ELECTRICITY UTILITY GOVERNANCE IN KENYA

A COMPREHENSIVE REPORT

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CONTENTS

ACRONYMS

ACCESS	Alliance of Civil Society Organizations for Clean Energy Access
ESAL	Energy Solutions Africa Limited
ELCOS	Electricity Consumers Society of Kenya
ESI	Electricity Supply Industry
EPRA	Energy and Petroleum Authority
ESAK	Electricity Sector Association of Kenya
GDC	Geothermal Development Corporation
GWh	Gigawatts
LCPDP	Least Cost Power Development Plan
KENGEN	Kenya Electricity Generating Company
KETRACO	Kenya Electricity Transmission Company Limited
KPLC	Kenya Power and Lighting Company
KCCWG	Kenya Climate Change Working Group
MW	Megawatts
REREC	Rural Electrification and Renewable Energy Corporation

EXECUTIVE SUMMARY

Kenya's power utility sector has been majorly characterized by a single power off-taker, the Kenya Power and Lighting Company, and power generating companies comprising Kenya Generating Company (KENGEN) and independent power producers. Kenya has made great progress over the last decade in improving access to electricity. Approximately 75% of Kenya's households have access to power which represents about 8.9 million households out of 12 million households. Its installed capacity is about 3,074 MW which comes from an energy mix majorly derived from renewable sources. Through several initiatives such as the Last Mile Connectivity Programme, Kenya has exponentially increased access to electricity establishing itself as one of the most developed power sectors in Sub-Saharan Africa.

The power sector has undergone significant reforms over the years aimed at expanding access to electricity, improving efficiency, promoting renewable energy and enhancing the overall performance of the utility sector. These reforms include restructuring and liberalization of the power sector by unbundling the utility company, opening up the Kenyan power generation market to independent power producers (IPPs), enacting the Energy Act 2019, promoting renewable energy, energy purchase frameworks being the Feed in Tariff System, Energy Auction Policy and Power Purchase Agreements, strengthening of institutions, rural electrification, off-grid and mini-grid solutions, energy power pools and energy efficiency and conservation measures and smart grid technologies. These reforms have altered the organization and the structure of the power sector which has improved its efficiency.

However, despite the progressive reforms, Kenya's electricity utility sector still faces several challenges. This includes weaknesses in power distribution segments, the politicization of the utility company management, system and commercial power losses, and inadequacy in providing equitable, affordable and efficient electricity utility services among other challenges such as costly power purchase agreements. These challenges have threatened the financial stability of the power utility company and resulted in huge costs and debts.

Many jurisdictions have been able to correct the inefficiencies in electricity utility governance. These jurisdictions have implemented several strategies that have enabled them to tackle the challenges faced by KPLC. The efficiencies of Kenya's electricity utility sector can be gauged based on several indicators including the level of access to electricity, the cost of electricity, the reliability of the power supply, and the environmental impact of electricity production. Norway, Sweden, Iceland, Finland and Australia provide benchmarks from which Kenya can learn in most of the indicators. This is especially on having a reliable, efficient, and sustainable electricity system that provides access to electricity for all citizens, while also balancing economic, social, and environmental considerations.

While the government has played a critical role in promoting good governance of the electricity utility sector, civil society organisations have also organized themselves in offering sustainable solutions towards electricity utility governance. They have become essential stakeholders, especially in advocacy for proper governance particularly on behalf of the most vulnerable, fostering dialogues between government and the people, providing expert views, influencing policy and legislative frameworks and promoting public participation to encourage a people-centred form of governance. This has made the involvement of civil society organizations vital to electricity utility governance.

There are notable individuals and organizations in the civil society space that have assisted in the advancement of electricity utility governance in Kenya. Examples include the Electricity Consumers Society of Kenya (ELCOS), which has participated in sustaining conversations about issues such as electricity tariff review, public interest litigation on electricity issues and consumer awareness. It has been involved in advocating for affordable and reliable power supply. ELCOS comprises of experts in the electricity industry who have been involved in public participation forums on behalf of consumers. Another notable civil society entity in this regard is the Kenya Climate Change Working Group (KCCWG). The KCCWG) has contributed in the promotion of universal energy access through advocacy for decentralized renewable energy. Third, is the Alliance of Civil Society Organizations for Clean Energy Access (ACCESS), which has been involved in promoting affordable and sustainable access to electricity. In general, the participation of civil society groups has assisted in the growth of access to electricity for poor households which has assisted in reducing energy poverty and promoting inclusive economic growth. Okiya Omtatah and Jerotich Seii are also notable voices in civil societies.

The purpose and objective of this comprehensive report is to analyze the gaps in Kenya's electricity governance and suggest ways these gaps can be addressed especially through civil society engagement. Kenya's electricity governance sector faces several challenges as highlighted above. Civil societies have a crucial role to play in providing solutions through advocacy, expert advisory and offering solutions in emerging issues such as energy transition in the electricity sector, implementation of sustainable energy initiatives, development of informational materials, establishment of networks to support good governance, for instance, linking development partners with local governments, and also developing monitoring tools. These are just among the many roles civil societies can play in Kenya electricity utility governance.

1.0 INTRODUCTION

1.1 Background of Electricity Utility Governance

The governance of Kenya's electricity utility sector has been an issue for reforms for a lengthy period. Successive governments have used diverse strategies towards enabling the electricity utility sector to deliver adequate, competitively priced and reliable power supply.[1] However, the utility sector has not been able to efficiently provide electricity services to all persons. This has been due to challenges in the utility's financial stability, operational efficiency and service delivery.[2] Currently, the government has been looking towards restructuring KPLC's governance while also focusing on the development of off-grid solutions, specifically community-owned power projects, as an alternative to the national grid especially for domestic consumers in rural areas.[3] This initiative aims to establish an electricity sector that is reliable and sustainable.

