing preparation of a rural electrification masterplan. Funding from France totaling Euro.30 million is financing electrification of 460 trading centres and 110 secondary schools, amongst other public facilities. Implementation of this component commenced in mid-2007 and is expected to be completed by December 2008. The component from Spain whose implementation started in April 2008 is for Euro.12 million targeting electrification of 41 trading centres and 24 secondary schools.

By June 2008, about 161,354 customers were registered by KPLC as the customers connected under the Rural Electrification Programme. However, the actual number of rural households supplied from the public grid is much higher than this given that in some instances one meter serves several households. In addition, under the current practice customers connected by KPLC after completion of a rural electrification scheme are recorded as KPLC's customers instead of Rural Electrification Programme customers. In this respect, it has been estimated that the total number of households connected to the grid in the rural areas is about 450,000 households.

Two options are usually available for consideration in the rural electrification process; the first option is the national grid extension and the second is the off-grid projects which mainly consist of diesel generators, mini hydros, solar PV projects and biomass usually implemented in isolated areas far away from the main grid. The isolated diesel power stations are mainly installed for the supply of trading centres, while solar PV systems are for schools and health centres mainly in arid and semi arid land.

Regarding solar PVs, the Ministry of Energy is currently providing solar electric power systems in public institutions in arid and semi-arid (ASAL) areas. At the onset of the programme in 2005/06, boarding secondary schools in the ASAL areas were given first priority. Within the last three years, the Ministry has implemented installation of solar PVs in 95 secondary boarding schools in 15 districts in ASAL areas at an approximate cost of KSh.360 million. Arrangements are underway to provide solar PV systems to about 100 health centers and 500 dispensaries.



In the case of diesel generation, currently there are twelve (12) isolated diesel power stations in operation including ten (10) located at Moyale, Marsabit, Mandera, Wajir, Lodwar, El Wak, Habaswein, Hola, Mpeketoni and Merti under the Rural Electrification Programme, and two (2) located at Garissa and Lamu both of which are owned by KenGen. Other three stations located at Lamu Island, Mfangano Island and Baragoi are under implementation and are due for completion by December 2008. To increase power capacity complementary wind generators will be installed in areas where diesel generators exist to act as hybrid systems where applicable.

Small hydropower and biomass are being considered and encouraged for the supply of electricity to villages, small businesses or farms. 260 small hydropower sites with a capacity not exceeding 10 MW each have been identified with an estimated theoretical total potential of more than 600 MW. Large companies especially agricultural based with the potential for co-generation using bagasse are increasingly being encouraged to consider alternative fuel for energy generation for self use and meeting the demand of the surrounding areas. Such projects include electricity from bagasse co-generation at sugar factories and biogas from flower farms, agricultural residues, municipal solid waste, waste water and sewerage treatment plants from big cities and towns.

Table 4 shows the current electrification status of public facilities in the rural areas. On average, about 39% of all trading centres, public secondary schools and health centres in the rural areas have been electrified. Of important to note is that two trading centres namely, Vanga and Lunga Lunga in Coast province were connected through tapping of power from Tanzania. In this respect, it is expected that extension of electricity to the border town of Namanga in 2007 will enable Tanzania supply its side of the town from Kenya.

The table reveals that about 67% of all public facilities so far electrified were connected in the last five years. In total 7,826 public facilities (about 61% of total public facilities) are yet to be electrified. This will be REA's target over the next five years. Electrification of these public facilities will be based on the best option including grid extension, diesel generation, solar PV, mini-hydro, wind, etc..

**Table 4: ELECTRIFIED AND NON-ELECTRIFIED TRADING CENTRES, SECONDARY SCHOOLS AND HEALTH CENTRES IN THE RURAL AREAS**

FACILITY	TOTAL NO. IN THE RURAL AREAS	ELECTRIFIED BEFORE 2003	ELECTRIFIED BETWEEN 2003/04 & 2007/08	NON - ELECTRIFIED	% OF NON ELECTRIFIED
Trading Centres	5,430	1,096	1,437	2,897	53%
Public Secondary Schools	5,204	285	1,383	3,536	68%
Health Centres	2,203	348	462	1,393	63%
<b>TOTAL</b>	<b>12,837</b>	<b>1,729</b>	<b>3,282</b>	<b>7,826</b>	<b>61%</b>

**Notes:**

- (i) The above data is preliminary and is being updated as new information is obtained.
- (ii) The data excludes Nairobi.
- (iii) 95% of the scope covered over the period 2003/04-2007/08 was implemented in two years (2006/07 and 2007/08).

**SWOT Analysis**

This section provides an appraisal of REA indicating the strengths, weaknesses, opportunities and threats towards enhancing rural electrification from the current status enumerated above. The analysis reflect strengths that REA would like to retain, weaknesses that REA should eliminate, opportunities REA should take advantage of and threats that REA should guard against.

**Strengths**

- Existing team spirit between the Board and Management
- Experienced and committed staff
- Good working relationship between MOE and REA

- **Significant funding:** Ksh. 11.4 billion allocated to rural electrification in 2008/09 is the biggest amount ever to be allocated in one year.
- **Existing Government owned rural distribution network:** Most of the distribution network in the rural areas is owned by the Government and extension from such network by REA won't therefore pose any problem.
- **Freely negotiated performance contract targets:** REA staff has a clear direction of the organization's goal.
- **New organization with no debt:** This means that all funds available will be dedicated to financing of new extensions as opposed to paying old debts.

### Weaknesses

- **Inadequate data on access and connectivity levels:** Accurate data on access and connectivity is vital for planning purposes. However, available data is not based on detailed analysis.
- **Lack of an updated rural electrification master plan including a GIS database:** Although a masterplan is very important in facilitating selection of projects for implementation, the existing masterplan that was prepared in 1997 is outdated. Updating of this masterplan is in progress but has delayed considerably due to a number of factors; it is expected to be completed around March 2009.
- **Inadequate manpower and institutional capacity:** Out of the anticipated total REA workforce of about 91 only 74 have been recruited.
- **Rural population may not be aware of REA's existence and its function in rural electrification:** Being new REA is not known in the rural areas and this has a potential of affecting wayleaves acquisition.
- **Inadequate research facilities:** These are important but they are non-existent.
- **Lack of appropriate regulations to support the legal framework relating to rural electrification:** No regulations have been prepared after enactment of the Energy Act, No.12 of 2006 and these are necessary especially in promoting community/private sector participation.
- **Insufficient power distribution design skills:** During recruitment of REA's staff it was not possible to get appropriate design skills.
- **Lack of risk management framework:** By virtue of being new REA is yet to put in place a risk management framework which is necessary in business operations.
- **Low private sector and community participation:** Currently, participation of the private sector and community in rural electrification is quite low.

