FIVE YEAR CORPORATE STRATEGIC PLAN 2016/17 - 2020/21

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Kenya Power





The 5-Year Corporate Strategic Plan (2016/17 - 2020/21) provides a roadmap for our mandate, highlighting our major priority areas of focus for the next five years. It champions the strategic themes of infrastructure development, network management, customer centricity, loss reduction, and resource alignment as the pillars for strategy formulation. This is aimed at strategically positioning the company at the center of social economic development of the country as it continues to work towards providing reliable and competitively-priced power to all.

The plan also recognizes the aspirations of all stakeholders in the power sub-sector and brings an optimal balance of competing interests. The generation mix, network growth, and average tariff progression will all lead to more competitivelypriced electricity to the customer while at the same time ensuring sustained profitability for the company. Customer and economic criteria are given supreme consideration in strategy selection given that energy is a major productive input in the economy and that the company's sustainability depends on increasing prosperity in the operating environment.

With all planned measures executed and the objectives achieved, it's expected that within the next five years:

- The customer base of the company will have grown by a minimum of 6 million customers by 2021; with a target to connect a total of 1.2 million customers annually both through grid extension and off-grid solutions.
- The infrastructure will be expanded at all levels and capacity increased in line with the planned additional 5,000 MW;
- The existing network will be modernised and automated to ensure efficient system management and speedy identification and resolution of faults within the network;
- System losses will be reduced from the current level of 19.4% to below 10% and;
- Last but not least, resources will be well aligned to ensure optimal usage and productivity.

These high expectations keep the company at the coalface of demanding and urgent tasks which I am confident will be achieved by a trusted and dedicated brand of women and men who are driven by the need to realize the dreams and aspirations of the country.

"strategically positioning the company at the center of social economic development of the country as it continues to work towards providing reliable and competitively-priced power to all."

Hon. Kenneth Marende, EGH

CHAIRMAN, BOARD OF DIRECTORS



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OVERVIEW OF THE STRATEGIC PLAN



The 5-year strategic plan is guided by the intent of the company to achieve it Vision of "providing a world class power that delights our customers" and in fulfilling its mandate in the national economic development agenda.

The corporate strategy aims to deliver projects and initiatives that will strengthen and cement Kenya Power competitive advantage and secure its profitability in addition to improving power supply reliability, increase access, and price competitiveness. This will be structured around five thematic areas namely: customer centricity, infrastructure development, network management, loss reduction, and resource alignment. These five themes will be at the centre of the desired end-state of the company as expressed in the following eight strategic objectives over the five-year planning horizon:

- Improved energy-generation mix that is efficient, reliable, and competitively priced;
- Increased customer connectivity to a customer base of over 9 million customers.
- Improved electricity supply quality that exceeds customer expectations; reduce cost of doing business; and increase sales revenue which all lead to improved delivery of customer services;
- A modern, efficient, and responsive electricity system infrastructure that encompasses electricity demand growth;
- A robust distribution system that facilitates the 5,000+MW generation expansion plan;
- Reasonable return to shareholders for their investment;
- Good corporate governance and management for enhanced efficiency and service through internal capacity development and resource alignment; and
- Diversified business revenue leveraging on the existing assets and innovation.

Although this is a very ambitious and costly power network infrastructural investment program, it will go a long way in sustaining the company's growth and expansion agenda while ensuring that quality, reliable and cost reflective electricity supply. On the same note, the company remains keenly aware that it provides an essential service as an input in productive activity and residential life in the modernizing economy and as such, recognizes customer satisfaction as a core objective.

Towards this end therefore, the strategic initiatives and programs will be implemented with equal sensitivity to favorable progression of customer satisfaction indicators as it has for the progression of its financial and operational indicators. The company is optimistic that its profitability will increase with the continued sales and demand growth in the plan period.

This will arise from the accelerating growth of the economy, massive infrastructural investment taking place in the country, and a vibrant domestic private sector. These five themes will be carried through to the Regional and County Plans, in line with the devolved County Units and salient features of each of the Regions and Counties.

With the support and dedication of the management and staff, I am confident that the company will be able to achieve and even surpass the set targets and play its role in the social economic development of this country.

Dr. Ben Chumo, OGW

MANAGING DIRECTOR & CHIEF EXECUTIVE OFFICER

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LIST OF ACRONYMS AND ABBREVIATIONS

ADSS FIC	D All Dielectric Self Supporting Fibre Optic Cable	GDC	Geothermal Development Company Ltd
AFD	French Agency for Development	GDP	Gross Domestic Product
AfDB	African Development Bank	GOK	Government of Kenya
AMR	Automatic Meter Reading	GPOBA	Global Partnership for Output Based Aid
CAIDI	Customer Average Interruption Duration Index	GPS	Global Positioning System
Capex	Capital Expenditure	GWh	Gigawatt hour
CFL	Compact Fluorescent Light Bulb	H2	Horizon 2
CSR	Corporate Social Responsibility	HV	High Voltage
DA	Distribution Automation	HVDC	High Voltage Direct Current
DCS	Design and Construction System	IAD	Internal Audit Department
DMS	Distribution Management System	ICT	Information and Communication Technology
DSM	Demand Side Management	IDA	International Development Agency
E/hse	Electricity House	IMS	Incidences Management System
EAC	East African Community	IOs	Internal Orders
EAT	Earnings After Tax	IPPs	Independent Power Producer
EIB	European Investment Bank	IT & T	Information Technology and Telecommunications
ERC	Energy Regulatory Commission	KEEP	Kenya Electricity Expansion Project
ERM	Enterprise Risk Management	KEMP	Kenya Electricity Modernisation Project
ESIA	Environment and Social Impact Assessment	KenGen	Kenya Electricity Generation Company Ltd.
FDB	Facilities Database		
FIT	Feed In Tariff		

FTTH Fibre to the Home

LIST OF ACRONYMS AND ABBREVIATIONS

KENINVE	EST Kenya Investment Authority	PBT	Profit Before Tax
KETRAC	O Kenya Electricity Transmission Company Ltd.	PPA	Power Purchase Agreement
Kms	Kilometers	RAP	Resettlement Action Plan
KPIs	Key Performance Indicator	RE	Rural Electrification
KPLC	The Kenya Power and Lighting Company	REA	Rural Electrification Authority
Limited		RMU	Ring Main Units
KShs	Kenya Shillings	S,I	Supply Install
Kv	Kilovolt	s/s	Sub Station
kWh	Kilowatt hour	SAIDI	System Average Interruption Duration Index
LCPDP	Least Cost Power Development Plan	SAIFI	System Average Interruption Frequency Index
L&T	Labour and Transport	SCADA	Supervisory Control and Data Acquisition
LNG	Liquid Natural Gas	SCOT	Strengths Challenges Opportunities and Threats
LRA	Local Reading Application	SMEs	Small and Medium Enterprises
LV	Low Voltage	T&D	Transmission and Distribution
MSD	Medium Speed Diesel	TMR	Transport Mileage Returns
MV	Medium Voltage	TMS	Transport Management System
MVA	Megavolt Amperes	TXs	Transformers
MVAR	Megavolt Amperes Reactive	UNFCCC	United Nations Framework Convention on
MW	Megawatt		Climate Change
MWh	Megawatt hours	UPS	Unlimited Power Supply
NEMA	National Environment Management Authority	USD	United States Dollar
NERA	National Electrification and Renewable Energy	WFM	Work Flow Management
	Authority		

KENYA POWER

1.1 Mandate of the Kenya Power and Lighting Company Limited

1.1.1 Legislative Mandates

The Kenya Power and Lighting Company Limited (KPLC) is established as a Limited Liability Company under the Companies Act, Cap 486, Laws of Kenya. Its mandate, as obtained from its Memorandum of Association, is the production, supply and sale of electricity. However, the mandate to produce or generate electricity has since been taken over by the Kenya Electricity Generation Company (KenGen) - which was formed in 1998 - as well as Independent Power Producers. KPLC is a listed company with approximately 49.9% of its shares publicly traded on the Nairobi Securities Exchange and 50.1% of its shareholding is owned by the Government of Kenya.

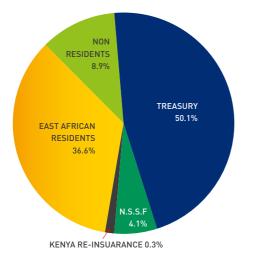


Figure 1.1 Ownership of the Kenya Power and Lighting Co. Ltd as at 30th June 2016

The main law governing KPLC's operations and the energy sector as a whole is the Energy Act No. 12 of 2006. The Energy Regulatory Commission (ERC) established under this Act regulates the activities of the company to ensure compliance with the law and other legal requirements.

Policy Mandate

The current policy framework relating to the electricity sub-sector, in which KPLC is a major player, is captured in Sessional Paper No. 4 of 2004. This policy lays the framework upon which cost-effective, affordable and adequate and quality energy services are to be made available to the domestic economy on a sustainable basis over the period 2004 - 2023. The Ministry of Energy and Petroleum, as KPLC's parent ministry, provides overall leadership, oversight, guidance and direction to ensure full implementation of the policy.

The Kenya Power and Lighting Company

KPLC has the mandate to purchase bulk electricity supply, transmit, distribute and retail electricity to enduse customers throughout Kenya. Its purpose, responsibilities and core functions as a commercial state corporation in Kenya are stated in its Vision and Mission Statements and are expressed in its relationships with other key players in the power sub-sector and in its contributions to the country's long-term public policy and national development objectives, supply of electric energy to consumers.

Mission

The mission statement is the overall framework within which KPLC's strategies are formulated. The mission statement is:

"Powering people for better lives"



The statement that captures the medium to long-term aspirations of the Company is:

"To provide world class power that delights our customers"

1.4 Core Values

The ideals by which the company strives to carry out its operations and conduct its business are embodied in the following:



The company thrives in a culture of working together contributing to the overall performance flows.

The company has cultivated within its employees traits that have enabled them believe in the work they do and to have a vested interest in the success of the company.

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One Team

Excellence

Integrity

The company has been sensitizing its employees on upholding their integrity as an important quality of great leadership in the company's business.

Passion

The company has proved to be consistent in its performance in striving to provide world-class power that delights its customers.

1.5 Planned Policy Initiatives

The Energy Act of 2006 and the Energy Policy are currently under review to align them to the 2010 Constitution. This has culminated in the development of the new National Energy Policy and Energy Bill, 2015 that proposes, among other things:

- i. National government to put in place a collaborative framework with the County Governments in planning and developing distribution networks and transferring them to duly licensed distributor(s) to operate and maintain them so at to have only one distributor in a given area at any particular time for efficiency, safety and technical effectiveness of the national grid.
- ii. As the distribution network expands through the various institutions as a result of increased generation and enhanced transmission, it would be necessary to ensure efficient distribution
- iii. The devolved structure in the energy sector calls for careful implementation of an open access system in distribution to be given due consideration to safeguard existing obligations and commitments.
- iv. Regularly review the electricity market to facilitate competition in retail of electricity
- v. Develop and implement the legal, regulatory and institutional framework for competitive electricity market and support regional integration of the power system to enhance regional power trade.
- vi. Provide a mechanism for determination of wheeling charges.
- vii. Setting of connection charges on the basis of affordability rather than cost, with options for payments in installments.
- viii. Develop and implement the requisite legal and institutional framework to designate one transmission licensee to be the system operator.
- ix. Introduction of penalties and compensation to electricity power customers due to power outages.
- x. Formulate a national electrification strategy to fast track consumer connections with a view to achieving universal access to electricity by 2020.