Despite governance challenges, Kenya has made substantial progress in expanding access to electricity. Between 2014 and 2020, access to electricity grew exponentially from 36% to 72%.[4] As of 2022, about 8.9 million households, which represents around 75% of Kenya's households, had access to electricity.[5] This is with about 100% access in urban areas and 65 % in rural areas.[6] The high access to electricity has been enabled by several electrification programmes, notably the Kenya Electrification Energy Strategy (KNES), the Last Mile Connectivity Project, the Kenya Off-Grid Solar Access Project (KOSAP), Rural Electrification Programme, and the Global Partnership Output-Based Aid (GPOBA).

In 2018, Kenya's National Electrification Strategy was launched through a partnership between the Kenya Government and the World Bank aimed at increasing access to reliable and affordable electricity throughout the country.[7] The strategy seeks to address energy poverty by extending electricity infrastructure to underserved and remote areas, promoting economic development, and improving the quality of life for Kenyan citizens.

The Kenya Off-Grid Solar Access Project (KOSAP) is an initiative aimed at increasing access to modern energy services in underserved and remote areas of Kenya through the use of off-grid solar solutions. The objective of this project is to accelerate the country's progress towards achieving universal access to electricity. The Last Mile Connectivity Programme aims to achieve universal access to electricity for all Kenyan citizens by extending the electricity grid to areas that were previously not connected. This is aligned with the Rural Electrification Programme created under the Energy Act 2019 to provide electricity to rural areas.

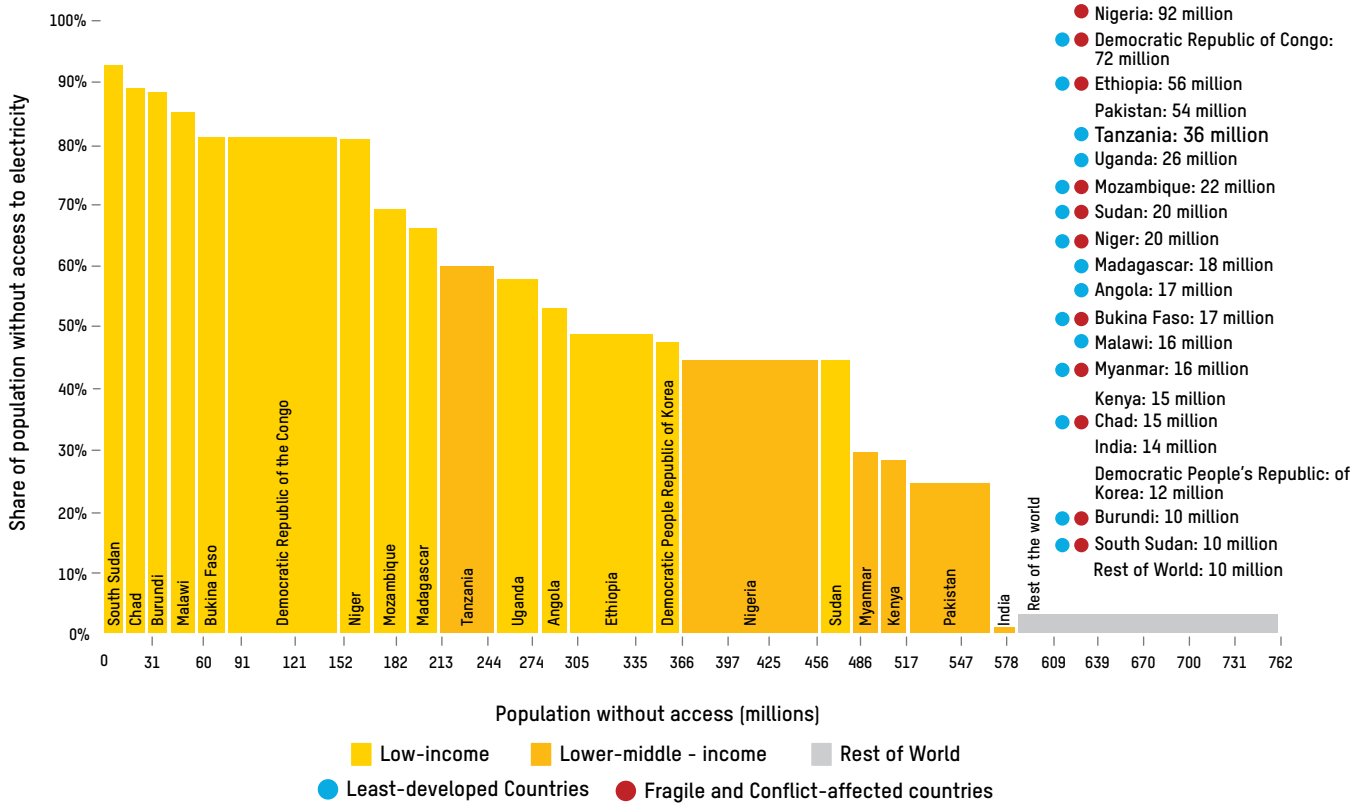
36%

EXPONENTIAL GROWTH IN ACCESS TO ELECTRICITY GREW BETWEEN 2014 AND 2020

1 Peter Rwakifaari,' Understanding Structural, Governance and Regulatory Incentives for Improved Utility Performance : A Comparative Analysis of Electricity Utilities in Tanzania, Kenya and Uganda, 'PHD Thesis University of Cape town
2 Ibid
3 Kenya Kwanza,' The Kenya Kwanza Plan: The Bottom Up Economic Transformation Agenda 2022-2027,< https://africacheck.org/sites/default/files/media/ documents/2022-08/Kenya%20Kwanza%2 0UDA% 20Manifesto%202022.pdf> accessed on 28th July 2023
4 World Bank,' Access to Electricity-Kenya,' < https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=KE> accessed on 23rd January 2023
5 EPRA, Energy & Petroleum Statistics Report 2022, page 15 & Kenya National Electrification Strategy: Key Highlights 2018
6 Government of Kenya, Kenya National Bureau of Statistics, Economic Survey 2022, page 4
7 World Bank https://www.worldbank.org/en/news/press-release/2018/12/06/kenya-launches-ambitious-plan-to-provide-electricity-to-all-citizens-by-2022

These projects sought to realize universal access to electricity, which is also a key component of the Kenya Vision 2030.[8] They have improved access to electricity by a great margin and significantly reduced the population of those without access to about 15 million people. However, there are many Kenyans who have no access to electricity services as the country remains among the top 20 electricity deficient countries as shown in the figures below.