### Opportunities

- **Government commitment in supporting rural electrification through provision of substantial funding:** There is realization within Government that provision of electricity is important for development.
- **High access and very low connectivity:** An access level of 63% and connectivity of 10% means there is room for connecting more customers within the existing network.
- **Policy framework on private sector and community participation in place:** REA intends to promote private sector/community participation in rural electrification. Sessional Paper No.4 of 2004 on Energy provides for this including the possibility of having cost reflective tariffs unlike the current uniform tariff structure which has been in existence in the country over the years.
- **Incorporation of operating costs of rural electrification schemes in the tariff:** Operating losses arising from rural electrification schemes has been a major issue in the past with huge amount of funds which would have been spent in financing extension of new lines being used to finance such losses.
- **Conducive legal framework for community and private sector participation:** Section 67 of the Energy Act, No.12 of 2006 provides for award of contracts for rural electrification projects; this could be to the private sector or communities.
- **Potential for development of renewable energy:** Contribution of renewable energy to total energy consumption in the country is said to be very small. Thus, there exists potential that needs to be exploited.
- **Development Partners goodwill in supporting rural electrification:** A number of development partners such as the World Bank, Finland, Spain, African Development Bank and Japan have shown interest in supporting rural electrification.
- **Recognition of electricity as an enabler in realizing Vision 2030:** This recognition is important as it is likely to translate into increased funding in future.
- **Existence of adequate and skilled labour and transport contractors:** There are about four hundred contractors already pre-qualified by KPLC and these are considered to be adequate for the work to be generated by REA.
- **Availability of devolved funds in the districts and the Constituencies:** Cooperation between REA and Stakeholders at the district and constituency level will enhance mobilization of funds for rural electrification. Some of the devolved funds that can be mobilized for

rural electrification include LATF and CDF.

- **Public Private Partnership framework:** The PPP framework is being finalized by the Treasury and through the implementation of the framework; mobilization of resources for rural electrification will be enhanced.

### Threats

- **Risk of delayed disbursement of funds from Treasury:** Any delay in release of funds from the Treasury will mean delay in project implementation thus adversely affecting REA's ability to meet its target.
- **Long lead time in international supply of materials:** Most power line materials are not available off the shelf but are usually manufactured on order and this can take long depending on demand.
- **Inadequate generation capacity in the country:** The current total generation capacity of 1,206 MW is inadequate relative to the current estimated peak demand of about 1,150 MW, which on the basis of the power planning criteria of a reserve margin of 20% of demand would require capacity of about 1,380 MW.
- **Weak electricity transmission and distribution infrastructure:** Extension of power lines in some areas is impossible without upstream reinforcement due to the high voltage drop that would be encountered.
- **Over reliance on Government funding:** Given that the major source of funds for rural electrification currently is from the Exchequer, any funding shortfall from this source would affect REA's operations negatively.
- **Lack of a legal framework to allow disconnection:** The Energy Act, No.12 of 2006 does not provide for disconnection of power if a customer is unable to pay for connection charges. This is likely to affect implementation of the phased payment system.
- **Low income in the rural areas:** Low incomes leads to delay in payment of connection charges by the beneficiaries.
- **Potential of delay in wayleaves acquisition:** Some landowners are reluctant to give permission for wayleaves.
- **Vandalism of power line assets:** This has of late been a major concern.
- **Increase in fuel and material costs:** This will increase the cost of implementation of rural electrification projects.
- **Inadequate awareness on existence of the Feed-in-tariffs:** Failure by the private sector to take advantage of the recently introduced feed-in-

tariffs is likely to have a negative impact on promotion of renewable energy.

## CHAPTER FIVE

# 5

### STRATEGIC ANALYSIS

The SWOT analysis conducted in the previous chapter facilitates identification of strategic issues that need to be addressed to achieve REA's mandate and goal. The issues identified include:

- Low accessibility and connectivity of electricity in the rural areas
- Lack of a comprehensive rural electrification master plan
- Inefficient use of electricity
- Limited use of renewable energy
- Lack of appropriate regulations to support the legal framework relating to rural electrification
- Low private sector and community participation in rural electrification
- Inadequate institutional and staff capacity
- Long lead times in international supply of materials
- Need to achieve financial sustainability
- Inadequate ICT infrastructure
- Lack of business operational manuals
- Vandalism of power line assets
- Lack of risk management framework
- Limited generation capacity
- Weak transmission and distribution network

The above strategic issues will be addressed through the following strategic objectives;

#### Strategic objectives

1. To increase access to electricity in the rural areas from 63% currently to 100% by 2012 and contribute towards increasing connectivity from 10% currently to 22% by 2012 and 100% by 2030
2. To promote the development and use of renewable energy
3. To enhance the legal and institutional framework
4. To strengthen staff capacity
5. To achieve financial sustainability
6. To develop and operationalise business processes
7. To promote sense of community ownership of rural electrification
8. To develop and implement a risk management framework

Strategies to facilitate realization of the above objectives are summarized below. Regarding limited generation/transmission capacity and weak distribution network which have not been addressed in the summary below, Annex II contains a list of committed generation and transmission projects for commissioning by 2013. Annex III on the other hand contains a list of identified transmission lines which are required within the plan period so as to reduce technical losses, improve voltages and meet the anticipated additional demand but whose funding is yet to be secured. REA will collaborate with the Ministry of Energy in ensuring that funding for these transmission lines is secured and they are implemented.



## Strategic issue, Strategic objectives and Implementation strategies

	Strategic issues	Strategic objectives	Implementation Strategies
1	<ul style="list-style-type: none"> <li>• Low accessibility and connectivity of electricity in the rural areas</li> <li>• Lack of a comprehensive rural electrification master plan</li> <li>• Long lead times in international supply of materials</li> </ul>	To increase access to electricity in the rural areas from 63% currently to 100% by 2012 and contribute towards increasing connectivity from 10% currently to 22% by 2012 and 100% by 2030	<ul style="list-style-type: none"> <li>• Connect all public facilities by 2012</li> <li>• Installation of additional transformers along existing power lines</li> <li>• Adoption of new conductor sizes or any other measure to enhance customer reach beyond 600 metres</li> <li>• Timely procurement of materials</li> <li>• Encourage local manufacture of power line materials</li> <li>• Develop a marketing strategy</li> <li>• Implement the marketing strategy</li> <li>• Finalization of the rural electrification master plan.</li> </ul>
2	Limited use of renewable energy	To promote the development and use of renewable energy.	<ul style="list-style-type: none"> <li>• Adopt energy mix policy in rural electrification</li> <li>• Dissemination of information on renewable energy to the public</li> <li>• Propose review of building regulations to incorporate installation of Solar PVs in buildings</li> <li>• Install solar PV in schools and health centres far away from the grid</li> <li>• Promote feed-in-tariffs</li> <li>• Review of feed-in tariffs</li> <li>• Implement biomass based electricity generating systems for institutions and communities</li> <li>• Partner with institutions to build capacity in design and installation of renewable energy technologies</li> <li>• Explore carbon trading opportunities</li> <li>• Carrying out research, development and dissemination of renewable energy technologies</li> <li>• Adoption of best practices</li> </ul>
3	<ul style="list-style-type: none"> <li>• Lack of appropriate regulations to support the legal framework relating to rural electrification.</li> <li>• Low private sector and community participation in rural electrification</li> </ul>	To enhance the legal and institutional framework	<ul style="list-style-type: none"> <li>• Clearly demarcate and define the role of REA</li> <li>• Develop Instruments to define and strengthen governance structures</li> <li>• Develop Public Private Partnership / community framework for collaboration in rural electrification</li> <li>• Review Rural Electrification Legal Framework</li> <li>• Implement legal framework for community participation</li> <li>• Define asset ownership and management of rural electrification infrastructure</li> </ul>