1.6 Potential Impact of Energy and Petroleum Bill 2015

The Energy Bill seeks to implement the new National Energy Policy. A central aspect of the Bill is that it brings to an end legal impediments to competition in electricity distribution and retailing. The bill allows for licensing of distribution companies as separate entities from electricity retailers and allows for new entrant companies to connect new customers from existing or new substations. The following are the key considerations affecting the competitive transformation of the electricity distribution sub-sector:

- i. Kenya Power, with its long history in the business, starts as the dominant distributor and retailer with countrywide operations already in place in the most commercially viable areas. The company will also remain well placed to continue extending its services to new areas of supply.
- ii. Kenya Power may lose its System Operator function as the bill stipulates that the System Operator shall not be involved in direct or indirect buying or selling of electricity. Thus the energy dispatch function associated with the National Control Centre is likely to be transferred to an independent transmission company.



- iii. New distribution entrants will for the most part be seeking to invest in areas presently unserved by KP by building mini-grids or off-grid power supply solutions. These areas are predominantly in remote or sparsely populated locations where the Rural Electrification and Renewable Energy Corporation (successor to REA) will be the major competitor.
- iv. New distribution and retail entrants may also seek to extend the supply value chain of captive generation by directly serving communities or project membership surrounding captive renewable generation. This scenario would be particularly attractive to investors in mini-hydro projects. However, the success and sustainability of these projects would depend on the pricing of energy supplied to the project customers as compared to national grid supplied energy.
- v. There presently are geographic cross subsidies in electricity tariffs as well as economies of scale in the existing national grid, which has enabled Kenya Power to supply electricity throughout the country at a uniform tariff. New distribution entrants in peripheral areas without access to large numbers of commercially viable customers will, however, be faced with high cost and high tariff operations. To operate profitably they will have a tariff regime more costly to consumers as compared to the prevailing pricing in the national grid.
- vi. New distribution entrants may find profitable operations where they are able to connect and serve large power customers. However, geographic limitations and inability to obtain a steady stream of new large power applicants would provide very little room for growth in business.
- vii. Service level agreements (SLAs) will have to be entered into between different entities connected along the same electricity power supply value chain in order for end customers to be assured of high quality power supply. Without SLAs that provide technical safeguards and which specify obligations and liabilities of contracting entities, it would be unlikely for new entrants, in particular new retailers, to be able to set up business.

Based on the foregoing, Kenya Power is not likely to see any significant deviation from its present growth forecast in the medium term period arising from new entrants in power distribution and retail business. However, the enactment of the bill would call for measurement of market share of all competing electrical energy distributors and retailers for purposes of national energy planning and performance monitoring.

"Kenya Power, with its long history in the business starts as the dominant distributor and retailer with countrywide operations."

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SITUATIONAL ANALYSIS

SITUATIONAL ANALYSIS

OPERATING ENVIRONMENT, SCOT ANALYSIS AND LESSONS FROM THE PAST STRATEGIC PLAN

2.1 Overview of the Operating Environment

KPLC undertook an environmental scan to identify and assess factors within its operating environment that would impact on the execution of its mandate. This was especially important since the country legislations and policies are being reviewed to align them to the 2010 constitution.



Political Factors

Political factors likely to impact on the company during the planning horizon:

- i. Devolution of Government is reshaping the process of service delivery. As development planning is now devolved to county government, the company has to now treat counties as the basic planning units for network development plans and integrate by a bottom-to-top approach.
- ii. Elections due in the year 2017 may raise pressure for decision making to be in the interest of public opinion at the expense of commercial best interests. There will also be raised emphasis on the social obligation activities such as completing pending rural electrification and other power projects within counties.
- iii. International relations, especially with neighbouring countries, affect the level of insecurity and thus the business climate.
- iv. A regulated tariff-setting process, under the direction of public policy, has led to irregular timing of tariff reviews. Public policy expediency has taken precedent over scheduled tariff reviews that are needed to timely accommodate new revenue requirements for the sub-sector.

- v. The East African Community countries -- Kenya, Uganda, Tanzania, Rwanda and Burundi -- are increasingly seeking to bring about a more integrated East African economy. This will increase market size for local industries and thus raise power demand. It can be noted that in 2010 the EAC countries formally agreed to an expanded free trade area and launched their own common market for goods, labour and capital within the region with the goal of creating a common currency and eventually a full political federation.
- vi. Other political factors that may likely influence energy consumption during the plan period include global and regional policy changes, government financial policies and changes in taxation.

2.1.2 Economic Factors

- i. Factors forming the basis for high business growth potential for the company during the planning horizon include positive GDP growth, population growth, continued displacement of traditional forms of energy consumption and the economic consequences of recently discovered natural resources. In the context of the country's Vision 2030 Economic Development Plan, these factors allow for ambitious sales and peak demand growth expectations.
- ii. Major economic factors with potential to adversely affect the company's business continue to include the movement of fuel prices, exchange rates, interest rates and inflation affecting input costs. The effect of these factors in raising end-user cost of electricity lowers the competitive advantage, potential sales and profitability of the company.
- iii. Given that large commercial and industrial customers account for 57% of total sales but only 0.1% of total customers, any change in the number of these large-power customers will have an appreciable effect on total sales. Thus a close correlation will exist between the company's business growth prospects and the level of direct investment that will occur in the country. Of particular importance will be Vision 2030 flagship projects in the medium-term plan period, including Konza Technocity, Light Rail, Standard Gauge Railway, Lamu Port and new pipelines which, when implemented, are estimated to create new demand exceeding 1,900MW.
- iv. Competition in the electricity sub-sector from self-generation by customers or non-KPLC supply to large-power customers may not rise significantly due to the substantial price disadvantage of nongrid thermal electricity. However, a growing number of large power consumers who have access to cheap energy resources, such as sugar and tea producers, are applying to become Feed-In Tariff (FIT) or IPP generators to the national grid in addition to supplying power to themselves. This would entail loss of a significant amount of sales to the company.
- v. During the plan period, economic shocks are invariably expected to occur given the volatile nature of the operating environment. At present, economic effects of the acts of terrorism are having both direct and indirect consequences to the outlook of business. These include raising the cost of providing security to company installations, loss of significant amount of sales from the tourism industry and discouragement to many potential investors who would be prospective power customers.
- vi. Economic shocks can also be expected from crises in foreign economies as witnessed in the 2010 collapse of financial markets in western developed countries. The capacity of foreign contractors to implement major power projects in this country can be severely affected by withdrawal of financiers. Recently, in 2015, there has been a significant appreciation of the US dollar increasing the impact of exchange rate risk on the cost of doing business. External economic events can also have positive consequences on the domestic power sub-sector such as the major fall in international crude oil prices in late 2015.



vii. Recent natural resource discoveries will be a major source of business opportunities within the plan period. In the medium term, new power demand from extractive industries which are within reach of the national grid, especially titanium and coal, will be a significant source of demand growth. In the longer term, the construction of new pipelines and other facilities to serve the oil and gas industries will also significantly raise power demand. Eventually, the nascent coal, oil and gas industries will provide substantial lower-cost electricity generation resources for this country to underpin its growing economic prosperity.

Social Factors

- i. Rising education and literacy levels in the country's population entails changing lifestyles. The shift from traditional to modern is associated with a greater percentage of the population seeking electricity connection. This has been a major contributor to the acceleration in customer applications and connectivity experienced in recent decades.
- ii. Continued poverty levels in the country means electricity will remain out of reach to millions of people in spite of subsidies provided by the Rural Electrification programme and by the life-line domestic tariff.
- iii. Vandalism and crime against company assets entails a substantial direct material financial cost to the company as well as lost sales revenue and customer inconvenience resulting from outages caused by vandalized equipment. At a current average of 20 transformers vandalized per month, the company faces direct losses of about Sh 5 million monthly on these items alone. While lobbying lawmakers has achieved success in recent years in bringing about stiffer penalties for vandalism, the company still has to continue engaging communities as partners in ending the vice.
- iv. The company will continue to find necessity for diverse reasons to implement strategies for community engagement. This will especially be in regard to promoting public safety against the dangers of electricity infrastructure, marketing initiatives to drive the customer connectivity campaign, promotion of new company services and facilities, and the implementation of corporate social responsibility initiatives. Community activism has occasionally interrupted progress on power project development. Issues such as wayleaves, land compensation and undesirable environmental effects have often been reasons behind community resistance to projects.

2.1.4 Technological Factors

- Introduction of new technologies provides many potential benefits to the company. Typical objectives that will be served by new technologies will include reducing power losses, operational cost savings, lowered peak demand, new or increased revenue streams, improved long-term growth prospects and improved customer satisfaction.
- ii. The major new technologies that will be implemented by the company during the plan period will aim to increase SMART grid capabilities of the network. The new technologies will apply to metering solutions and automation of the power grid. The installation of fibre optic cables on power lines up to the "last mile", besides facilitating SMART grid (two-way communications with customer meters), will also allow the company to engage in partnerships with telecommunications companies in provision of retail broadband services to customers.
- iii. Change in technology use by the public can also affect the pattern of power demand growth. For example, the need for all schools and other public institutions to adopt digital technology will require all public institutions to be connected to the national grid in the next few years and will significantly raise the level of power demand. Use of energy-efficient equipment by customers may also play a significant role in the variation of demand of electricity.

2.1.5 Environmental Factors

Several factors in the physical environment will influence the outcome of the company's operations during the planning period. These include:

- i. Drought and hydro risk can potentially cause a significant change in the end-user tariffs charged on monthly basis given that 35% of power generation capacity in 2015/16 was hydro and that the standby alternative to hydro power is the much more expensive diesel power.
- ii. International environment protection policies require that efforts are made to reduce greenhouse gas emissions in production processes. Thus, these requirements will be taken into account in Public Power Agreements (PPAs) the company will enter into with power generators.
- iii. Easy access by customers to renewable sources of energy can significantly impact on the level of electricity sales. For example, the increased use of solar panels for water heating and the continuing use of wood fuel for cooking are detrimental to the company's electricity sales. While use of renewable energy sources that degrade the environment, such as wood fuel, should be discouraged, the use of solar and wind energy, where economic, should be encouraged as part of the overall energy development plan.
- iv. Other environmental factors with a bearing on operations include territorial, geographic and climatic considerations such as distance to the grid, elevation, population density, temperature and other weather attributes. These factors affect project design and implementation costs, operations and maintenance costs, and commercial viability of investments in network assets.
- v. The company also recognizes that its Demand Side Management (DSM) initiatives, by reducing the need for thermal generation during the daily system peak demand, qualify for tradable carbon credits. In this regard, the company's ongoing Compact Fluorescent Light (CFL) initiative targeting distribution of 3.3 million CFL bulbs to households is being registered with United Nations Framework Convention on Climate Change (UNFCCC) to earn revenue from carbon credits. Another company project, Energy Efficient Transformers, is also being registered for carbon credits.