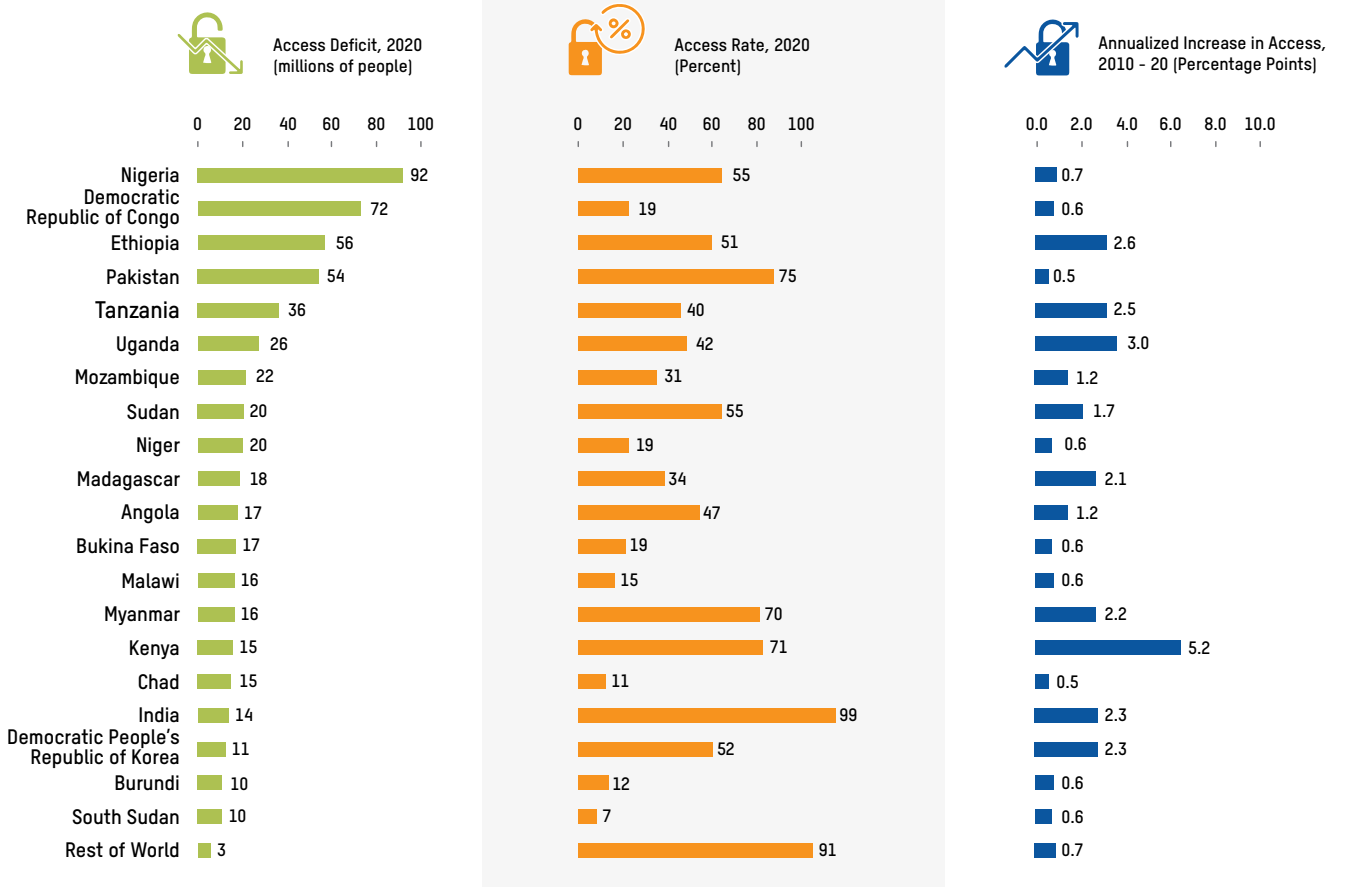
FIGURE 1.1 - SHARE OF POPULATION WITHOUT ACCESS TO ELECTRICITY



ACHIEVING UNIVERSAL ACCESS TO ELECTRICITY WHILE REALIZING THE SDGS REQUIRES AN INTEGRATED APPROACH THAT INVOLVES STATE AND NON-STATE ACTORS.

8 Government of Kenya, Sessional Paper No. 10 of 2012 on Kenya Vision 2030

SDG7, The Energy Progress Report 2022.



Access to electricity that is affordable, reliable and clean is a major goal of sustainable development.[9] Under the Sustainable Development Goals (SDGs), access to electricity is not only concerned with providing affordable service to all persons but also delivering it in a manner that observes environmental and climate change principles.[10] Therefore, as the report highlights, good governance in the electricity utility sector not only addresses governance weaknesses but also proposes strategies for integrating sustainable development goals within them.

The report underscores that achieving universal access to electricity while realizing the SDGs requires an integrated approach that involves state and non-state actors. The universal, transformative and ambitious nature of the SDGs has made it highly inclusive, making the participation of non-state actors such as civil societies a paramount component to its success. This has made the involvement of civil societies crucial especially in achieving sustainable development and delivering social benefits.[11]

9 Francesco Dalla & Bob van der Zwaan,' Heart of Light: An Assessment of Enhanced Electricity Access in Africa,' 2021 136 Renewable and Sustainable Energy Reviews, page 1
10 Ibid
11 Cristina Esposa &Gabriel Rangel,' What Roles for Civil Society Organizations Play in Monitoring and Reviewing the Sustainable Development Goals? An Exploration of Cases in Ecuador, Colombia and Argentina,' 2022 5 Latin American Science, Technology and Society, page 3

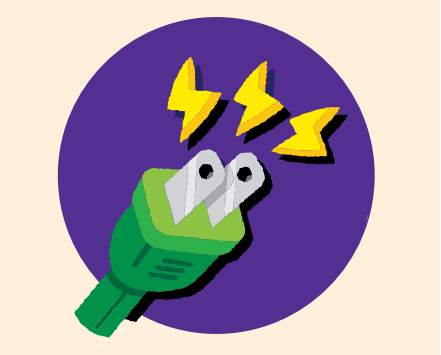
The World Bank defines civil societies to constitute non-profit groups, individuals and institutions, formal or informal, who work to improve the lives of their constituents.[12] There has been involvement of civil societies in the electricity sector. Civil societies have participated in advocacy activities for access to electricity. However, there have been challenges, especially concerning their capacity to navigate through the technical aspects of the sector, participation in vital events such as tariff reviews and financial support for civil education and campaigns. The purpose of this comprehensive report is to identify the weaknesses in Kenya's electricity utility governance and the capacity of civil societies to advocate for good governance in the sector.