## Strategic issue, Strategic objectives and Implementation strategies (continued)

	Strategic issues	Strategic objectives	Implementation Strategies
4	Inadequate staff capacity	To strengthen staff capacity	<ul style="list-style-type: none"> <li>• Attract and retain staff</li> <li>• Capacity Building</li> <li>• Provision of adequate and suitable work environment</li> <li>• Optimization of staffing levels</li> <li>• Training on Management of the delineation, tendering and award of contracts for licenses and permits for rural electrification</li> </ul>
5	Need to achieve financial sustainability	To achieve financial sustainability	<ul style="list-style-type: none"> <li>• Increase customer connectivity with a view to maximize 5% revenue</li> <li>• Increase capacity to fundraise and increase revenue inflows.</li> <li>• Develop an efficient financial management system</li> <li>• Enhance financial management controls</li> <li>• Safeguard the assets of the Authority</li> </ul>
6	<ul style="list-style-type: none"> <li>• Inadequate ICT infrastructure</li> <li>• Lack of business Operation Manuals</li> </ul>	To develop and operationalize business processes	<ul style="list-style-type: none"> <li>• Develop and implement ICT Strategy</li> <li>• Develop Information Technology Infrastructure Library (ITIL) capability</li> <li>• Design and implement Integrated Management Information System (IMIS)</li> <li>• Design and implement ICT infrastructure</li> <li>• Design and implement Disaster Recovery Plan</li> <li>• Design Monitoring and Evaluation System</li> <li>• Formulate Corporate Social Responsibility Initiatives</li> <li>• Inculcating a culture of innovativeness in the Authority</li> </ul>
7	<ul style="list-style-type: none"> <li>• Vandalism of power line assets.</li> </ul>	To promote sense of community ownership of rural electrification	Create community ownership awareness
8	<ul style="list-style-type: none"> <li>• Lack of risk management framework.</li> </ul>	To develop and implement a risk management framework	<ul style="list-style-type: none"> <li>• Establish risk management strategy</li> <li>• Develop a risk register</li> </ul>

Detailed implementation matrix containing specific actions for each of the above strategies is attached (Annex IV).

## COORDINATION FRAMEWORK AND DEPARTMENTAL FUNCTIONS

The Board of Directors of the Authority will provide strategic direction towards ensuring that this Strategic Plan is implemented in a coordinated manner. The implementation matrix contained in Annex IV provides a framework to guide the Board and Management of REA in translating strategic objectives into actions and reporting performance levels. The matrix will be operationalized within the five year period through annual performance contracts of both the Board and Management.

The following key departmental functions are geared towards realization of the corporate strategic objectives through implementation of the actions highlighted in the said matrix

### Communications

- Designing and implementing communications strategies and programs
- Preparation and implementation of service delivery charter
- Promotion of corporate image and conducting Authority's public relations events
- Preparation of content and managing the Authorities website
- Implementing corporate social responsibility programs

### Human Resources/Administration

- Recruitment of staff
- Capacity development
- Management of staff records and proper staff exit.
- Management of compensation and staff welfare
- Management of general administrative services.

### Corporate Planning

- Preparation of the National Rural Electrification Master Plan
- Coordination of implementation of the Corporate Strategic Plan
- Formulation and implementation of policies and strategies
- Provision of timely performance data and information
- Monitoring the overall performance of the Authority

### Legal

- Provision of advisory legal services to the management and the Board and overseeing Corporate Compliance

- Draft and review contracts, agreements and other legal instruments
- Liaise with external lawyers in litigation matters affecting REA
- Secretary to the Board and Board Committees
- Development and implementation of the Governance structure
- Custodian of Company seal and other important Authority Documents

### Procurement and Supply

- Provision of procurement advisory services to the Board and management.
- Preparation of procurement plans
- Procurement of goods and services
- Storage of materials and stock control
- Preparation of the procurement procedures manual

### Information Communication Technology

- Development and management of ICT system
- Capacity building on ICT
- Provision of technical network and application support to other departments.
- Design and implement integrated management information systems
- Design and implement disaster recovery system

### Internal Audit

- Evaluate the risk exposures relating to REA governance, operations and information systems
- Review and appraise the adequacy and effectiveness of internal control systems
- Secretary to the Board Audit Committee
- Appraise the relevance, reliability and integrity of management, financial and operating data/reports, risk management and control processes
- Conduct special assignments and investigations on behalf of the Audit Committee.

### Design

- Carry out preliminary cost estimates for projects to be implemented
- Carry out survey for projects being implemented

## CHAPTER SIX

# 6

- Acquire wayleaves consents
- Undertake crop damage assessment/compensation
- Prepare technical design reports

### Finance

- Mobilisation of funds for rural electrification programme
- Budgeting and budget control
- Cash management
- Asset management
- Compilation of statutory financial report
- Preparation of final accounts

### Operations

- Verification of Bill of Quantities
- Award of construction contracts
- Supervision of construction works
- Commissioning of completed projects
- Preparation of construction and customer connections standards.

### Renewable Energy

- Promotion of the development and use of small hydros, wind and solar PV electricity generators including hybrids with oil fired thermal plants in an environmentally friendly manner
- Promotion of off-grid power generation systems using biomass based renewable energy sources like biogas, producer gas, and municipal solid waste
- Undertaking capacity building with other relevant institutions
- Partnering with relevant Institutions in scaling up the use of renewable energy
- Conducting research, development and dissemination of renewable energy technologies in collaboration with relevant institutions including adoption of best practices





## CAPACITY ASSESSMENT

This assessment of REA's capabilities looks at the adequacy of existing capabilities against those required to discharge its functions as outlined in the Energy Act, No.12 of 2006.