2.16 Legal Factors

- i. The Legal and Regulatory environment is set to be reformed in the planning period as a result of the expected enactment of the Energy Bill 2015. The institutions to be created under this act will include: the Energy Regulatory Authority, Energy and Petroleum Institute, Rural Electrification and Renewable Energy Corporation and Energy and Petroleum Tribunal.
- ii. The Act will require integrated energy planning at both the national and county levels of government within the framework of the National Energy Policy.
- iii. The act will also specify the legal rights of stakeholders in regard to rights of way wayleaves, and use of land for energy resources and infrastructure besides setting licensing requirements for electricity generation, transmission and distribution.
- iv. An introduction to the operations of the power market that will arise from the new Energy Act will be provision of a Wholesale Spot Market. It is intended that the market provides a mechanism for determining the price of electricity not covered by bilateral contracts between sellers and purchasers of electricity. This will call for open access by generating companies to the national transmission grid to be facilitated and will lead to greater competition in electricity supply.



v. The licencing of small power projects by County Governments is an amendment to the Energy Bill 2015 that has been proposed by ERC. When enacted, this measure will be expected to significantly increase the number of FIT generation projects seeking to connect to the national grid and may also create independent mini-grids in areas where the mini-generation projects are economically viable.

2.2 Strength Challenges Opportunity and Threats (SCOT) Analysis

The KPLC SCOT analysis serves to identify the internal factors (Strengths and Challenges) and external factors (Opportunities and Threats) that are most relevant to the achievement of the company's goals and gives an indication of whether the goals are attainable. This analysis furthermore provides the basis for strategy formulation to exploit strengths and opportunities and mitigate challenges and threats in order to achieve the medium term goals.

	Providing an essential service
	High demand
	 Ability to readily adapt to a changing and modernizing operating environment
	Company presence in all counties
Strengths	Well trained and highly skilled workforce
	High revenue collection rates
	• Ability to attract external funding from both public and private, domestic
	and international sources
	Ability to sustain high growth rates in new customer connectivity
	• Automation – Substations automation, reduces response times
	Insufficient transmission and distribution network redundancy
	Inadequate capacity to absorb all the loan capital financing available
	High internal construction costs
	High transmission and distribution operating costs
	Power supply quality remains unsatisfactory
Challenges	Uncoordinated planning among infrastructural developers
	Low level of workforce engagement
	 Staff Costs as a % of Transmission and Distribution Costs (current 50%- 60% to 30 - 35%)
	 Insufficient project commitment and post-implementation analysis, including business project re-engineering upon completion of new projects such as automation



Opportunities	 Long-term growth market due to current low level of market penetration New business ventures in Fibre Optic telecommunications and consulting Formation of counties
	 Good potential for sourcing cheap power from neighbouring countries Lower cost energy from economies of scale as the power system expands
	 Street lighting opportunities increasing linkages with county governments and sales
	Adverse hydrological conditions
	 Difficult wayleaves acquisition Vandalism of transformers, electricity line cables and accessories
	Encroachment on electricity line wayleaves
	 Unfavourable land use i.e. low population density in rural areas leading to high connectivity cost
	Illegal electricity connections and theft of electricity
Threats	Limitations due to regulatory conditions
	Erratic international oil pricesDelays in tariff reviews
	Insecurity and acts of terrorism leading to loss of business
	 Self-generation by customers, especially the use of renewable sources such as solar and wind
	 Inability to absorb all new generation to be installed in the short to medium term may substantially raise capacity costs.
	 Levies and taxes imposed by County Government and other Government/regulatory bodies.

2.3 Lessons from the Past Informing Current Strategy

Past power sector reforms and development initiatives have not yet brought about sufficient improvements in the performance of the sub-sector entities. This is notable in the following areas:

- i. Competition in generation by introduction of IPPs did not eliminate occurrence of power shortages as seen in the period 1997 to 2013. Hence emphasis emerged on implementing an ambitious generation expansion plan since 2013. However, in the period June 2013 to June 2015 there has been 34% generation capacity expansion against only 12% rise in peak demand. Thus, an oversupply situation has now arisen entailing a new challenge of demand creation.
- ii. The implementation of Rural Electrification programme has increased electricity access to the rural population. However, rural access to electricity remains at less than half of the urban access rate despite extensive subsidies for rural power connectivity development. In view of the fact that the majority of households are within the rural areas, electric power continues to remain out of reach for millions of these households. Thus accelerated new customer connectivity continues to be a core strategy.

- iii. Despite reforms in the industry structure (vertical unbundling), a revised Energy Act, tariff structure, and in utility regulation, power prices in real terms and operating costs have still risen by a greater per cent. From end of 2009/10 to end of 2015/16 there has been a cumulative 77% increase in the average power purchase cost per unit as compared to a 52% increase in average revenue (non-fuel) per kWh. Greater emphasis is now being placed on increasing the contribution of cheaper renewable energy sources in the generation mix to lower the unit cost of electricity. Improving operational and system efficiencies are also core strategies to reduce hidden and avoidable costs to lower the future revenue requirements of the sub-sector and keep tariffs at a minimum.
- iv. Heavy capital expenditure to upgrade and expand electrification (approximately Kshs 157 billion by KPLC in the past 5-years (2010 2015) has been associated more with connectivity as compared to load growth. In the 5 year period over 2.5 million new customers were connected (179% growth) as compared to increase in peak demand of 374MW (31.3%) and sales growth of 25.0%. Substantially increased sales and demand growth rates are possible arising from increased utilization of this larger distribution capacity that has already been put in place.
- v. The Eastern Africa regional power pool has not yet succeeded in raising cross-border trade in power beyond token levels as total power trade with three neighbouring countries amounted to only 1.3% of total generation in 2014/15. With expected commissioning of the new Uganda-Kenya interconnector in 2017 and the Ethiopia-Kenya interconnector in 2018, regional power exchange is expected to rise to about 6% of KPLC's total energy trade under the 5,000+MW generation expansion plan.
- vi. The power market with peak demand at 1,586MW by June 2016 is likely to still be too small to provide enough room for efficient lowest unit cost operations by multiple players in the sub-sector. Thus, besides realignment of operations of existing entities to match the devolved county government structure, no major structural change in the power sub-sector is anticipated in the medium term.
- vii. The tariff structure up to present provides no incentive to flatten the daily load curve by raising night-time energy demand thus leading to idle time for much of the base load generation. A flat time of use tariff has not encouraged customers to shift more consumption to late night hours, which would entail higher utilization of existing generation capacity. Implementation of a tariff structure that distinguishes peak, off-peak and shoulder time periods in rate setting would encourage night-time energy consumption especially by industries. This can initially be implemented on a pilot basis to gauge customer response and should be refined so as to fully cover fixed costs as well as remain revenue neutral to the company. The shift of a significant amount of demand from peak to off-peak hours would improve the generation mix leading to lower average tariffs.
- viii. Despite an increase in generation capacity by 657.5MW in the period since March 2013 June 2016) leading to 34% reserve capacity margin as at June 2016, many new investments in the economy that could absorb the surplus generation are hampered by deficiencies in the transmission and distribution network. This is particularly the case with primary industries in the agricultural and mining sectors where investors encounter an absence of power grid in remote areas. Furthermore, in spite of the current surplus generation capacity the company is still not able to export enough energy to Uganda (UETCL) due to weak transmission link. The 5000MW generation expansion plan should be accompanied by a transmission and distribution expansion plan that identifies and aims to reach areas with high economic potential but that are currently underserved.



ix. Summary of the performance for 2015/16

	Actual 2014/15	Target 2015/16	Actual 2015/16	% Change
Total Customers	3,611,904	4,757,983	4,890,373	3%
Annual New Customers Connected	843,899	1,000,000	1,253,196	25%
Estimated Population Access to Electricity	45%	56%	60%	7%
Breakdowns per 1000 customers per month	9.22	7.5	6.39	17%
Average Repair Response Time hours	4.92	3.5	2.82	24%
Customer to Staff Ratio	333	432	439	2%
Total Sales (GWh)	7,655	8,000	7,912	-1%
Length of HV and MV network	59,459	62,659	63,321	1%
Generation Capacity (MW)	2,299	2,334	2,309	-1%
Operational Efficiency	20.30%	20%	18% *	11%
Debt Age (all customers) (days)	40.01	40.00	44.61	-10%
Total Assets (Kshs Mill)	275,493	277,644	265,946*	4%
Annual Capital Expenditure (Kshs Mill)	41,914	34,241	30,215 *	13%
Profit Before Tax (Ksh Mill)	12,110	12,000		

Note: *As at end of 3rd Quarter 2015/16

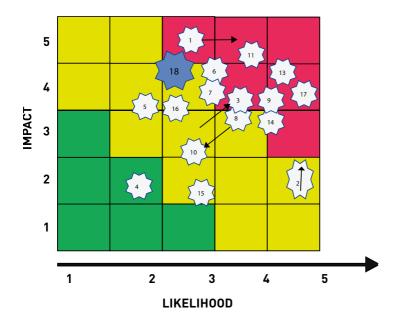
The Table 2.1 shows actual results performance results achieved in 2015/16 for selected KPIs as compared to the targets agreed with stakeholders. In the period preceding the strategic plan, the company exceeded stakeholder expectations in regard to new customer connectivity, supply quality improvement and in lowering operating costs as a percentage of revenue. Network expansion, sales growth, generation capacity increase were almost at par with expectations. However, customer debt age worsened, which was associated with widening of the customer base in the ordinary (small power) customer category.

2.4 Enterprise Risk Management

Enterprise risk management is an integral part of strategic management in any organization and ensures long term viability and sustainability of the Company. Kenya Power recognizes the presence of risks, both within the organization and externally that continually affect the organization's strategy implementation. In this regard, Kenya Power prepares and evaluates the Corporate Risk Profile every quarter (3 months) to evaluate the need to continue implementing activities or a need to redirect strategy. Figure 2.1 overleaf shows the Corporate Risk Profile (Heat Map) as at 30th September 2015.



Figure 2.1 Corporate Risk Profile (Heat Map) -September 2015



Risk

- 1. Legal and Regulatory Environment
- 2. Increasing competition
- Failure to meet customer needs and expectations (Reputational risk & legal liabilities for the service charter standards)
- 4. Inadequate succession planning and talent Management
- 5. Political risk & uncertainties
- 6. Financial and market risks
- 7. Cash flow/liquidity risk
- 8. Pressure on power network/infrastructure due aging, expansion and contractors
- 9. Contractual/third party liability
- 10. Logistics, distribution and supply chain failure
- 11. Technology failure/system failure and interdependency
- 12. Outsourcing (Contractor and contracts management)
- 13. Computer crime and fraud
- 14. Fire health and safety related risks
- 15. Low productivity/staff morale
- 16. Increased exposure to security, terrorism, fraud sabotage and ethical risks
- 17. Insufficient demand growth raising demand risk for uptake of the additional 5,000 megawatts
- 18. Natural disasters such as El Nino weather phenomenon



STRATEGIC THEMES AND STRATEGIC OBJECTIVES

3. STRATEGIC THEMES AND STRATEGIC OBJECTIVES

3.1 Introduction

Over the years, the Kenyan electricity market has been evolving, as have been electricity markets all over the world. The demand for electricity has grown, the technologies have changed, there is more emphasis on renewable sources of energy and erratic weather conditions are more prevalent. There is also the increased drive towards open access to electricity driven by the demand for quality supply and customers' heightened awareness. These and more changes and growth areas require a focused strategy for KPLC to maintain its competitive advantage and focus on being a market leader in this sector.