The report has established that there has been extensive policy and regulatory reforms aimed at providing a reliable and affordable electricity supply through clean and sustainable means. The reforms include the energy legislative framework that was fully overhauled in the year 2019 and policies such as the Feed in Tariff 2021, Renewable Auctions Policy 2021 and the Gender Policy in Energy 2019. These reforms seek to address the challenges of access to electricity including access to rural populations, informal settlements and women. It also addresses the inefficiencies that Kenya has been exposed to for years due to its heavy reliance on KPLC as a single off-taker. This is particularly in its operations and production.

Successive governments have made numerous efforts to resolve KPLC's inefficiencies through several strategies including performance contracts for the utilities, private management and debt refinancing.[13] The Kenyan electricity sector has for many decades remained under state control as the government is the majority shareholder in the KPLC and KENGEN which is the largest power generating company supplying about 70% to the national grid. Both KPLC and KENGEN are listed companies therefore subjected to corporate governance principles which require them to adopt standards that promote financial and technical efficiencies.

Their corporate structure as listed companies subjects them to standard practices such as observing corporate governance. KPLC is also ISO certified and hence has laid down procedures for budgeting and capital expenditure. However, despite adopting these standards, KPLC has not enjoyed an independent board as its decisions have been majorly influenced by government policies leading to decisions that are not commercially sound. It has had a huge turn over in management and has failed in delivering services efficiently.

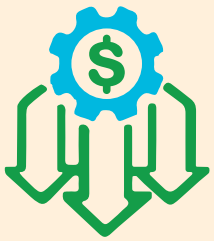
These challenges, besides financial and operational challenges, have affected the electricity utility's ability to deliver services efficiently. This has called for urgent remedial measures to undo its adverse effects. Electricity utilities have been globally recognized as vital elements that lead to sustainable development. Indeed, the United Nations Sustainable Development Goals partly aim to ensure that every person has access to affordable, reliable and modern energy services.[14] Member states of the UN have been called upon to increase the proportion of their citizens who have access to electricity, enhance access to clean fuels and technology, and boost renewable energy in the total energy mix. These states have also been required to improve energy efficiency and expand energy infrastructure.[15] Norway, Sweden, Iceland, Finland and Australia are some of the jurisdictions that have been able to achieve universal access with a sustainable energy mix that uses higher levels of renewable energy sources.



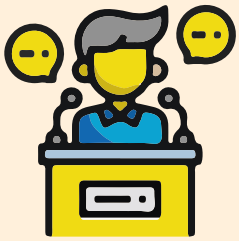
THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS PARTLY AIM TO ENSURE THAT EVERY PERSON HAS ACCESS TO AFFORDABLE, RELIABLE AND MODERN ENERGY SERVICES.

12 World Bank,' Working Together : The World Banks Partnership with Civil Societies,' < https://documents1.worldbank.org/curated/en/477131468767089339/pdf/multi-page.pdf> accessed on 28th July 2023
13 Supra , Note 1
14 United Nations, United Nations 17 Sustainable Development Goals, https://sdgs.un.org/goals/goal7 accessed on 26th January 2023
15 Ibid

IN SUMMARY, WHILE KENYA HAS MADE SIGNIFICANT STRIDES IN ENSURING EQUITABLE ACCESS TO THE NATIONAL ELECTRICITY GRID, IT STILL FACES SEVERAL CHALLENGES. THESE INCLUDE:



FINANCIAL AND OPERATIONAL INEFFICIENCIES



POLITICAL INTERFERENCES

A LIMITED SCOPE OF AWARENESS AMONG CONSUMERS OF THE DYNAMICS INFORMING THE GOVERNANCE AND OPERATION ISSUES IN THE SECTOR; AND

A NASCENT INVOLVEMENT BY CIVIL SOCIETY ADVOCACY GROUPS THAT ARE NOT ALWAYS WELL-INFORMED OR COMMITTED TO IMPROVING THE PERFORMANCE OF THE ENERGY SERVICE PROVIDERS GENERALLY.

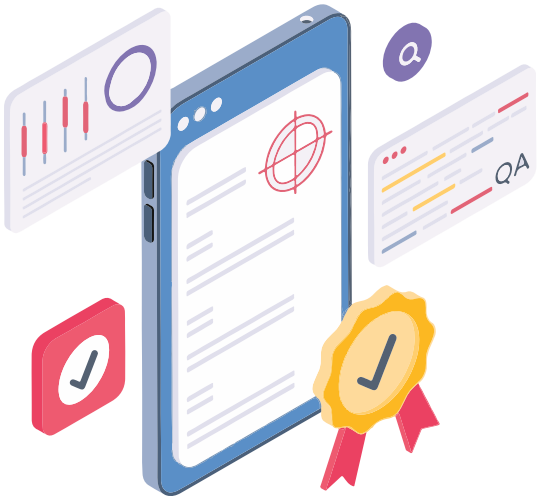
It was against this broad background that the current study was commissioned.

1.2 Purpose and Objectives of the Study

The main purpose of the study is to analyze Kenya's electricity utility governance and establish the role of civil society organizations in effectively advocating for good governance in the sector. The objectives of the study are below.