Function	Status	Capacity
Management of the rural electrification programme fund	Legal notice has been gazetted placing the fund under REA	<ul style="list-style-type: none"> <li>Inadequate ICT tracking capacity for business transactions</li> </ul>
Development and updating of the rural electrification programme master plan	Preparation of the master plan is in progress.	<ul style="list-style-type: none"> <li>Inadequate human skills to update the plan regularly</li> </ul>
Implementing and sourcing of funds for the rural electrification programme	<ul style="list-style-type: none"> <li>REA is planning to commence project implementation in November 2008.</li> <li>A master plan is vital in sourcing for funds. The 1997 master plan is currently being updated</li> </ul>	<ul style="list-style-type: none"> <li>Project implementation capacity exists in the country</li> <li>The capacity to source for additional external funding is pegged to completion of the new master plan.</li> </ul>
Promotion of renewable energy sources of electricity	Limited use of renewable energy in the rural areas	<ul style="list-style-type: none"> <li>Inadequate trained human capacity</li> <li>Limited awareness on use of renewable energy</li> </ul>
Management of the delineation, tendering and award of contracts for licences and permits for rural electrification	This is a new concept.	Being a new concept there is need to build capacity in this area

From the assessment certain critical areas evolve requiring urgent intervention to enable REA carry out its mandate effectively as summarized below:

- (i) Tracking of proceeds from the 5% levy to ensure that the amount due is remitted: This will require appropriate ICT system and additional staffing to facilitate regular auditing of KPLC accounts.
- (ii) Preparation of a rural electrification masterplan: Given the importance of the masterplan in facilitating decision making on project implementation and the need to have it updated annually it is necessary that appropriate training is provided.
- (iii) Management of the delineation, tendering and award of contracts for licences and permits for rural electrification: This function is very important in order to promote community/private sector participation in rural electrification. Appropriate training needs to be provided urgently.



## CHAPTER SEVEN

# 7

## RESOURCE FLOWS

Funding for rural electrification comes from both internal and external sources. Major internal sources include direct Government funding from the Exchequer, 5% Rural Electrification Programme levy, Petroleum Development Levy and proceeds from the Kipevu Oil Storage Facility. Currently, external funding is from the Governments of France, Spain and Finland. During financial year 2008/09, a total of Kshs 6.6 billion has been provided from these sources out of which about 87% is from internal sources as detailed in Table 5 .

**Table 5: REA'S SOURCE OF FUNDS FOR 2008/09**

	SOURCE OF FUNDING	AMOUNT (KSH. BILLION)
i	Exchequer	4.010
ii	5% Rural Electrification Programme Levy	1.236
iii	Petroleum Development Levy	0.361
iv	Proceeds from the Kipevu Oil Storage Facility (KOSF)	0.100
v	Development Partners	0.870
vi	Royalties	0.026
	<b>TOTAL</b>	<b>6.603</b>

As indicated earlier, this plan targets connecting 7,826 public facilities within the five year plan period. Based on an estimate of 1.7 public facilities per scheme, a figure derived from all the schemes implemented between 2003 and 2008, the above total number of public facilities translates to 4,603 schemes. An analysis of projects under implementation by KPLC in financial year 2007/08 shows that the average cost of a scheme is Ksh.10 million.

Kshs 46 billion will therefore be required over the period 2008/09 to 2012/13 to connect 7,826 public facilities covering trading centres, secondary schools and health centres. This figure excludes public facilities

to be connected under ongoing projects. An additional Ksh.3.84 billion will be required over the plan period to cover installation of transformers along existing power lines targeting domestic households (Ksh.1 billion) and other support activities (Ksh.2.84 billion) as detailed in the implementation matrix. Thus, a total of Kshs.49.84 billion will be required to implement the strategic plan.

Given that Kshs.5.053 billion (Ksh.4.467 billion for capital works, Kshs.419 million for recurrent expenses, Kshs.120 million for storage and Ksh.47 million for office equipment) has been provided in the current financial year, the balance of Kshs 44.79 billion will be required in the next four years translating to about Kshs 11.2 billion per year. It is expected that this financial outlay including any cost escalation will be met from both internal and external sources.

The Authority will undertake fundraising initiatives to mobilize additional resources from local corporate organizations and some of the devolved fund agencies such as CDF towards lighting up of the rural areas. Based on successful experiences from other parts of the world it is expected that the Government will continue being the major financier of rural electrification. Furthermore, innovative financial instruments will be developed to raise funds locally and internationally.

## CHAPTER EIGHT

# 8

## ACCOUNTABILITY AND RISKS

The Management of the Rural Electrification Authority will be responsible for implementation of this Strategic Plan. This will be through translation of the targets set in the plan into annual performance contracts and workplans to facilitate realization of the strategic objectives.

Similar to any other business operations, implementation of this plan has a potential of encountering various risks. Some of the risks that are likely to affect implementation of the Strategic Plan and proposed mitigation measures are as follows:

### CHAPTER NINE

# 9

Risks	Mitigation Measures
Rural poverty	Reduction of connection charges/phased payments
Environmental risks	Environmental awareness campaigns
Poor design	Strict supervision/enforcement of standards and partnering with training institutions
Procurement risks	<ul style="list-style-type: none"> <li>• Strict compliance with the Public Procurement and Disposal Act and associated Regulations.</li> <li>• Enhanced supplier management and integration</li> </ul>
Financial risks	Enhanced internal controls and risk management
Technological changes	Regular updates and continuous training
Demand outstripping supply	<ul style="list-style-type: none"> <li>• Promotion of electricity conservation measures</li> <li>• Incentives to promote generation of electricity</li> <li>• Proactive engagement with relevant stakeholders in planning and implementation of generation and transmission projects</li> </ul>