To guide KPLC in the next five years, this strategic plan highlights five (5) main themes. These are namely:



3.2 Strategic Objectives

The five themes will be the centre of the desired end state of the company as expressed in the following eight strategic objectives:

- i. Improved energy generation mix that that is efficient, reliable and competitively priced;
- ii. Increased customer connectivity to a customer base of over 9 million customers.
- iii. To improve electricity supply quality that exceeds customer expectations, reduce cost of doing business and increase sales revenue. These will in overall improve the delivery of customer services;
- iv. A modern, efficient, and responsive electricity system infrastructure that encompasses electricity demand growth;
- v. A robust distribution system that facilitates achievement of the 5,000+MW generation expansion plan;
- vi. Good corporate governance and management for enhanced efficiency and service through internal capacity development and resource alignment;
- vii. Diversified business revenue leveraging on the existing assets and innovation; and
- viii. To give reasonable return to shareholders for their investment.
 - THE KENYA POWER AND LIGHTINING COMPANY LIMITED

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INFRASTRUCTURE DEVELOPMENT

3.3 Theme 1: Infrastructure Development

One of the key enablers of the economic development agenda and aspiration of the Country as documented in the country development plan Vision 2030 is the supply of quality, reliable and affordable electricity to all Kenyans by the year 2030. Given the expansive nature of the country and the population distribution pattern, power line infrastructural expansion is critical if the Vision is to be achieved and electricity availed to all citizenry. Towards this end, a detailed grid expansion plan has been developed aimed at putting in place infrastructure that will support electricity supply, at the least cost, to over 6 million customers by 2021.

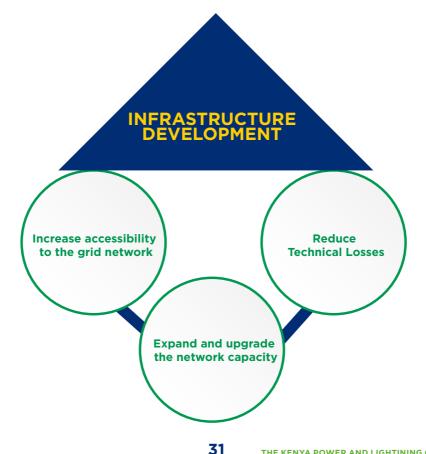
Increased focus and capital investment in network expansion both in power line extensions and establishment and/or refurbishment of substations will play a critical role in serving the growing customer base and in improving power supply quality. Without this expansion and upgrade of the power network economic growth would be severely constrained, especially in regard to industrial and commercial activities.

Infrastructure development in the planning period aims to address three major strategic objectives:

- i. Expand and upgrade the network capacity;
- ii. Increase accessibility to the grid network; and
- iii. Reduce technical losses.

Expansion and upgrade of the distribution substation capacity and power lines is necessary to absorb and distribute the 5000+ MW of new generation that will come in to the system in the medium-term planning horizon. This expansion is also necessary to meet the goal of universal access to electricity by 2020.

Table 3.1 Infrastructure Development Strategic Objectives and Performance Indicator Targets



Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
1. To expand the grid network	Construction of new bulk supply points	 20 new bulk supply points
infrastructure to reach and serve over 80% of the population.	Construction of new distribution substations	1,237.5 MVA of new bulk supply substations
	Construction of new MV power lines	capacity
	Efficient and timely procurement for turnkey projects	 116 new primary substations
	Effective project implementation management	 6,225MVA of new sub-station capacity
	 Improve contractors construction quality standards 	7 760/mm more and 11 MM
	Improve transport and logistics for network development	
	 Lobby Government for legislation to compel counties to provide wayleaves and underground tunnels for utilities 	
	 Kenya Power will take the lead on undergrounding and wayleaves issues and will convene all stakeholder utilities 	
	 Initiating undergrounding in emerging business centres, such as Upper Hill, ahead of new buildings so as to avoid difficulties and higher costs when this is done late 	
	 Preparation of a report on an undergrounding strategy that can lead to a legislation 	
	 Follow the master plan for transmission and distribution as closely as possible in regard to project scheduling and priorities 	
	 Kenya Power to invest in short distance transmission lines to reach load centres in cases where KETRACO is not progressing on projects of strong interest to the company 	

Table 3.1 Infrastructure Development Strategic Objectives and Performance Indicator

Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
2. To upgrade the grid network infraction	Upgrade of primary substations Uprating conductors	 41 primary substations upgraded
to absorb the additional	 Uprating overloaded transformers 	100% of secondary transformers replaced or
	Upgrading low voltage network to create more capacity	10 mini prido tavadina officaria protomore
	 Re-siting transformers and creating new ones to improve supply quality 	
	Construct mini grids in off-grid areas	

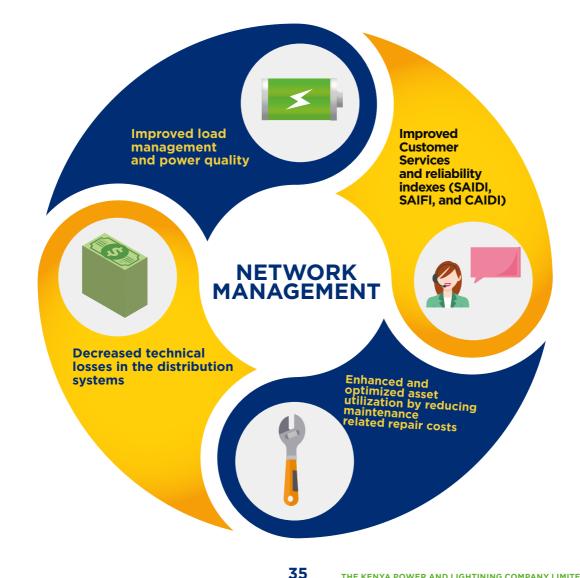
NETWORK MANAGEMENT

va Power

3.4 Theme 2: Network Management

For the company to remain competitive and ensure its longevity, the need for an efficient and robust system cannot be understated. The adoption of network automation, system reinforcement and use of modern technologies will improve supply reliability and therefore reduce losses. Self-healing technology employed will give the company and the customers the much needed comfort that should faults occur, electricity supply will be rapidly restored to affected customers. Modernization therefore, allows for remote monitoring and system control which will reduce the losses in transmission and distribution, enhance electricity supply reliability and by extension secure revenue growth. A number of strategies have been proposed to improve the robustness of the network to provide supply reliability and ensure that customers are highly satisfied and system stability is maintained. The cost of not modernizing and optimizing the network would be a steep rise in outages, which besides lowering customer satisfaction, would entail loss of revenue to the company. In addition, power outages affecting the productivity of customers would in aggregate lower economic growth.

The electricity distribution strategic plan has identified automation as one of the key factors likely to impact positively on the power market and on operations of the company during the planned period. This will be achieved through the continual automation efforts on the distribution grid, undergrounding of MV and LV feeders (based on economic viability), use of aerial bundled conductors and live line maintenance work to reduce planned outages. The benefits of these initiatives include:



Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
1. To improve Power Supply Quality	 Automation to improve transmission and sub-transmission substations and feeder management 	Customer Satisfaction Index 75%
	• Automation of continuous at aximatic cubetations for factor	 Air Break Switches Automated 50%
	supply restoration	 RMUs Automated 70%
	 Undergrounding of overhead MV + LV network to eliminate 	 No of substations added to the SCADA system
	 3rd party interference with the lines & reduce way leave costs/ challenges 	
	Refurbishment works on distribution substations	
	 Linking of substations by MV interconnectors to improve reliability 	
	Projects prioritization based on CBA	
	 Improve the capacity and performance of the company's Electrical Plant workshops in regard to transformers repairs and maintenance 	
	 Extend live line maintenance in the distribution network after carrying out cost benefit analysis 	

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Strategic Objective	Strategio	Strategic Initiative	Key Performance Indicators 2020/21 Targets
2. To improve power	•	Provision of alternative supplies to major customers	Repair response time (CAIDI) of 1 hour
	•	Replacement of 74,000 wooden poles with concrete	 LV breakdowns per 1000 customers at 1.5 per
	•	System audits to identify weak points in the network	
	•	Trace clearance both on MV and LV Lines	Leeder Dreakers on MV lines (&2 No.) OTO continue on MV lines
	•	Protecting and securing infrastructure, company premises, and assets against vandalism and insecurity	 Primary substations with N-1 70%
	•	Introduction of feeder breakers on MV lines in place of auto-reclosers in small substations	 Primary feeders with N-1 65%
	•	Introduction of sectionalisers on MV spurs	
	•	Measure % of existing feeders, substations, primary substations and MV constructed under N-1 criterion	
	•	Initiate accurate calculation and monitoring of SAIFI, CAIDI and SAIDI power supply quality indices using the completed FDB system	
	•	Project prioritization based on cost-benefit analysis with focus on industrial areas and large power customers	
	•	Initiate rapid response motorcycles for faster emergency response. Increase proactive communication to customers and the public about power maintenance outages	
	•	Extending installations with ABC (insulated) cables which do not require tree cutting	
	•	Maintenance activity	

CUSTOMER CENTRICITY

3.5 Theme 3: Customer Centricity

Customer satisfaction has powerful implications for the success of the company in the power market. Customer satisfaction surveys and customer relationship management metrics are being used to guide management on the importance of fulfilling customers' expectations. Upward moving customer satisfaction will entrench market share and increase revenue. However, when these indicators drop it is a warning of customers' disengagement that can lower sales and profitability. Thus, the company recognises that its future in a progressively competitive market will depend increasingly on improving its customer satisfaction ratings by addressing operational issues that are the basis of customer electricity experience.

The company is focusing on raising customer satisfaction by improving the reliability and quality of electricity supply across the country. To do this, the company, within the planning period, will address issues relating to adequate generation capacity, customer connectivity, sales, customer service and demand creation all aimed at reducing operational costs and increasing revenue.

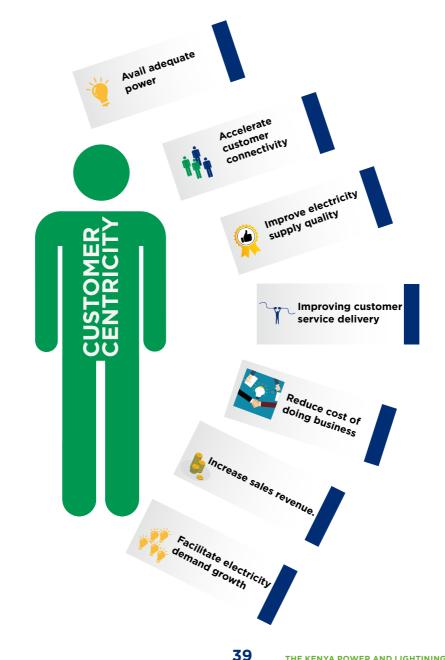


Table 3.3 Customer Centricity Strategic Objectives and Performance Indicator Targets

Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
		Targets
1. To avail adequate power to meet growing demands at least cost	 Procure power from 44 new power stations between 2015/16 and 2019/20 - both least cost and FIT projects -totalling 2,725 MW Generation capacity mix change from Hydro 35.7 %, Thermal (MSD) 35.9%, Geothermal 	 Installed Capacity of 5,024MW Thermal energy generation to be at 9% of total generation Average generation tariff is expected to fall from US cts/
	 26%, Cogeneration 1.1%, Wind 1.1% and solar 0.03% in 2015, to Hydro 17%, Geothermal 26%, Thermal 16%, Cogeneration 1% ,Wind 11%, Solar 1%, Coal 20% and imports 8% in 2021 	kWh 12.89 in 2015 to US cts / kWh 11.44 in 2021
2. To accelerate customer connectivity by connecting seven million new customers by 2021.	 Implement Last Mile Connectivity project Implement pre-investment schemes to fast-track connectivity Rollout of the 3 step new connection process to reduce connectivity timelines Automatic generation of quotations facilitated by FDB system Line maximization Group schemes Slum electrification (GPOBA Schemes). Off grid mini grids solutions 	 New customers connected targeted at 1,200,000 per year over 5 years Population Connectivity reaching 100%
3. To improve electricity supply quality to exceed customer expectations	 Refurbishment works on distribution network and substations 	 Customer satisfaction 75% Population connectivity reaching 90%
4. To enhance customer satisfaction by improving customer service delivery	 Enhance customer relationship management structures Customer segmentation to guide the development of an effective engagement strategy Implement in-depth customer service training for all members of staff Creation/remodelling of customer service centres Implementation of rapid response teams 	 Improved Customer Satisfaction Survey (CSS) index to 75%

Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
5. To reduce cost of doing business	 Separation of customer service from commercial services functions Implementation/ enforcement of a uniform dress code for all customer facing-members of staff Outsource meter reading, revenue collection and customer service functions Complaints management module is to be upgraded and a web based application installed for use by customers Modern customer care applications that interact with customers including Twitter and Facebook will be integrated Extend use of Automated Meter Reading technology to improve revenue collection and reduce energy losses. Partnerships with financial institutions to offer financing to potential customers Allow for new connection payments to be made through the bills and to be subject to disconnection in case of non- payment. High connection charges for many customers will be reduced by the GPOBA and Last Mile projects 	 Connection fee affordable and paid by 100% of power applicants No of new customers connected at 1.2 million annually Electricity tariffs reflecting average generation cost falling from US cts / kWh 12.89 in 2015 to US cts / kWh 11 44 in 2020
6. To increase sales revenue	 Increased focus towards 100% revenue collection Install 2.8 million smart meters to better capture customer consumption data and facilitate two way communications and improve load management Acquire a Debt Collection Management Module Continued roll-out of Automatic and Prepaid Meter Systems Expand street lighting project across the country 	 kWh 11.44 in 2020 Sales growth averaging 6% annually 30 days for receivables 2.8 million Smart Meters installed

Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
	 Grow demand among existing customers through reduced electricity costs 	
	 Improve the robustness of the network to reduce customer outages 	
	 Reduction in commercial losses and power theft by new initiatives such as outdoor metering 	
	 Increased sales from new customers 	
	 Premium customers to have dedicated lines 	
	 Additional methods for vending pre-paid tokens besides MPESA such as use of sms without cost 	
	 Introduction of centrally controlled pre-paid accounts allowing them to be movable if customers change premises 	
	 Introduction of self-service kiosks as a substitute to banking halls and introducing a small fee for customers using banking halls 	
	 Converting defaulting post-paid customers to pre-paid 	
	 Marketing and customer education campaigns to promote use of electrical appliances 	
7. To facilitate electricity demand growth of 6% annually	 Accelerate new connections towards universal electricity access by 2020 from approximately 52% access rate in December 2015 Connect Vision 2030 Flagship projects to provide 1927MW in new demand. Vision 2030 flagship projects, namely the ICT Park, light rail, standard gauge railway, Port of Lamu, new pipeline pumping stations and resort citiesShould Vision 2030 projects not be timely realised the company will be pursuing the following additional strategies: 	 Peak demand of 2,864MW System capacity factor of 56% Sales reaching 11,408 GWh Sales growth averaging 6% annually Population connectivity reaching 90%



Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
	• Ensuring that effective collaborations are followed with private sector organizations such as KAM and KEPSA to provide sufficient power infrastructure for expansion of existing business and to meet the needs of new investors	
	• Ensuring that electricity infrastructure closely follows the development of new roads so as to timely capture new demand arising from new urban and commercial centres	
	• Support to GOK efforts to attract many new large-scale investments which, together with normal growth from existing and new ordinary customers, should contribute over 2,000MW in new demand	
	 Improve the corporate brand and image promotion to enhance engagement with private sector stakeholders. This is to include sponsoring public engagement events such as sports tournaments and heightened media and advertising presence 	
	• Timely deliver new transmission and distribution infrastructure to facilitate planned generation and demand growth	

Off-grid Mini grids

To achieve universal access, the company will also be focusing on bringing on board customers away from the existing grid within areas zoned initially as "off-grid." These areas are considered to be far away from the main interconnected grid especially in the northern part of the country where the population is scattered across the vast land areas. The company is currently considering deployment of off-grid mini grids in these areas through use of hybrid sources of energy such as solar-diesel and wind plants. It is estimated that about 10% of the population will receive access to electricity through this means.

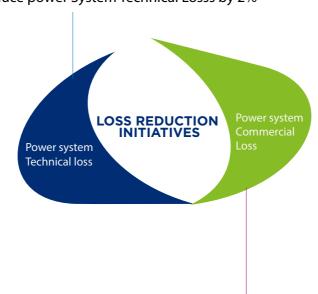


LOSS REDUCTION INITIATIVES

3.6 Theme 4: Loss Reduction Initiatives

Network losses represent a major cost in the delivery of energy hence the conscious drive to have it carefully monitored and managed. A reduction in energy losses creates a proportional increase in the trading margin reflected in the company's Income Statement. The company targets to reduce system losses from double to single digits over time, improving the energy balance, reducing energy purchase costs and increasing revenue. To achieve this, the company will invest in system management tools and bulk digital metering solutions that will allow a more robust data collection to effectively understand and monitor consumer behavior, network impact and control energy usage. This increased understanding and access to information will enable the company to more easily overcome the challenges of system losses by implementing appropriate modern, more efficient and cost saving technologies such as outdoor metering and smart meters.

Loss reduction to improve profitability within the planning period targets systems losses declining from 19.4% in 2015/16 to below 10% by 2020/21. This will be achieved by focusing on the following two objectives:



To reduce power System Technical Losss by 2%

To power System Commercial loss by a total minimum of 9.5%

The loss reduction projections above are based on the assumption that all initiatives and programs identified below will be implemented within the planning period.

The loss reduction project will result in increased gross profit resulting from reduced power purchase costs and revenue increase.

Note: The value of 1 percentage point reduction in system losses in the current situation of surplus generation capacity translates to approximately Ksh.766 million annual power purchase cost savings at present. As there is no significant load shedding at present, sales increase due to loss reduction may come only from some of the commercial losses translating to additional sales. One percentage point reduction in commercial losses, if translated into additional metered sales will result in approximately Ksh.13 billion additional annual revenue.



Strategic Objective	Strategic Initiative	Key Performance Indicators
		2020/21Targets
1. To reduce power System technical loss by 2% over	 Distribution system reinforcement and upgrade projects with loss reduction benefits 	Technical Losses at 9.1%
the next five years	 Intensifying power system maintenance 	
	 Improving power factor by installing more capacitors at 11kV level 	
	 Extending the MV network to shorten LV lines, where losses are highest 	
	 Increasing the number of distribution transformers to shorten LV lines 	
	 Reconductor MV feeders, attend to poor joints / connectors 	
	 Reconfigure heavily loaded feeders / add s/stns near loads 	
	 System studies to determine network sites having highest losses and thereafter implement remedial actions 	
	Reconductoring of MV feeders lines	
	Install capacitor banks on MV feeders	

Table 3.4 Loss Reduction Strategic Objectives and Performance Indicator Targets

		Key Perforr	Key Performance Indicators
Strategic Objective	Strategic Initiative	2020/21Targets	gets
 2. To reduce Commercial Loss	Regular global sweeps and inspections of meter installations	• 6,0	6,000 outdoor meters installed
		• 1,0	1,000 distribution feeders metered
	 Outdoor metering for large power customer 	• 50,	50,000 distribution transformers metered
	 Metering distribution feeders 	• 2.8	2.8million smart meters installed
	 Install meters in distribution transformers for energy balancing. 	• Pre	Prepaid meters installed
	 Acquire meter data control centre 	• Glo	Global sweep carried out 100%
	 Acquire and implement energy balance module 	• 100	100% meter reading coverage
	Acquire a debt collection management module	• Ani	Anti-power theft campaigns carried out
	 GPOBA programme for providing power to peoples' settlements on-going 		
	 Roll out smart metering for domestic and small commercial customers consuming above 500 kWh per month 		
	 Roll out pre-paid meter systems to majority of domestic and small commercial customers 		
	 Upgrade of computer hardware/software for the billing system 		
	 Frequent anti power theft campaigns 		

RESOURCE ALIGNMENT

1.1.1

Theme 5: Resource Alignment

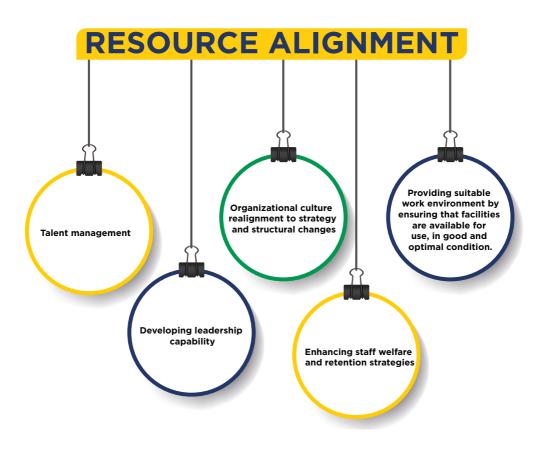
Introduction

Implementation of the strategic initiatives under the themes explained above over the five-year planning horizon will require an enormous amount of resources. This can be generally grouped into human and financial resources.

3.7.1 Human Resources Requirements

The company underwent structural re-organization that has seen the company increase the number of its operational regions from nine to ten and further devolved its activities to each of the 47 counties by opening up county offices. This is complemented by the company's overall focus of having the right mix in Human Capital to deliver on the key corporate strategic objectives. Towards this end, the company will strive to achieve the following strategic objectives that ensure that human resources are aligned to the business strategies and initiatives:

- a. Talent management;
- b. Developing leadership capability;
- c. Organizational culture realignment to strategy and structural changes;
- d. Enhancing staff welfare and retention strategies; and
- e. Providing suitable work environment by ensuring that facilities are available for use, in good and optimal condition.



Strategic Objective	Strategic Initiative	Key Performance Indicators 2020/21 Targets
Talent management	Identification of critical roles and critical talent	Competence mapping report
	Undertaking competency mapping	3 successors candidate per position
	Developing a comprehensive manpower plan	 Productivity index of 77%
	 Implementing needs-based training programmes 	Sales per employee of 1,340
		 Staff costs as a % of transmission and distribution costs at 30%
	 Improve employee productivity 	 100 % of employees trained as per the needs assessment report
Developing leadership capability	 Implementing leadership development programmes Implement staff approximant meatings 	 1,000 management staff trained on leadership
	 Engage a reputable consulting firm to design an effective staff 	 Staff engagement index of 80%

Enhancing staff welfare and retention strategies	 Implement staff engagement meetings and activities Encourage staff participation in extracurricular activities 	 Staff engagement index of 80%
Organizational culture realignment to strategy and structural changes	 Culture change programs Encourage employee mentorship programmes 	 Customers and Employee satisfaction index of 75%
Provide suitable work environment	 Maintenance, renovation, rehabilitation and redecoration of existing facilities Asset management Construction of offices, depots and stores in partnership with RBS Expansion and refurbishment of existing facilities Securing of existing facilities Replacement, rationalization and disposal of obsolete furniture and equipment 	 Work environment index of 92% Completion of projects (e-plants, depots, stores and e-houses, boundary walls and security works and installations to 100% Implement 100% preventive maintenance, small and major R&M works identified in the master plan. Annual identification and disposal of obsolete equipment's and furniture

3.7.2 Staff Projections for 2016-2021 Period

Staff growth is mainly determined by number of customers and the size of the network operated by the company measured as the customer to Staff ratio and sales per employee. A linear relationship between the above parameters and staff growth would ignore other efficiency dynamics and lead to a very high number of employees. A provision of 2% staff growth has been made based on the following assumptions:

- i. Processes mechanization and automation will be stepped up allowing for a modest increase in technical staff;
- ii. Improved network maintenance and refurbishment will reduce the need for more maintenance staff;
- iii. Staff in support functions will remain at current levels;
- iv. Productivity levels will continue improving;
- v. Annual sales growth will improve to 6% consistent with the expected 5,000+MW generation plan demand creation initiatives; and
- vi. Annual connectivity will be 1 million customers.