2.0 METHODOLOGY

The nature of the assignment called for an extensive qualitative analysis of existing literature that ranges from policy documents, institutional reports, journalistic articles and occasional academic resources. Since the anticipated outcomes were to be gleaned mainly from dominant perceptions of existing statistics, the assignment involved conducting an in-depth thematic and discourse study of Kenya's electricity utility governance. This was done to obtain information on trends and patterns of thought around key issues on power utilities in the country. For purposes of quality assurance and to gain insider perspectives on the provisional findings of the literature review, we also conducted semi-structured key informant interviews with different players in the industry, targeting informed respondents in positions of decision-making along the utility value chain. We briefly describe the two methods below.



2.1 Literature Review on Energy Service Providers in Kenya

We conducted key-word analysis in the literature review. The literature comprised annual reports, World Bank reports, the Constitution of Kenya, as well as relevant legislative frameworks and policies. We focused mainly on legal instruments regulating the sector, government policies governing electricity utility and sector-specific strategy papers. We also reviewed the KPLC Annual Reports and reports from different international organizations, mainly the World Bank, African Development Bank, the International Renewable Energy Agency, and the United Nations Development Programme.

The actual review of this literature adopted a lexical and thematic analysis using measures of recurrence to determine the regularity with which a concern or idea would appear. Our interpretation was that regularity of appearance corresponded with the importance or topicality of the issue in the energy sector. The identified important or topical issues then formed the basis for the key informant interviews, described below, that we employed to temper our own interpretations.

AN EXTENSIVE QUALITATIVE ANALYSIS OF EXISTING LITERATURE THAT RANGES FROM POLICY DOCUMENTS, INSTITUTIONAL REPORTS, JOURNALISTIC ARTICLES, AND OCCASIONAL ACADEMIC RESOURCES.

2.2 Key Informant Interviews

The consultant conducted semi-structured interviews with representatives drawn from the key players in the electricity utility sector. The interviews aimed to elicit insider perspectives on the recurrent themes and issues that we had identified from the desktop literature review. Using a generic key informant interview guide, we engaged in open-ended interviews with respondents in senior positions of the identified institutions. The interviews aimed at establishing whether gaps exist between the theoretical information harvested from the literature review on the one hand, and the practical considerations in decision-making and actual implementation, on the other hand.

The interviews were conducted with selected key informants drawn from government ministries, semi-autonomous government agencies, private sector actors, investors and associations, professional research and academic institutions, as well as civil society organizations (NGOs and CBOs). The key informants were identified by purposive sampling. However, since the research was qualitative, the consultant only used the key informative interviews to the extent that they could shed light on the findings from the literature review. As such, the source-value of the interviews was determined based on a discourse analysis of the logical persuasiveness of the responses and not necessarily on the recurrence of a particular response. Overall, the consultant ensured that the key informant interviews observed ethical considerations, including obtaining prior informed consent, allowing only voluntary participation, and assuring the key informants of confidentiality.

The consultant conducted the key informant interviews between 2nd February 2023 and 25th February 2023. Table 1 below summarizes details of the key informants based on their sectors of expertise and the purposes of their inclusion.

Table 1: Key Informants

No.	Key Informant Cluster	Institutions	Purposive Role
i]	National Government / Key Ministries	▪ Ministry of Energy; The National Treasury and Economic Planning	To provide policy positions on matters of energy, governance structures, and current economic and financial state of electricity in Kenya.
ii]	Semi-Autonomous Government Agencies; Parastatals and Public Institutions	▪ Kenya Power and Lighting Company (KPLC); Kenya Electricity Transmission Company Limited (KETRACO); Kenya Electricity Generating Company PLC (KENGEN); Energy and Petroleum Regulatory Authority (EPRA); Rural Electrification and Renewable Energy Corporation (REREC); and ▪ National Environmental Management Authority (NEMA)	To jointly and individually give insights into practical operations, spread of energy installations, and any other relevant information.
iii]	Private Sector Actors/ Investors and Associations	▪ Independent Power Producers (IPPs); Kenya Renewable Energy Association (KREA); Energy Professionals Association (EPA); Electricity Sector Association of Kenya (ESAK); Kenya Private Sector Alliance (KEPSA); and Kenya Association of Manufacturers (KAM)	Information on the role of development financing and possible financiers; possible reforms in the energy sector, and any other relevant information.
iv]	Professional Research and Academic Institutions	▪ Strathmore University; Kurrent Technologies Limited	Information on global / regional best practices, and suggestions on necessary policy reforms.
v]	Civil Society Organizations (NGOs and CBOs)	▪ Electricity Consumers Society of Kenya (ELCOS); and ▪ Energy Activists	Possible advocacy recommendations; successes, challenges and prospects of civil society advocacy in energy matters; issues on the impact of energy developments on ESG concerns, and any other relevant information.

3.0 POLICY, INSTITUTIONAL AND REGULATORY FRAMEWORK FOR ELECTRICITY UTILITY GOVERNANCE AND CIVIL SOCIETY PARTICIPATION

3.1 Legislative Framework on Electricity Utility Governance and Civil Society Space.

The Constitution of Kenya, 2010 introduced several governance reforms that gave freedom to form and join civil society groups and made public participation part of national values and principles of governance. This created an obligation on the state to encourage public participation and on Parliament and county assemblies to ensure that public participation was facilitated in all policy and law-making processes. As the supreme law for Kenya, all legislations and regulations are required to observe public participation which gives room for civil societies to participate in governance. The Constitution of Kenya, 2010 under Article 118 (b) requires public participation in every legislative process while Articles 22 and 258 provide space for public litigation. ECLOS and activist Okiya Omtatah have used these provisions to bring cases against the KPLC, especially on consumer rights issues. These provisions have provided an avenue for the participation of civil societies making them a major component of governance.

The Constitution provides under the Fourth Schedule that the National Government is in charge of energy policy whereas county governments are in charge of gas reticulation and regulation. The Constitution under Article 43 provides for economic and social rights which include the right to the highest attainable standard of health, the right to food, education and clean and safe water. The fulfilment of these rights relies on access to electricity services making universal access to electricity a derivative right. The Constitution also requires sustainable exploitation of natural resources and this includes energy resources. All these aspects provide a gateway for civil societies to advocate for and also engage the government on policy and legislative matters.