## MONITORING AND EVALUATION

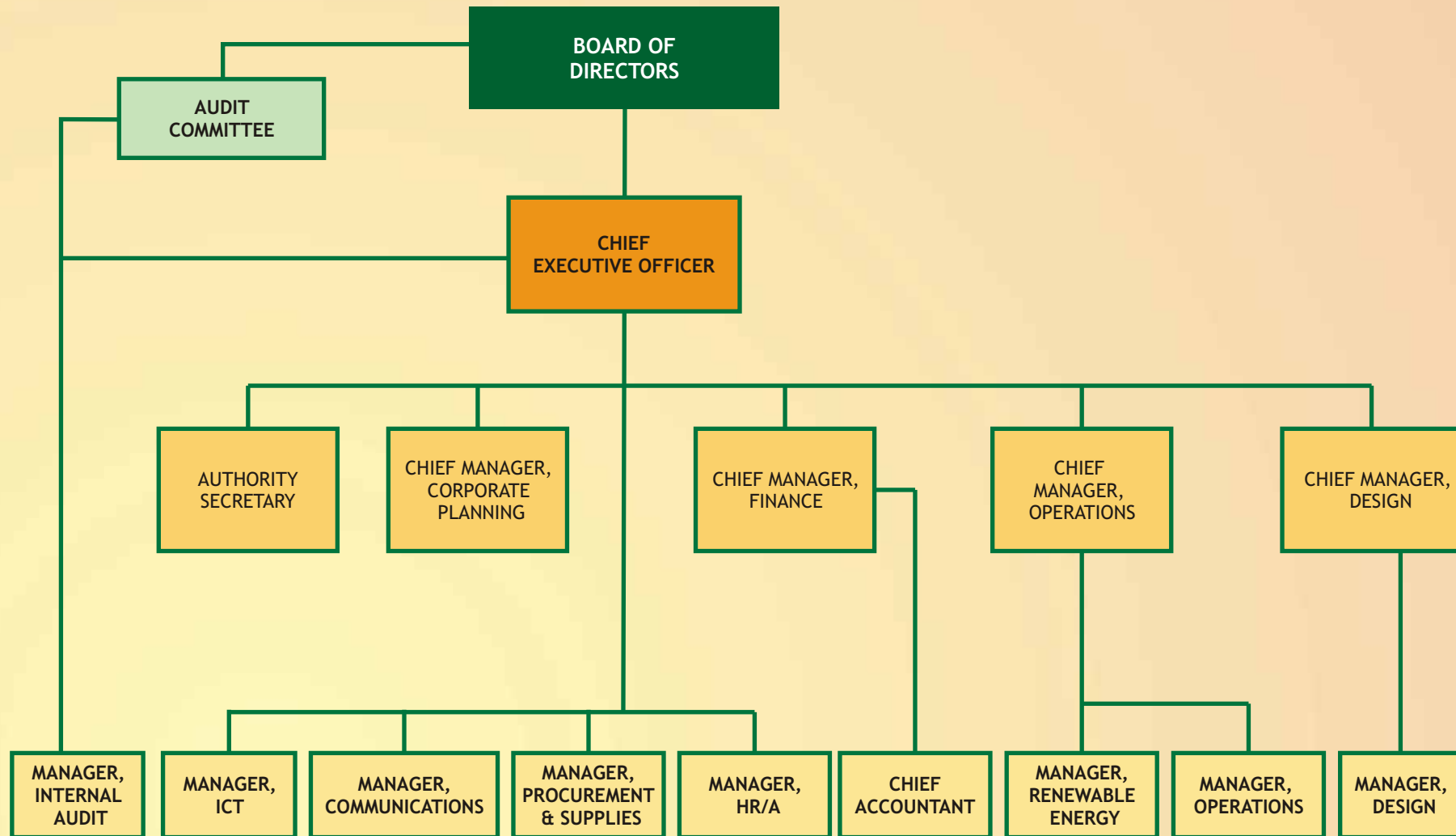
The Authority will use the targets in the matrix as a basis for monitoring and evaluating the implementation of the Plan. In order to ensure steady and satisfactory progress towards fulfillment of targets of the five year plan, the Authority has put in place effective procedures for tracking performance indicators in accordance with the requirements of the annual performance contracts. These include monthly, quarterly and annual performance reports.

# CHAPTER TEN

# 10

# ANNEX I

## INTERIM REA'S ORGANISATION STRUCTURE



## ANNEX II

### COMMITTED GENERATION AND TRANSMISSION PROJECTS

#### A. GENERATION PROJECTS

PROJECT	CAPACITY (MW)	COMMISSIONING DATE	IMPLEMENTING ORGANISATION
Orpower 4 Geothermal	35	2008	Orpower4
Mumias Sugar Co-generation	25	2009	Mumias Sugar Co.
Kiambere Rehabilitation	10	2008	KenGen
Kiambere Rehabilitation	10	2009	KenGen
Additional Iberafrica	50	2009	Iberafrica
Retire Aggreko HSD	-50	2009	—
Rabai Diesel	90	2009	IPP (BWSC)
Tana Additional	10	2009	KenGen
Retire Aggreko HSD	-100	2009	—
Wind Plant (Kinangop)	50	2010	IPP ( AEOLUS)
Wind Plant (Ngong)	100	2011	IPP ( AEOLUS)
Olkaria II 3rd Unit	35	2010	KenGen
Simba Diesel (Mombasa)	80	2010	Simba Energy
Sangoro Hydro	20	2011	KenGen
Kindaruma 3rd Unit	20	2011	KenGen
Coal Power Plant	300	2012	Ministry of Energy / DAEWOO
MSD (Mombasa) or Combined Circle Gas (Mombasa) or Tanzania Gas Interconnector	100	2012	KenGen
Ethiopia Interconnection	200	2012	Ministry of Energy
Geothermal 2X70	140	2012	KenGen
Wind Plant (Turkana or Marsabit)	100	2012	IPP (Turkana Wind)
<b>TOTAL</b>	<b>1,225</b>		

## B. TRANSMISSION LINES

PROJECT	COMMISSIONING DATE	IMPLEMENTING ORGANIZATION
Kamburu - Meru 115Km 132KV Line	2010	KPLC
Chemosit - Kisii 60Km 132KV Line	2010	KPLC
Mombasa - Nairobi 450Km 400KV Line	2011	Ministry of Energy
Ethiopia - Kenya 1200Km 400 KV Line	2012	Ministry of Energy
Olkaria - Lessos-Tororo 433Km 220KV Line	2013	Ministry of Energy
Rabai - Diani 50Km 132 Kv line	2010	Ministry of Energy

## ANNEX III

### Proposed Transmission Lines

132 KV TRANSMISSION LINES	DISTANCE (KM)
Rabai - Bamburi - Kilifi	60km
Voi - Taveta	110km
Kindaruma - Mwingi - Kitui - Wote - Sultan Hamud	185km
Konza - Kajjido	45km
Nanyuki - Nyahururu - Kabarnet - Lessos	235km
Nanyuki - Meru	75km
Ishiara - Kieni	35km
Kilimambogo - Thika - Githambo - Kiganjo	135km
Musaga - Webuye	15km
Eldoret - Kitale	60km
Musaga - Mumias - Siaya - Kisumu	85km
Kisii - Sondu	50km
Kisii - Migori	60km
Naivasha - Narok - Bomet - Kisii	250km

**NOTE:**

The above transmission lines are part of the Energy Access Scale-up Programme under the Ministry of Energy which is expected to be financed from both internal and external sources. No firm financing commitments have been made on the proposed lines. REA will work with the Ministry to secure funding for these lines.