Based on the above, the table 3.6 below indicate the expected staff growth and sales per employee in the period.

Month/ Year	No. Of Customers	No. Of Staff (2% Growth/Year)	Customer: Staff Ratio	Sales/Employee
15-Jun	2,330,962	10,465	223	628
16-Jun	2,757,983	10,590	260	685
17-Jun	3,611,904	10,845	333	715
18-Jun	4,611,904	11,062	417	774
19-Jun	5,611,904	11,283	497	839
20-Jun	6,611,904	11,509	575	908
21-Jun	7,611,904	11,739	648	984

Table 3.6 Projected No. Of Customers, Staff and Sales

3.7.3 Funding Requirements for Implementation of the Strategic Plan

Energy projects are capital intensive and will therefore require a lot of funding more so now that majority of the projects and initiatives planned for implementation are geared towards expanding and refurbishing the grid network. It is estimated that a total of 2,133Million US Dollars (US\$) will be required over the next five years to finance the strategic plan as shown in table 3.7 below.



Table 3.7 Summary of the Strategic Plan Financial Requirements

	Strategic Objective	Estimated Amount Required (Ksh.Million)	Estimated Amount Required (US \$Million)
1	Infrastructure Development	20,000	198
2	Network Modernization	49,480	490
3	Customer Centricity	31,580	313
4	Loss Reduction	111,345	1,102
5	Resource Alignment	7,200	71
	Total	219,605	2,174

The projects will be implemented over the five year period with the capital expenditure for each year estimated as below:

Table 3.8 Summary of the financial requirements

				Planned	(US\$ M)	
Year	2016/17	2017/18	2018/19	2019/20	2020/21	Total
Capital	491	432	430	421	400	491

The funds will be sourced internally and externally by either reinvesting profits or borrowing under competitive terms.

3.7.4 Financial Strategies

The following financial strategies are to be pursued:

- i. Operational efficiency improvement by keeping growth in T&D costs lower than growth in electricity revenue (non-fuel) by an average difference of 4% (percentage points) annually;
- ii. Revenue gains from new customer connections (approximately 5% on average of annual total revenue);
- iii. System losses reduction to increase gross profit by the equivalent of 1.3% of total revenue for each one percentage point loss reduction;
- iv. Financial gains from improvement in electricity supply quality entailing increased sales from reduced aggregate interruption time; and
- v. Growth in new revenue streams from diversified business in particular the leasing of fibre optic telecommunications capacity.

3.7.5 Financial Projections

Based on implementation of this development and growth plan under the assumption of adequate tariff level, Profit Before Tax is expected to rise from Ksh 12,255 million in 2014/15 to Ksh 13,009 million in 2019/20. Total assets are expected to grow from Kshs 275,493 million to Kshs 438,384 million over the same period. (See Table 3.9.) These growth projections are based on the assumptions and financial strategies explained below and are also subject to the sensitivity factors as described.



3.7.6 Major Assumptions

The following major assumptions are associated with these results:

- Allowable system losses level is assumed making fuel cost recovery almost the same as fuel cost;
- Tariff revision approved in 2015/16 to commence in 2016/17 and on 3-year schedule;
- Thermal generation in energy mix declines to 9%;
- Annual Average total sales growth of 6% ;
- Connection of Vision 2030 Flagship projects and other large-scale investments to absorb the new 5,098MW of generation of which 652.5MW is already commissioned and 2,726 MW is to be completed in the plan period.

3.7.7 Sensitivity Factors around Revenue and Profit Projections

The major sensitivity factors that will affect revenue and profit during the plan period are the following:

- i. Continued growth in the national economy as reflected by GDP that will raise energy demand by all customers as well as ensure viability of market penetration as new customers are connected.
- ii. Achievement of the ambitious sales and consequential revenue targets associated with absorbing the new 5,098MW of generation capacity will depend on the success of the Vision 2030 Flagship projects implementation as well as other major large scale investments occurring in the country.
- iii. Capacity charges payable to IPPs arising from the investment in the new generation plant poses a major risk to profitability if demand is insufficient to absorb the new capacity.
- iv. Tariff adjustment approval according to the scheduled 3 year intervals will be needed to take account of the revenue requirements of new generation PPAs, as well as changes in the operating cost structure and levels of the company.
- v. The reduction in power system losses will have an appreciable effect on the cost of energy.
- vi. The movement of the bulk supply tariff as a result of the changing generation mix and imported fuel prices will determine the extent to which the fuel cost surcharge has to be applied to raise revenue.
- vii. Finance costs as a result of large scale borrowing to finance capital expenditure will have an appreciable effect on pre-tax profits.
- viii.Staff costs as a percent of total transmission and distribution cost will have an appreciable adverse effect on profitability if it worsens from the present 49%.
- ix. New technologies such as the proposed smart grid will have an appreciable positive effect on the company's operating efficiency and will reduce T&D costs as a percent of revenue.



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The projected Financial Performance during the plan implementation period is shown in Table 3.9 below.

	2016 /17	01/2100	01/0100	00/0100	10/0000
	2010/1/	201//18	2018/19	2013/20	2020/21
	Projected	Projected	Projected	Projected	Projected
Units purchased (GWh)	10,356	10,926	11,527	12,161	12,740
System losses	18.90%	18.40%	17.90%	17.40%	16.90%
Total sales -(GWh)	8,394	8,923	9,503	10,149	10.587
Profit & Loss Accounts					
Revenue					
Electricity sales	88,976	94,584	100,732	107,579	112,279
Forex recoveries - Power purchase	2,756	2,894	3,038	3,190	3,350
Company operations	2,150	2,279	2,416	2,561	2,714
Fuel cost recoveries	15,821	16,770	17,776	18,843	19,973
Total revenue	109,703	116,527	123,962	132,173	138,316
Power purchases					
Non-fuel	(52,395)	(55,015)	(57,766)	(61,232)	(64,906)
Forex cost	(2,756)	(2,894)	(3,038)	(3,190)	(3,350)
Fuel cost	(15,981)	(16,939)	(17,956)	(19,033)	(20,175)
Sub-Total	(71,132)	(74,848)	(78,760)	(83,455)	(88,431)
Gross margin	38,571	41,678	45,202	48,718	49.886
T&D cost	(20,902)	(22,183)	(25,213)	(26,929)	(27,221)
Depreciation	(7,106)	(7,800)	(8,400)	(8,942)	(9,423)
Sub-Total	(28,008)	(29,983)	(33,613)	(35,871)	(36,644)
Gross margin as % Sales	35%	36%	36%	37%	36%
Total operating income	10,563	11,695	11,589	12,847	13,242
Other operating income	7,208	7,840	8,407	7,909	8,328
Net finance (income)/cost	(4,366)	(5,626)	(5,367)	(5,223)	(5,667)
Profit/(Loss) before tax	13,405	13,909	14,630	15,533	15,903
			_		

Table 3.9 Projected Financial Performance 2016/17 to 2020/21

Table 3.10 Balance Sheet

Fixed and Current Assets (KShs million)	s million)				
	2016/17	2017/18	2018/19	2019/20	2020/21
	Projected	Projected	Projected	Projected	Projected
Total assets	340,511	371,850	407,284	438,384	471,771
Equity and liabilities			(KShs million)		
Total equity and liabilities	340,511	371,850	407,284	438,384	471,771

Table 3.11 Financial Performance Indicators

	2016/1/	2017/18	2018/19	2019/20	2020/21
	Projected	Projected	Projected	Projected	Projected
Current ratio	1.42	1.38	1.34	1.241	1.201
Debt service coverage	2.07	1.66	1.42	1.56	1.52
Self- financing ratio	63%	61%	60%	63%	65%
Days' receivable	60	59	59	58	58

3.8 Links to Grid Network Development and Maintenance Plan

Kenya Power Grid Development and Maintenance Plan

The Grid Development Plan attached provides a detailed power supply value chain with activities that centre on the committed, planned and future electricity generation, transmission and distribution projects. In summary, the document is arranged as follows:

- i. Load forecasting This encompasses the review of load forecast assumptions, pertinent variables, historical data set and methodology, taking cognizance of the future macro-economy.
- II. 5000+MW Generation Plan It discusses the medium-term planned generation projects under the 5000+ MW programme, the time frame and the long-term requirements necessary to meet the growing national load at least cost. It also includes a review of the expected energy mix that would be applicable with the introduction of the different generation sources.
- III. Transmission Network Development Plan It provides a detailed summary of both the committed and future transmission projects including the regional grid interconnections requirements. The projects are mainly developed by KETRACO as identified and planned under the least cost power development plan.
- IV. Distribution Infrastructure Development Plan The plan indicates the need for the company to invest in the distribution and transmission infrastructures (66kV Network) for the short-term period of 2016-2021. The plan proposes the required system reinforcement, upgrades and network expansion program that ensures that the network is robust and reliable to transmit and carry the load demands as and when it grows and more so with the injection of the new 5,000MW generation.
- V. **Network Management Plan –** In a bid to ensure 100% network asset maintenance and automation, the Network Management Strategic Plan has put in place plans to reinforce, upgrade, underground (based on economic viability and prudent resource use) and refurbish the network. This is aimed at reducing the interruptions per 1,000 index, increased customer satisfaction and a well maintained network.

Other plans that are linked to this strategic plan although not part of the plan include the Least Coast power development plan, 5000+MW development plan, Ministry of Energy and Petroleum strategic Plan and the Vision 2030 Medium Term Plan.



RESOURCE MOBILIZATION

RESOURCE MOBILIZATION

4. FINANCING THE DEVELOPMENT PLAN

4.1 Funding Framework and Policy

Recognizing the capital intensive nature of the company's investments, the modest regulated returns and the long investment recovery period, a framework and policy is necessary to define the mix of loans by tenor and costs so that the impact to the company remains within sustainable levels.

The company will observe the following requirements with regards to loans:

- a) Self-Financing Ratio It defines the level at which the company can finance its projects and looks at the ability of the company to supplement its loan funds. The self- financing ratio assumes that the lending should be matched in acceptable ratios with own funds. In the case of KPLC, the self-financing ratio is at 25%. The ratio ensures that the company does not operate entirely on debt in funding its operation.
- **b) Debt-Equity Ratio** This measures the company's financial leverage calculated by dividing the total debt by the equity. As an overall control on the company and to ensure the company is not owned and fully controlled by lenders, there is need to keep the requisite ratio of debt to equity which is 1.2:1. The company will continue measuring this ratio with the aim of ensuring that it is being monitored at all times.

A comprehensive evaluation of the company's operations and finances is currently underway with the help of the World Bank which, when completed, will provide a clear definition on the levels of borrowing and the components of the borrowed moneys. This will be completed by the end of fiscal period 2016/17 and will form a clear basis for defining a comprehensive funding policy in the company.