3.1.1 Historical Development of Electricity Utility Legislative Reforms

Kenya is one of the few countries in Africa to have initiated wide legislative market-oriented power sector reforms as early as the 1990s.[16] The reforms sought to break down the monopoly status of a vertically integrated government-owned utility and encourage foreign investment.[17] While the wave of reforms in the 1990s improved the technical efficiency of the power utility sector, its macroeconomic benefits were not very clear and its gains did not trickle down efficiently to the consumers.[18] This was majorly attributed to regulatory and institutional weaknesses, especially in jurisdictions that had a monopolized state-owned utility.[19]

The reforms show how Kenya has continuously amended its legal framework to promote good governance in the electricity utility sector. These changes not only sought to improve governance but also widened the space for the participation of civil societies. Reforms in the power utility sector have been experienced in three waves. The first wave began in 1996 leading to the Electric Power Act 1997 where Kenya initiated policy and regulatory reforms whose major outcomes were to separate regulatory functions from commercial activities and the unbundling of power generation from transmission and distribution.[20] KenGen assumed responsibility for power generation while KPLC managed transmission and distribution. This also came with liberalization of power generation which saw the entrance of independent power producers.

16 Catrina Godinho & Anton Eberhead ,' Learning from Power Sector Reform : The Case of Kenya,' Policy Research Working Paper < https://documents1.worldbank.org/curated/en/451561555435655366/pdf/Learning-from-Power-Sector-Reform-The-Case-of-Kenya.pdf> accessed on 27th March 2023.

17 Tooraj Jamas, Rabindra Nepal & Govinda Timilsina,' A Quarter Century Effort Yet to Come of Age: A Survey of Electricity Sector Reform in Developing Countries,' (2017) The Energy Journal, page 195.

18 Ibid

19 Ibid.

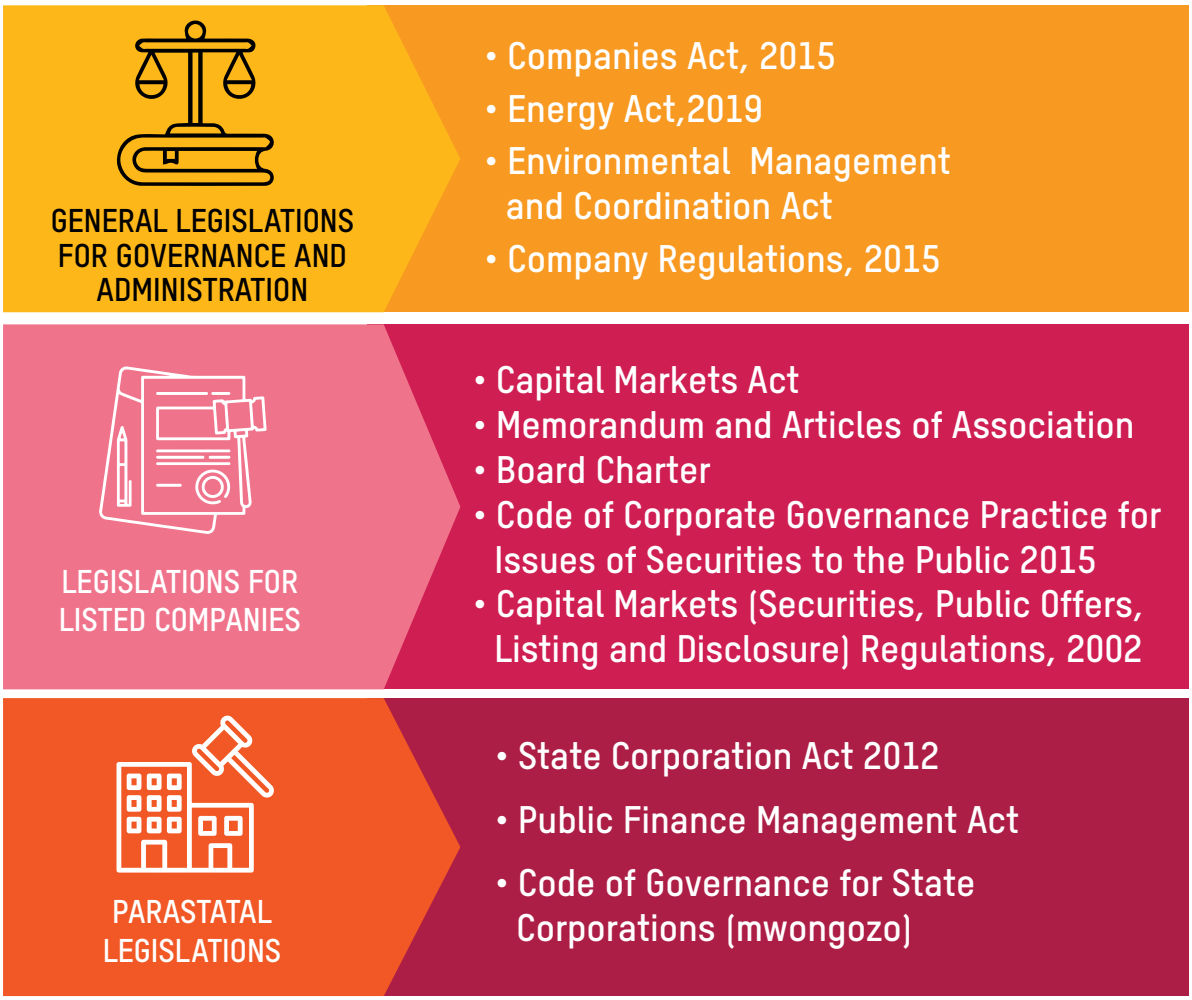
20 Ibid

The second wave of reforms started in 2002 when Kenya began partial privatization for state-owned entities such as KenGen and KPLC.[21] Although the state sold off its stake, it retained majority ownership. These measures attracted private investment into the sector which improved KPLC's operational efficiency and cost recovery. This led to the repeal of the Electric Power Act and the subsequent enactment of the Energy Act 2006.