## Annex IV

### RURAL ELECTRIFICATION AUTHORITY STRATEGIC PLAN IMPLEMENTATION MATRIX FOR THE PERIOD 2008 TO 2012

**Strategic Objective 1: To increase access to electricity in the rural areas from 63% currently to 100% by 2012 and contribute towards increasing connectivity from 10% currently to 22% by 2012 and 100% by 2030**

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
1. Connect all public facilities by 2012	Identify the public facilities	2008/09	7,826 public institutions identified	Corporate Planning	4.7 Billion
	Survey, wayleaves acquisition and design of identified schemes	2008/09 - 2012/13	4,604 schemes FY 2008/09 - 800 2009/10 - 951 2010/11 - 951 2011/12 - 951 2012/13 - 951	Design	
	Construction of designed schemes	2008/09 - 2012/13	4,604 schemes FY 2008/09 - 223 2009/10 - 1095 2010/11 - 1095 2011/12 - 1095 2012/13 - 1095	Operations	11.5 Billion
	Connection of Customers	2008/09 - 2012/13	200,000 customers connected FY 2008/09 - 24,000 2009/10 - 44,000 2010/11 - 44,000 2011/12 - 44,000 2012/13 - 44,000	Operations	
2. Installation of additional transformers along existing power lines	Identify sites for installation of additional transformers	2008/09 - 2009/10	1,000 sites identified FY 2008/09 - 300 2009/10 - 700	Design	30.0
	Install transformers and associated network	2009/10 - 2012/13	1,000 transformers installed FY 2009/10 - 250 2010/11 - 250 2011/12 - 250 2012/13 - 250	Operations	1.0 Billion
3. Adoption of new conductor sizes or any other measure to enhance customer reach beyond 600metres	Undertake research and prepare specification on the conductor sizes	2008/09	One report on research findings	Design	
	Implement research findings	2009/10 - 2012/13	Customers beyond 600m from the transformers connected.	Design	

## Strategic Objective 1: (Continued)

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
4. Timely procurement of materials	Development of annual procurement plans	2008/09 - 2012/13	100% of the approved materials procured on time	Procurement / Supplies	29.8 Billion
	Undertake annual market Surveys	2009/10 - 2012/13	Annual Surveys report	Procurement / Supplies	
	Procurement of materials	2008/09 - 2012/13	100% of the approved materials procured on time	Procurement / Supplies	
5. Encourage local manufacture of power line materials	Identify potential manufacturers	2009/10	Document on identified potential manufacturers	Corporate Planning	
	Hold consultative meetings with relevant Government institutions and potential manufacturers to promote investments	2010/11	Reports of meetings	Corporate Planning	
6. Develop a marketing strategy	Develop service charter	2008/09	Service Charter	Communications	—
	Develop an interactive website	2008/09	Website in place	Communications	1.0
	Prepare a marketing plan	2009/10	Marketing Plan in place	Communications	2.0
7. Implement the marketing strategy	Implement strategies for creation of awareness on existence of REA	2009/10 - 2012/13	Twelve (12) Strategies implemented. (3 per year)	Communications	150.0
	Develop IEC materials on energy conservation	2009/10 - 2012/13	1,000 copies of various IEC materials prepared and distributed per year	Communications	
	Promote entrepreneurship in rural electrification	2009/10 - 2012/13	5 campaigns undertaken every year	Communications	
	Undertake annual Customer satisfaction surveys	2008/09 - 2012/13	Annual Customer satisfaction survey reports	Communications	
8. Finalization of the rural electrification master plan	Coordinate finalization of the master plan	2008/09	Master plan report	Corporate Planning	25.0
	To review/update the master plan annually	2010/11 - 2012/13	Annual Master plan updated reports	Corporate Planning	30.0

## Strategic Objective 2: To promote the development and use of renewable energy

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)	
1. Adopt energy mix policy in rural electrification	Identify potential sites for implementation	2008/09 - 2009/10	50 sites identified 2008/09 - 20 2009/10 - 30	Operations/ Renewable Energy	5.0	
	Carry out pre-feasibility studies	2009/10 - 2012/13	20 Pre-feasibility study reports FY 2009/10 - 5 2010/11 - 5 2011/12 - 5 2012/13 - 5	Operations/ Renewable Energy	20.0	
	Carry out feasibility studies	2009/10 - 2012/13	12 feasibility study reports FY 2009/10 - 3 2010/11 - 3 2011/12 - 3 2012/13 - 3	Operations/ Renewable Energy	40.0	
	Implementation of pilot projects	2009/10 - 2011/12	5 projects implemented FY 2009/10 - 1 2010/11 - 2 2011/12 - 2	Operations/ Renewable Energy	65.0	
	Roll out projects		2009/10 - 2012/13	5 projects involving Small hydro power and biomass based energy FY 2010/11 - 1 2011/12 - 2 2012/13 - 2	Operations/ Renewable Energy	375.0
				5 projects of wind power (hybrid) FY 2010/11 - 2 2011/12 - 2 2012/13 - 1	Operations/ Renewable Energy	400.0
				15 isolated diesel stations FY 2008/09 - 3 2009/10 - 3 2010/11 - 3 2011/12 - 3 2012/13 - 3	Operations / Renewable Energy	—

## Strategic Objective 2: (Continued)

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
	Develop a framework for promoting solar Pvs for households	2009/10	A framework in place	Operations/ Renewable Energy	16.0
	Implement the framework for promoting solar PVs for households	2009/10 - 2012/13	2 Promotions /awareness Campaigns per year	Operations/ Renewable Energy	—
2. Dissemination of information on renewable energy to the public	Sensitization of the public	2009/10 - 2012/13	16 awareness campaigns Four (4) per year During exhibition / ASK Shows, energy conference and symposium FY 2009/10 - 4 2010/11 - 4 2011/12 - 4 2012/13 - 4	Operations/ Renewable Energy	20.0
3. Propose review of building regulations to incorporate installation of Solar PVs in buildings	Identify relevant public / private institutions involved in building constructions	2009/10	Report on identified institutions	Operations / Renewable Energy	20.0
	Hold consultative meetings with relevant institutions with a view to reviewing the building code	2009/10	Record of meetings	Operations / Renewable Energy	
	Propose review of relevant regulations to incorporate use of solar PVs	2009/10	Reviewed building regulations	Operations/ Renewable Energy	
4. Install solar PVs in schools and health centres far away from the grid	Review of the on-going MOE solar PVs programmes	2008/09	Evaluation report	Operations/ Renewable Energy	2.0
	Identify school and health centres for solar Pvs installation	2008/09	250 facilities identified	Operations/ Renewable Energy	15
	Installation of solar Pvs	2009/10 - 2012/13	200 schools and health centres covered FY 2009/10 - 50 2010/11 - 50 2011/12 - 50 2012/13 - 50	Operations/ Renewable Energy	—