As an overall control on the company and to ensure the company is not owned and fully controlled by lenders, there is need to keep the requisite ratio of debt to equity which is 1.2:1

Debt-Equity Ratio

The ratio ensures that the company does not operate entirely on debt in funding its operation

Self-Financing Ratio

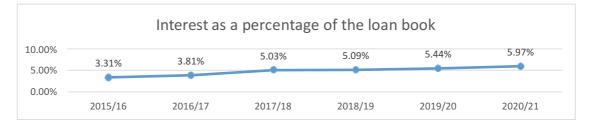


4.2 Status and Trends of Significant Financial Ratios

Interest as a Percentage of the Loan Book

An important aspect the company needs to manage is the funding costs, which at the moment averages below 6%.

Figure 4.1 Interest as a Percentage of the Loan Book



From the graph Fig 4.1 above, it can be deduced that the interest as a percentage of the loan book stands at 3.31% during the financial year of 2015/2016. This rate is expected to remain steady touching 5% in the financial year 2017/2018 through 2019/2020.

Current ratio should be >1 - The current ratio defines the solvency and liquidity of the company. The ratio compares the current assets against the current liabilities and indicates the ability of the company to meet its recurrent obligations.

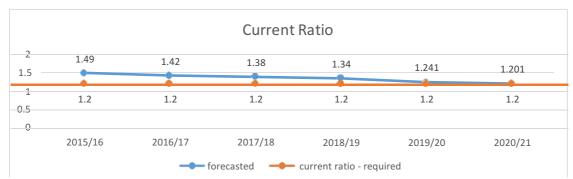


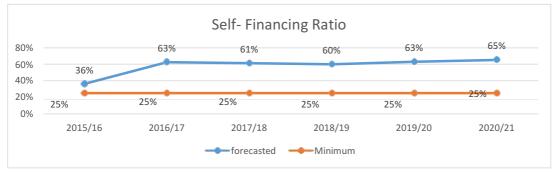
Figure 4.2 Current Ratio

From Fig 4.2, the ratio in 2015/16 is 1.49 which is slightly better than the minimum ratio of 1.20. As the years progress, the ratio declines gradually towards the one set by most of the lenders.



Self-Financing Ratio should be 25% - This is measured by taking the profitability of the company excluding depreciation and comparing with the total loan expenditure.

Figure 4.3 Self-Financing Ratio



The SFR rate is expected to be remain strong over the period. As shown in figure 4.3 the rate is well in excess of the 25% set by the lending covenant throughout the projection period.

Debt Service Coverage Ratio of 1.2 - This measures the extent to which the company is able to generate resources to be able to repay its debt obligations as they fall due. The ratio looks at the profits plus depreciation during the year as a ratio of principal debt repayment and interest.



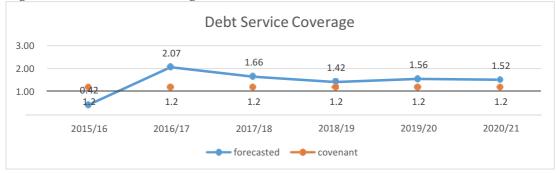


Figure 4.4 Debt Service Coverage Ratio

The DSCR is slightly above the covenanted level except in years 2016 due to the huge repayment of refinance facilities and in 2018 when it is expected to dip as repayment of facilities currently on moratorium takes effect.

STRATEGIC PLAN IMPLEMENTATION AND MONITORING FRAMEWORK

STRATEGIC PLAN IMPLEMENTATION AND MONITORING FRAMEWORK

5 IMPLEMENTATION OF THE STRATEGIC PLAN

5. Implementation Strategy

The Board of Directors will provide strategic direction towards ensuring that this strategic plan is implemented effectively. The implementation matrix contained in Annex I provides a framework to guide the Board and top Management of KPLC 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 the Board, Management and the Staff.

Specifically, management shall:

- Adopt a comprehensive implementation programme that will involve awareness creation to all staff for effective cascading of the plan;
- Link the Strategic Plan to the Performance Contracting targets. In this respect, activities in the strategic plan implementation matrix will be implemented through annual Performance Contracts of the Board, CEO & MD and top Management to ensure compliance to the strategic plan. This is in tandem with ISO and other Quality Management standards and practices;
- Prepare and submit relevant monthly, quarterly and annual reports based on the various functions and informed by best practice;
- Undertake a mid-term review of the strategic plan to ensure continued alignment to Government's Second Medium-Term Development Plan of Vision 2030;
- Undertake end-of-term review to not only determine success but also lessons learnt; and
- Automate monitoring and evaluation of implementation of the strategic plan to improve efficiency in reporting, analysis and follow up.

5.2 Performance Reporting Structure

Accountability for performance will be cascaded in alignment with the organization structure as follows:

- Corporate KPIs and targets are set at the Board level in the context of the annual Performance Contract. This contract contains a combination of KPIs reflecting the company's objectives and public policy objectives.
- The Corporate KPIs are all assigned to the MD & CEO's performance contract which is expanded to include other high priority KPIs to which the MD & CEO is accountable.
- All the KPIs in the corporate and MD & CEO's performance contracts are cascaded to the relevant divisional and functional heads and drilled down to management staff with reference to their specialised contributions.
- Corporate operational KPIs are also disaggregated into regional, county and branch components with targets customized to each level and organisational unit.

5.3 Key Corporate Performance Indicators

The KPIs considered most reflective of the strategic themes of customer centricity, network expansion, infrastructure modernization, loss reduction and resources alignment are shown in table 5.1 below. These KPIs will be tracked and evaluated against yearly targets to determine the success in achievement of the medium-term objectives.

Strategic Performance Measures	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
1. Infrastructure development						
New HV and MV Power Lines (Kms)	3,200	3,200	3,200	3,200	3,200	3,200
Number of New Bulk Supply Points	7	-	Ļ	-	0	0
Number of New Primary Substations Completed	21	20	20	4	4	4
Number of New Distribution Substations Completed	0	250	630	120	0	0
2. Network Management						
Air Break Switches Automated (11kv 33kv)	40%	50%	70%	80%	100%	100%
RMUs Automated	35%	40%	%02	80%	100%	100%
Breakdowns per 1000 Customers/month	6.39	6.09	5.89	5.69	5.49	5.29
Avg. Response Time(CAIDI)	2.82	1.8	1.5	1	-	1
No of Substations Refurbished	30	14	14	14	14	14
3. Customer Centricity						
New Generation Capacity Procured (MW)	42	142	1,269	567	556	556
Energy Purchase (GWh)	9,817	10,341	10,895	11,478	12,093	12,740
Peak Demand (MW)	1,585	1,750	1,959	2,205	2,494	2,834
Average Retail Tariff US cts /kWh	14	13	13	13	13	13
Average Bulk Supply Cost US cts per kWh	12.46	12.3	12.14	11.71	11.44	11.4
New Customers Connected Annually	1,253,196	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000

Table 5.1 Key Performance Indicators for Monitoring and Evaluation

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Strategic Performance Measures	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Customer Satisfaction Index	78.30%	67%	%69	71%	73%	75%
4. Loss Reduction						
System Efficiency (%)	80.60%	81.10%	81.60%	82.10%	82.60%	83.10%
Commercial loss Reported	4.04%	4.04%	4.04%	4.04%	4.04%	4.04%
Technical Loss Reported	15.36%	14.86%	14.36%	13.86%	13.36%	12.86%
Annual Sales GWh	7,912	8,386	8,890	9,423	9,988	10,588
5. Resource Alignment						
Productivity Index	73%	74%	75%	76%	77%	78%
Sales Per Employee (kWh)	774	839	908	984	1,065	1,153
Staff Costs as a % of T&D costs	54%	44%	39%	30%	30%	30%
Customer - Staff Ratio	417	497	575	648	719	787
Engagement Index	20%	72%	74%	76%	78%	80%
Work Environment Index	80%	83%	86%	89%	92%	92%
Acquisition of Land and Premises	45	45	45	45	45	45
Total Assets		109,703	116,527	123,962	132,173	138,316
Total Revenue		109,536	116,661	124,247	132,324	160,362
Profits Before Tax (KShs)		13,405	13,909	14,630	15,533	15,903

ANNEX: STRATEGIC PLAN TARGET CHAIN MATRIX

Strategic Theme 1: Infrastructure Development

						Target				
Specific Objective Activities	e Activities	Key Performance Indicators	Assumptions	Responsibility (Ksh. Million) 2016/ 17	kesources (Ksh. Million)		2017/ 18	2018/ 19	2019/20	2020/21
	Construction of new distribution substations totaling	MVA of new Bulk supply substations capacity	Availability		0,00	360	400	400	0	0
	6225MVA with 3,767.83 kms of	No of new bulk supply points	of competent construction firms		18,400	-	1	1	0	0
	power lines	No of new Primary substations	Continuous	Infrastructure Development	11,900	20	20	4	4	4
		No of Distribution substations added (IDA)	monitoring of contractors		200	250	630	120	0	0
		New LV lines constructed IDA (Km)	Incl. Electrification Project		5,500	3,000	8,000	1,500	1,500	1,500
To expand		New MV lines constructed	1		3,000	2,500	2,500	2,500	2,500	2,500
and upgrade the network capacity to	Primary Substations under N-1 criterion	Primary Substations No of upgraded Primary under N-1 criterion Substations	Availability		2,500	20	00	8	2	2
absorb the 5000+MW	MV Constructed under N-1 criterion	Length of line constructed under N-1	construction firms	Infrastructure Development	Cot	5	0	0	0	0
		No of New Lines MV Constructed under N-1criterion			IQO	51	0	0	0	0
	Uparade of primarv	No. of Primary substations Upgraded	Availability of competent	Infrastructure Development	2 500	17	0	1	4	4
	substations	Capacity of Primary substations upgraded (MVA)	construction firms	Infrastructure Development	000,4	276	0	180	92	92
		Scada Upgrade	I	Infrastructure Development	1,000	0	30	28	IJ	IJ
	Effective project	% of Completion Rate	Project	Infrastructure		100%	100%	100%	100%	100%
	implementation management	% of Cost Efficiency	management system exists	Development		100%	100%	100%	100%	100%

				-	Resources	Target				
Specific Objective Activities	Activities	key Performance Indicators	Assumptions Responsibility (Ksh. Million) 2016/ 17 2017/ 18 2018/ 19 2019/20 2020/21	Responsibility	(Ksh. Million)	2016/ 17	2017/ 18	2018/ 19	2019/20	2020/21
To reduce Installation of technical losses Automatic Load within the Break Switches	Installation of Automatic Load Break Switches	No. of Automatic Load Break Switches Installed	Availability of Competent Construction	Availability of Infrastructure Competent Development Construction	2,000	400	400	200	0	0
	Installation of Reactive Power	Reactive Power Compensators Installed	1			თ	0	0	0	0
		Capacity of Reactive Power Compensators Installed (MVAr)			Z,200	191.5	0	0	0	0
Total Cost of Theme	0				49,480					