The third wave was the enactment of the Energy Act, 2019 which introduced major reforms including further unbundling of the power utility by separating transmission from distribution. Other reforms sought to consolidate energy laws, promote renewable energy and encourage private investments in the sector. The Act increased opportunities for civil society participation as it required the Cabinet Secretary and the Energy and Petroleum Regulatory Authority (EPRA) to involve sector stakeholders before developing the national energy policy, the integrated national energy plan, national energy efficiency and conservation action plans and educational materials and curricula.[22] Civil societies such as ECLOS and ESAK have been involved in these processes where they have contributed to the policy and decision-making processes that touch on the governance of the power utility sector. The constitutional requirement of public participation allowed civil societies to participate in the reform.

Apart from the main laws in the sector, other laws were formulated that had an impact on power utility governance. These include the Companies Act (2015), the Capital Markets Act CAP485A, the State Corporations Act CAP446, and the Code of Governance for State Corporations (Mwongozo). This is in addition to the Memorandum and Articles of Association, and the Board Charter which outline the structure, composition, roles, responsibilities and functions of the company, the board and the committees. The legal framework comprises general legislations on governance and administration, legislations that were developed for listed companies and those that were for state-owned entities.

Figure 3.1: State Corporations act



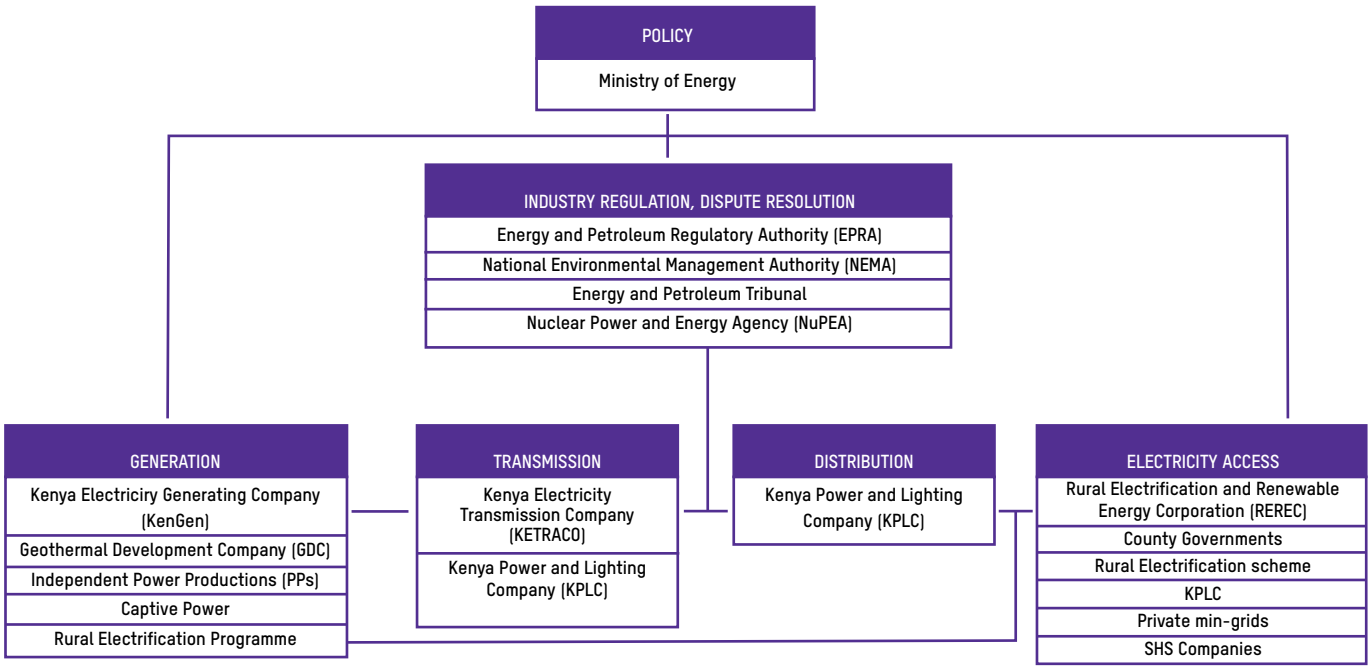
21 Ibid
22 Energy Act, Section 4,5. 10 and 201

3.1.2 Energy Act 2019

The Energy Act 2019 mandates the government to facilitate the provision of affordable energy services to all persons in Kenya. The Act was formulated as a progressive reform towards the attainment of universal access to electricity. The Act acutely focuses on creating capable, effective and accountable entities, aligning government policies on energy and creating a monitoring, evaluation and reporting mechanism that would promote the continuous development of the utility sector. As provided under Section 7(1) of the Energy Act 2019, the overall obligation of the government is to provide affordable energy services to all persons.

The Energy Act, 2019 provides for the establishment of energy sector entities and the regulation of the generation, supply and use of energy. The structure of the electricity sector is provided in the table below.

Figure 3.2: Structure of Kenya's Electricity Governance



The roles of the actors in the sector are provided in the table below.