## Strategic Objective 2: (Continued)

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
5. Promote feed-in-tariffs	Sensitization of potential investors	2009/10	<ul style="list-style-type: none"> <li>One (1) advertisement in 2 print media houses</li> <li>Content uploaded in REA website</li> </ul>	Operations/ Renewable Energy	2.0
6. Review of feed-in- ariffs	Assess the impact of feed-in-tariffs in attracting investment and promotion of development and use of renewable energy	2009/10	Assessment report	Operations/ Renewable Energy	1.0
	Hold consultative meetings with MOE, ERC, and KPLC based on the findings of the assessment report	2009/10	Record of meetings	Operations / Renewable Energy	—
	Draft proposal on the review of the feed-in-tariff	2009/10	Reviewed feed-in-tariffs	Operations / Renewable Energy	
7. Implement biomass based electricity generating systems for institutions and communities	Provide incentives for installation of biogas for electricity systems in institutions and communities	2009/10 - 2012/13	20 Institutions / Communities with biogas systems FY 2009/10 - 2 2010/11 - 5 2011/12 - 5 2012/13 - 8	Operations/ Renewable Energy	100.0
8. Partner with institutions to build capacity in design and installation of renewable energy technologies	Identify the institution (s) and associated training modules	2010/11 - 2012/13	14 participants trained FY 2010/11 - 5 2011/12 - 5 2012/13 - 4	Operations/ Renewable Energy	10.0
9. Explore carbon trading opportunities	Identify renewable energy projects to benefit from carbon trading	2009/10	Two (2) projects identified	Operations/ Renewable Energy	2.0
	Capacity building in carbon trading negotiations	2009/10 - 2012/13	Five (5) staff members trained FY 2009/10 - 2 2010/11 - 1 2011/12 - 1 2012/13 - 1	HR/A	10.0

## Strategic Objective 2: (Continued)

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
10. Carry out research, development and dissemination of renewable energy technologies	Carry out research in the use of renewable energy	2009/10 - 2012/13	4 research reports FY 2009/10 - 1 2010/11 - 1 2011/12 - 1 2012/13 - 1	Operations/ Renewable Energy	35.0
11. Adoption of best practices.	Identify best practices	2009/10	4 best practices identified	Operations/ Renewable Energy	5.0
	Customize the identified best practices	2010/11 - 2012/13	4 best practices incorporated	Operations/ Renewable Energy	5.0

### Strategic Objective 3: To enhance the legal and institutional framework

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
1. Clearly demarcate and define the role of REA	Identify duplicating and overlapping roles	2008/09	No of reports on identified overlaps	Legal	5.0
	Develop SLA between REA and KPLC	2008/09	Signed SLA between REA and KPLC	Legal	1.0
2. Develop Instruments to define and strengthen governance structures	Develop Code of Ethics for BoD & staff	2008/09	Code of Ethics approved and signed	Legal	10.0
	Develop BoD Charter	2008/09	Board Charter approved and implemented	Legal	
	Develop Board manual	2008/09	Manual approved and implemented	Legal	
	Develop TORs for Board committees	2008/09	TORs for Board committees approved and implemented	Legal	
	Develop capacity building programme for the BOD	2008/09	Training plan developed and approved	Legal	
	Implement a capacity building programme for the BOD	2008/09 - 2012/13	Board Members trained	Legal	
3. Develop Public Private Partnership/Community framework for collaboration in Rural Electrification	Develop framework for collaboration with the private sector, communities, customers, Institutions / Organizations	2009/10	Public Private Partnership/Community Framework in place	Corporate Planning	10.0
4. Review Rural Electrification Legal Framework	Review the law relating to connection of customers	2009/10	Report to the Ministry on the proposed amendments	Legal	18.0
	Train legal staff in regulations and licensing	2008/09 - 2012/13	Five (5) staff trained 2008/09 - 1 2009/10 - 2 2010/11 - 2 2011/12 - 1	HR/A	
	Develop related regulations to support rural electrification	2009/10	Regulations gazetted	Legal	

### Strategic Objective 3: (Continued)

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
5. Implement legal framework for community participation	Identify areas for community pilot projects	2008/09	Three (3) areas identified	Corporate Planning	3.0
	Create awareness within rural communities on the Legal Framework	2009/10	Three (3) awareness campaigns for the pilot projects	Legal	20.0
	Develop Legal Instruments for the identified pilot projects	2009/10	Three (3) framework / Legal Instruments developed for the pilot projects	Legal	50.0
	Develop governance structures for the identified pilot projects	2009/10	Governance structures for the three (3) instruments approved by the Board for the pilot projects	Legal	50.0
	Registration of legal entities for identified pilot projects	2009/10	Three (3) Legal entities in place for the pilot projects	Legal	60.0
	Operationalize the identified pilot projects	2009/10	Three (3) legal entities operational for the pilot projects	Corporate Planning	
	Review performance of the pilot project	2010/11	Review report for the pilot projects	Corporate Planning	
	Roll out communities managed rural projects	2011/12 - 2012/13	10 community projects per year	Corporate Planning	
	Develop a capacity building programme for communities managing rural projects	2009/10	Community capacity building programme in place	HR/A	1.0
	Implement capacity building programmes for communities	2009/10 - 2012/13	23 Community groups trained 2009/10 - 3 2010/11 - 10 2011/12 - 10	HR/A	50.0
6. Define Asset ownership and management of rural electrification infrastructure	Undertake consultations with MoE/Treasury	2009/10	Asset ownership register	Legal	15.0
	Prepare an inventory of Assets managed by KPLC	2009/10	Register of assets	Finance	
	Prepare an inventory of assets developed by REA	2010/11 - 2012/13	Inventory register maintained	Finance	



## Strategic Objective 4: To strengthen staff capacity

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
1. Attract and retain Staff.	Biannual review of terms and conditions of employment	2008/09 - 2012/13	Annual review reports	HR/A	400.0
	Implementation of the review reports	2009/10 - 2012/13	Implementation reports	HR/A	
	Develop frame work for the Schemes of Service	2009/10	Framework report	HR/A	
	Prepare the Schemes of Service	2010/11 - 2012/13	Nine (9) Schemes of service developed (3 per year)	HR/A	
2. Capacity Building	Conduct biannual training needs assessment for staff	2008/09 - 2012/13	TNA reports	HR/A	125.0
	Conduct biannual training needs assessment for contractors	2009/10 - 2012/13	TNA reports	HR/A	
	Conduct Regular / Focused Training	2008/09 - 2012/13	20% increase in skills annually as per TNA report	HR/A	
3. Provision of adequate and suitable work environment	Office partitioning & furniture	2008/09	Partitioned offices	HR/A	100.0
	Undertake annual work environment survey	2008/09 - 2012/13	Reports	HR/A	
	Implement survey findings	2009/10 - 2012/13	Implementation Reports	HR/A	
	Purchase of plot to construct REA Offices	2009/10	Plot purchased and secured	HR/A	100.0
	Opening up of REA sub regional offices.	2009/10	2 regional offices opened	HR/A	
4. Optimization of staffing levels	Carry out biannual workload analysis	2008/09 - 2012/13	Workload analysis reports	HR/A	15.0
	Implement the results of the analysis	2008/09 - 2012/13	Biannual Implementation reports	HR/A	
5. Training on Management of the delineation, tendering and award of contracts for licenses and permits for rural electrification	Build Capacity on procurement, contracts, tariffs setting, negotiation skills, etc	2009/10 - 2012/13	40 staff trained (10 per year)	HR/A	5.0
	Undertake study tours	2009/10	15 staff trained	HR/A	