Specific	Activities	Kev Performance	Assumptions	Responsi-	Resources	Target				
Objective		Indicators		bility	(Ksh. Million)	2016/ 17	2017/ 18	2018/19	2019/20	2020/21
To improve Power Supply		RMUs Automated	Automate 85 RMU in 5 years	Network Management	200	25	20	20	20	20
Quality	and sub transmission substations and feeder management	Use of Aerial bundled Conductors in kilometers	Deplete current stock of 125 km in 3 years	Network Management	100	50	25	0	0	0
	Automation of equipment at primary substations for faster	Air Break Switches Automated	500 switches to be automated	Network Management	1,000	125	125	125	125	125
	supply restoration	Automation GIS/FDB coverage	I	ICT	800	100%	0	0	0	0
	Refurbishment works on distribution substations	No of substations refurbished	1	Infrastructure Development	8,300	14	4	14	14	14
To improve power Supply reliability to	Provision of alternative supplies to Major customers	% of Major customers with alternative lines	1		561	100%	100%	100%	100%	100%
	Trace Clearance both on MV and LV Lines	Average Number of Iow voltage Breakdowns per 1000 customers per month	Each feeder owner will be empowered to use tree cutting day workers throughout the year	Network Management	3,150	7.3	L.Z	6.9	6.7	6.7
		Customer Satisfaction index	Survey completed as scheduled.	Customer service	20	75%	80%	85%	%06	%06
	Protecting and securing infrastructure, company premises and assets	No of theft reported	I	Company Secretary & Corp Affairs		29	25	22	19	19
	against varidanstri and insecurity	Level of Transformer Vandalism	Cooperation with the local administration and governments	Company Secretary & Corp Affairs	5,860	171	146	125	107	107
		% of success rate in prosecution of vandalism cases		Company Secretary & Corp Affairs		%06	%06	80%	%06	%06

Strategic Theme 2: Network Management

Specific	Activities	Key Performance	Assumptions	Responsi-	Resources Target	Target				
Objective		Indicators		bility	(Ksh. Million)		2017/ 18	2018/19	2016/17 2017/18 2018/19 2019/20 2020/21	2020/21
	Intensifying power system maintenance through Boresha Joint Operations, individual teams and L&T contractors	Average number of low voltage breakdowns per 1000 customers per month	1	Network Management	10,000	7.5	7.3	۲Z	0. 0	6.7
Total Cost of Theme	eme			-	20,000					

	2020/21	< <	< <	16%		11.44
	2019/20	556	5,024	16%		11.44
	2018/ 19	567	4,468	16%		11.71
	2017/ 18	1,269	3,901	18%		12.14
Target	2016/ 17	142	2,632	21%		12.3
ŝ	(KSn. M)	0	0	0		0
Responsibility		Business Strategy	Business Strategy	Business Strategy		Business Strategy
Assumptions		All the 5000MW + projects will be implemented Generation	projects will be commissioned as scheduled Political and economic scability of the			
Key Performance	Indicators	Additional Power Procured in MW.	Installed Capacity MW	% of Thermal energy generation	Average generation tariff	Installed Capacity
Activities		Procure power from 44 new power stations between 2015/16 and 2019/20, both least cost and FIT projects, totaling	2,774 MW	Generation capacity mix to change from Hydro 35.7 %, Thermal (MSD) 35.9%, Geothermal 26%, Cogeneration	1.1%, Wind 1.1% and solar 0.03% in 2015, to Hydro 17% . Geothermal	26%, Thermal 16%, Cogeneration 1% , Wind 11%, Solar 1%, Coal 20% and imports 8% in 2021.
Strategic	Objective	To avail adequate power to meet growing demands at least cost				

Strategic Theme 3: Customer Centricity

Activities	Key Performance	Assumptions	Responsibility	Resources	Target				
	Indicators			(Ksh. M)	2016/ 17	2017/ 18	2018/ 19	2019/20	2020/21
Implement last Mile project	No. of new households connected	Sustained government subsidv on	Customer Service	13,500	188,520	62,840	0	0	0
Implement pre-investment schemes to fast- track connectivity	New customers connected under the schemes	electricity connection costs	Customer Service	9,670	15,000	30,000	50,000	50,000	50,000
Rollout of the 3 step new connection process to reduce	Connection timelines for business customers	Availability of all necessary materials	Customer Service	10	30	30	30	30	30
connectivity timelines	Connection timelines for ordinary customers	For customer connection	Customer Service	50	43	43	35	30	30
Automatic generation of quotations facilitated by FDB system	% GIS coverage	All offices are linked and connected to the FDB system	ICT	800	52%	100%	100%	100%	100%
Line maximization	No. of lines identified for maximization	5 Major Refurbishment projects/County/ per annum @ KShs 100M/ county (235 no of projects/Year	Network Management	0	235	235	235	235	235
Group Schemes Slum Electrification (GPOBA)	No. of groups schemes implemented/ connected	Availability of group schemes	Infrastructure Development	3,500	72	65	70	68	60
Establishments of Off-grid Mini grids	No of mini grids established	Availability of potential sites	Business Strategy	2,000	800	800	800	800	800

Strategic	Activities	Key Performance	Assumptions	Responsibility	es	Target				
Objective		Indicators			(Ksh. M)	2016/ 17	2017/ 18	2018/ 19	2019/20	2020/21
To facilitate electricity demand	Accelerate new connections so customer base	Electricity connectivity access level	Availability of all necessary materials			59%	70%	78%	84%	%06
growth of 8%	towards universal access by 2020	Domestic Customers	For customer	Customer Service	50	4,406,682	5,384,112	6,361,542	7,338,972	8,117,758
annuany.		Small Commercial			20	199,244	221,244	243,244	265,244	287,244
		Large Power			10	5,978	6,548	7,118	7,688	8,258
	Support to GOK efforts to attract many new large scale investments, which together with normal growth from existing and	Additional new demand (MW)	Joint efforts with other ministries and authorities to encourage investment	Business Strategy Customer Service	200	100	50	70	200	0
	new ordinary customers should contribute over 2,000MW in new	Sales growth (Gwh)	Sustained economic growth							
			Implementation of Vision 2030 development projects	Customer Service	400	8,000	8,784	9,497	10,371	11,408
Total Cost of Theme	f Theme				31,580					

Initiatives
Reduction
4: Loss
: Theme
Strategic

						Target				
Specific Objectives	Activities	Key Performance Indicators	Assumptions	Resources (Ksh. Million) Responsibility	Resources (Ksh. Million)	2016/17 2017/18	2017/18	2018/19	2019/20	2020/12
To reduce power Svstem	Distribution System Reinforcement and Upgrade projects with loss reduction	Level of technical losses		B/ Strategy		11.1%	10%	9.2%	8.9%	9.1%
Technical Loss by 2% over the next five years	benefits	No of primary sub-stations constructed	Projects are implemented and commissioned as per schedule	Infrastructure Development	Covered under Network Expansion	20	20	20	4	4
,	Intensifying power system maintenance through Boresha Joint Operations, individual teams and L&T contractors	Average number of low voltage Breakdowns per 1000 customers per month	The projects are part of	Network Management	Covered under Network Management	7.5	7.3	1.7	0. 0.	6.7
	Improving reactive power compensation by installing more capacitors at 11kV level	No of feeders commissioned with Reactive Power Compensation installed	the MV and LV extensions targeted for construction.	Business Strategy	1,285	0	20	20	0	0
	Extending the MV network to shorten LV lines, where losses are highest	Length of MV Lines constructed (kms)		Infrastructure Development	0	145	295	630	120	0
	System studies to determine network sites having highest losses and thereafter implement remedial actions	Study Reports	1	Business Strategy	06	30	30	30	30	OM

						Target				
Specific Objectives	Activities	Key Performance Indicators	Assumptions	Resources (Ksh. Million)	Resources (Ksh. Million)	2016/17	2017/18	2018/19	2019/20	2020/12
To reduce power System Commercial	Regular global sweeps and inspections of meter installations	% Levels of Commercial losses Reported	1	Customer Service	500	6.8%	5.3%	3.8%	2.3 %	0.8%
Loss by 7.5% over the next five years.	GPOBA programme for providing power to peoples settlement on going	No of schemes	Increased connection reduces incidences of electricity theft	Infrastructure Development	Covered under Customer Centricity	72	65	70	08	60
	Roll out smart metering for domestic and small commercial customers consuming above 500 kWh	New connections	Reduce commercial losses	Customer Service	18,200	0	500	600	700	800
	per month	No. to be Retrofitted	1		370	12,500	20,000	20,000	0	0
	Roll out Pre-paid Meter Systems to majority	Prepaid installed (New)	Availability of the meters	Customer Service	6,000	750,000	500,000	400,000	0	0
	commercial customers	Retrofitting			59,500	2,000	5,000	10,000	0	0
		Smart Meters installed(new)			15,000	8000	500,000	600,000	1,000,000	0
		Retrofitting			0	8,000	5,000	10,000	20,000	20,000
	Acquire meter data control Centre	Reduce commercial losses	1	Business Strategy	100	0	100%	0	0	0
	Acquire & implement energy balance module	Reduce commercial losses	Availability of the required system in the market	Business Strategy	300	20%	100%	100%	100%	100%
Total Cost of Theme	of Theme				111,345	-				

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Specific Objective	Activities	Key Performance Indicators	Assumptions	Responsibility	Resources (Ksh. Million)	Target				
						2016/17	2017/18	2018/19	2019/20	2020/21
Talent Management;	Implementing needs based training programmes	5 training days per employee	Availability of employees with the required	Human Resources & Administration	738	м	Μ	4	IJ	U
	Implementing leadership development programs	Leadership training days per employee	expertise or skills		239.2	Μ	Μ	4	IJ	IJ
	Undertaking competency mapping; Identification of critical roles and critical talent	Completion of Exercise	Sales growth projects are attained		39	100%	100%	100%	100%	100%
	Implementing succession planning	No. of candidate successors per position			Q	Ν	M	M	м	м
	Improving employee productivity	Productivity Index			13.4	74%	75%	76%	77%	78%
		Sales per employee			0	839	908	984	1,065	1,146
Leadership Development	Managing staff costs	Staff Costs as a % of T&D costs	I	Human Resources & Administration	0	44%	39%	30%	30%	30%
	Controlling staff numbers growth	Customer: Staff ratio	Availability and Adoption of new technologies		0	497	575	648	719	800
Enhancing Staff Welfare	Improving employee engagement	Engagement Index	I	Human Resources & Administration	13.6	72%	74%	76%	78%	80%

	5	
	2020/2	85%
	2016/17 2017/18 2018/19 2019/20 2020/21	85%
	2018/19	85%
	2017/18	85%
Target	2016/17	80%
Resources (Ksh. Million) Target		001
Assumptions Responsibility Resources (Ksh. Million		Human Resources & Administration
Assumptions		Staff Human willingness to Resources & change Administratio
Key Performance Indicators		ç
Activities		Cultural change programs Improved customer satisfactio Index
Specific Objective		Organizational culture realignment to strategy and structural changes

Specific Objective	Activities	Key Performance Indicators	Assumptions	Responsibility	Resources (Ksh. Million)	Target				
						2016/17	2017/18	2018/19	2019/20	2020/21
Provide suitable Premises and off work environment support services	Premises and office support services	Work	Stable political and social	Human Resources & Administration	1,000					
	Management of leases	environment index		Administration	1,000	83%	86%	89%	92%	92%
	Statutory compliance				95					
	Asset management	Replacement, rationalization and disposal of obsolete furniture and equipment			400	100%	Ad hoc	Ad hoc	Ad hoc	Ad hoc
	Construction of offices, depots and stores in partnership with RBS	Completion of projects			2,000		-			-
	Expansion and refurbishment of existing facilities	Works to E-plants, depots, stores and e-houses			600	N	Ŋ	7	7	5
	Maintenance, renovation, rehabilitation and redecoration of existing facilities	Preventive maintenance, small and major R&M works identified in the master plan	1	Human Resources & Administration	400	40%	60%	80%	100%	100%
	Securing of existing facilities	Boundary walls and security works and installations	ı	Human Resources & Administration	500	м	4	4	4	4
Total Cost of Theme	це				7,200					





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