## Strategic Objective 5: To achieve financial sustainability

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
1. Increase customer connectivity with a view to maximize 5% revenue	Review existing connection charges including mode of payments	2009/10	Report on proposed connection charges	Corporate Planning	—
	Implement new connection charges	2009/10	Semi-annual reports	Corporate Planning	—
	Develop financing arrangement for connection charges for rural customers	2009/10	Document on financing arrangement	Finance	—
	Implement the financing arrangement	2009/10 - 2012/13	Five (5) banks consulted annually	Finance	—
2. Increase capacity to fund raise and increase revenue inflows.	Training in finance, investments and preparation of donor/ funding proposals.	2009/10 - 2012/13	Three (3) staff members trained annually	HR/A	25.0
	Benchmarking with other allied organizations	2009/10 - 2012/13	One annual report	Finance	25.0
	Prepare fundraising proposals	2009/10 - 2012/13	Five (5) funding proposals prepared and presented per year	Finance	—
	Negotiate for increased allocations from the exchequer	2009/10 - 2012/13	100% increase in funding for 2009/10 and 10% increase annually thereafter	Finance	—
3. Develop an efficient financial management system	Training on government budgetary system	2009/10 - 2012/13	Five (5) staff trained annually	HR/A	—
	Enhance budget preparation process.	2009/10 - 2012/13	Timely funding of budgeted activities	Finance	
	Control on the use and compliance to the set budgetary level	2008/9 - 2012/13	Management and operation reports	Finance	
	Preparation of monthly periodic financial reports.	15th day of the succeeding month	Monthly report on utilization of allocated funds	Finance	

## Strategic Objective 5: (Continued)

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
4. Enhance financial management controls	Procure and install an Information Management System (IMIS)	2009/10	IMIS in place	ICT	—
	Strengthen budgeting process	2008/09 - 2012/13	Annual budget proposals prepared, presented & adopted	Finance	—
	Prepare three year MTEF rolling budget	2008/09 - 2012/13	Annual MTEF budget reports	Finance	—
	Improve internal control systems	2008/09	Policy and procedures manual in place	Finance	—
	Strengthen procurement procedures and systems	2008/09	Procurement procedures manual in place	Procurement / Supplies	—
5. Safeguard the assets of the Authority	Undertake Asset marking and identification	2009/10	Report on assets	Finance	5.0
	Prepare a fixed asset register	2008/09 - 2012/13	Updated register	Finance	

## Strategic Objective 6: To develop and operationalize business processes

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
1. Develop and implement ICT Strategy	Set up a steering committee for ICT strategy	2008/09	ICT steering committee in place	ICT	3.0
	Draft ICT policy and Standards	2008/09	Draft policy in place	ICT	
2. Develop Information Technology Infrastructure Library (ITIL) capability	Set up resource center	2009/10	Resource centre in place	ICT	5.0
	Set up ICT support service	2009/10	ICT Service Level Management document	ICT	
	Implement ITIL standards and undertake bench marking	2009/10 - 2012/13	- ITIL standards adopted - Four (4) bench marking reports (one per year)	ICT	
3. Design and implement Integrated Management Information System (IMIS)	Set up Design and Construction (DCS), Project Management, Integrated Financial Management (IFMS), Procurement and Stock Control Systems	2008/09	DCS, Project Management, Integrated Financial Management (IFMS), Procurement and Stock Control softwares in place	ICT	150.0
	Undertake business process analysis and re-engineering	2008/09	Business process blue print document	ICT	
	Set up Human Resource and Administration, Asset management, Corporate Governance and Internal Audit Management systems	2009/10	Human Resource and Administration, Asset management, Corporate Governance and Internal Audit Management systems in place	ICT	
	Set up Intranet/Extranet	2009/10	E-mail system, Interactive website, online forms and documentation in place	ICT	
	Set up electronic Document Management System (DMS)	2009/10	Electronic Document Management System in place	ICT	10.0
	Set up Legal Information Management System (LIMS)	2009/10	Legal Information management system in place	ICT	5.0
	Set up Performance Management System	2010/11	Performance management system in place	ICT	2.0

## Strategic Objective 6: (Continued)

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
4. Design and implement ICT infrastructure	Procure and install appropriate IT hardware systems	2008/09	Servers, software licenses PCs/printers in place	ICT	150.0
	Set up communication Infrastructure to monitor projects progress	2009/10	Local Area Network, Wide area Network, Radio, Tele/ video conferencing systems installed	ICT	
	Develop support and maintenance programme for the implemented Systems	2008/09 - 2012/13	Support and maintenance contracts for installed systems in place.	ICT	
5. Design and implement Disaster Recovery Plan	Procure and install ICT hardware, software systems	2010/11	Appropriate ICT infrastructure set up at a remote location	ICT	30.0
6. Design a Monitoring and Evaluation System	Develop a framework for monitoring and evaluation	2009/10	Report on M& E Framework	Corporate Planning	10.0
	Develop ICT system for M&E Reporting	2010/11	ICT system in place	ICT	
	Conduct Monitoring and Evaluation	2009/10 - 2012/13	Quarterly and annual reports	Corporate Planning	
	Training on M & E	2009/10 - 2012/13	50 staff trained	HR/A	10.0
7. Formulate Corporate Social Responsibility Initiatives	Formulate a CSR policy	2008/09	CSR policy document	Communications	
	Identify and Implement CSR Programme	2009/10 - 2012/13	Eight (8 ) Activities implemented (2 every year)	Communications	10.0
8. Inculcate a culture of innovativeness in the Authority	Formulate R & D policy framework	2009/10	R&D policy framework in place	Design	5.0
	Implement research and develop policy framework	2008/09 - 2012/13	10 research & development projects implemented (2 per year)	Design	

## Strategic objective 7: To promote sense of community ownership of rural electrification

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
1. Create community ownership awareness	Sensitization of communities through barazas	2008/09 - 2012/13	Forty (40) sensitization barazas (8 per year)	Communications	—

## Strategic objective 8: To develop and implement a risk management framework

Strategy	Action	Time Frame	Output (s)	Responsible Lead Department	Budget (Kshs. Million)
1. Establish risk management strategy	Set up a risk management Committee representing all the REA departments	2008/09	Risk management Committee in place	Internal Audit	—
	Set up risk management units in each department to make periodical reports to the Risk Management Committee	2008/09	Departmental risk management units in place	Internal Audit	
2. Develop a risk register	Assess and analyze the risks facing REA operations	2008/09	Risk assessment and analysis reports	Internal Audit	5.0
	Develop mitigating factors for each risk identified	2008/09	Risk mitigating factors report	Internal Audit	
	Compile all risks identified and mitigating factors into a risk register	2008/09	Risk Register	Internal Audit	
	Conduct bi-annual reviews and updates of the risk register	2008/09 - 2012/13	Updated risk register	Internal Audit	

**Total amount Kshs: 49.84 billion**



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