Table 3.3: Actors and Roles in the Energy Sector

No.	Institution	Functions
i)	Ministry of Energy and Petroleum	• Setting sector policies and overseeing energy development projects
ii)	Energy and Petroleum Regulatory Authority	• Regulating the energy sector
iii)	Energy and Petroleum Disputes Tribunal	• Determines disputes and cases in the energy sector
iv)	Rural Electrification and Renewable Energy Corporation	• Undertakes the implementation of rural electrification projects, including renewable energy planning and implementation in rural areas, including off-grids
v)	KenGen	• Electricity generation
vi)	Geothermal Development Company	• Acceleration of the development of geothermal resources
vii)	KPLC	• A partly privatized distribution company and grid operator
viii)	Kenya Electricity Transmission Company Limited	• To plan, design, construct, own, operate and maintain new high-voltage electricity transmission lines (over 132kV), associated substations, and regional interconnectors that form the backbone of the national transmission grid

The Act introduced major reforms through policy and regulations to improve the governance of the electricity utility sector. Some of the provisions sought to address the financial and operational challenges facing KPLC. Some of the major developments introduced through the Act that have an impact on the power utility governance include:

1. The establishment of new entities in the energy sector.

The Act established a few institutions which included the Energy and Petroleum Authority which was given an expanded regulatory mandate in the power sector.[23] It also established the Rural Electrification and Renewable Energy Corporation (REREC). REREC was established to expand access to electricity in rural areas as well as promote renewable energy.[24] The introduction of REREC aimed to transfer the mandate of rural electrification from KPLC. Although the government provided funds for rural connectivity, KPLC incurred huge costs in operation and maintenance and it also took time before the government compensated it. The establishment of REREC was also intended to enable the government to delink the utility company from government development initiatives thereby allowing it to operate commercially. EPRA, as a regulator, is required to provide licensing to other utility companies interested in distributing power. It is also required to facilitate competition by allowing third-party access and other measures such as wheeling.

2. The creation of universal access to energy as an obligation on both national and county governments.

The Act, unlike the previous regime, made it a government obligation to provide universal access to electricity.[25] This emphasized the government's ambition under the Kenya National Electrification Strategy (KNES) and KOSAP. This was to promote initiatives by National and county governments to provide access, especially through off-grid solutions.

3. The introduction of development and periodic review of a national energy policy and an Integrated National Energy Plan.

The Act requires the Cabinet Secretary to create the National Energy Policy and the Integrated National Energy Plan.[26] The plan is to guide the government and investors on the most viable energy supply options and the most appropriate technology to meet Kenya's energy demand. This is aligned with the Least Cost Power Development Plan (LCPDP) that was established to encourage the generation of the most affordable energy. The objective was to enable Kenya to plan and track its energy needs in a manner that is inclusive of stakeholders such as the power utility companies and civil societies.

4. The introduction of a new framework for renewable energy feed-in tariff system.

This led to the Feed in Tariff Policy 2021 for biomass, biogas and small hydro projects of up to 20MW and the Auctions Policy for renewable projects larger than 20MW. This was introduced to ease the process for the small power producers, especially in areas far from the grid. The Auctions Policy was also to enhance competition through the bidding process, encourage lower prices of energy and promote transparency.[27] It also enables the government to discover the appropriate price.

5. Net metering.

The Act introduced net metering, whose regulations are currently undergoing public participation. Net metering allows consumers generating less than 1MW to feed electricity to the national grid and get credit in return. Net metering has some benefits for utility companies as it can assist to meet the load capacity in the neighbourhood, reduce the need for network upgrades and reduce congestion on power lines.

6. Regular review of the electricity market.

This measure was proposed to provide insight into the developments and trends of the electricity market to enhance competition, improve efficiency, increase reliability and security of electricity supply as well as improve the quality of service by all licensees. This was to help utility companies such as KPLC get fair tariffs for a fair electricity market.

23 Energy Act 2019, Section 9
24 Ibid Section 43
25 Energy Act 2019, Section 7
26 Ibid Section 4,5 and 6
27 Cindy Oraro,' Scaling Up : The Potential of Kenya's Proposed Renewable Energy Auctions Policy,' < https://www.oraro.co.ke/wp-content/uploads/2022/07/SCALING-UP-THE-POTENTIAL-OF-KENYAS-PROPOSED-RENEWABLE-ENERGY-AUCTIONS-POLICY.pdf> accessed on 27th July 2023.

3.2 Policy Intervention on Access to Electricity

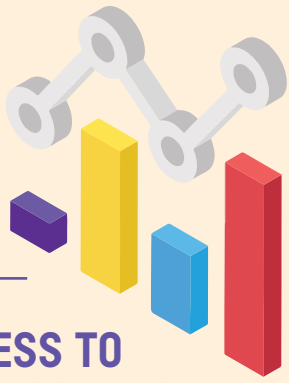
3.2.1 Kenya Vision 2030

One policy that has heavily influenced the sector is Kenya's Vision 2030, which is Kenya's development blueprint formulated in the year 2010. The blueprint provides government measures aimed at making Kenya a middle-income country by the year 2030. It identifies electricity as a major component of this goal and provides measures towards the development of energy infrastructure. It provides for the Energy Access Scale-Up Programme that seeks to promote universal access to electricity. Some of the notable achievements in electricity have been the increase of access to electricity from 2.26 million in 2013 to 8.9 million in 2023 and connecting 22, 249 public schools to the national grid. The initiatives under the policy include the Last Mile Connectivity Programme and increasing installed capacity to 5,221 MW. Currently, the installed capacity is at 3, 074 MW.

The objectives of Kenya's Vision 2030 have been captured in sector policies, statutes and regulations. Other key government initiatives in the same line include the Last Mile Connectivity Programme, Power Project, World Bank's Energy Sector Recovery Project, Power Africa and the East Africa Power Pool.

SOME OF THE NOTABLE ACHIEVEMENTS

2.26 MILLION TO 8.9 MILLION



INCREASE OF ACCESS TO ELECTRICITY FROM 2013 TO 2023

3.2.2 Gender Policy in Energy

The Energy Act recognizes the essence of the inclusion of women in the sector and requires that all appointments made under the Act be gender inclusive.[28] This ensures that women are included in policy-making, regulation and development decisions. Historically, the energy sector has been male-dominated.[29] This prompted the Ministry of Energy to formulate the Gender Policy for the sector. The latest data shows that women comprise about 35 % of the total staff in the Ministry of Energy. However, women are significantly underrepresented in technical leadership positions, where they occupy only 15% of such roles.

Even in line professions, gender representation favours men over women. This was acknowledged by the Institute of Engineers in Kenya, which includes electrical engineers. Accordingly, among registered engineers, women are only 500 compared to approximately 6,500 men.[30] Further, in the major energy corporations, the number of women in the board of directors and senior management is lower compared to men. Only KPLC had a woman board chairperson among the five main energy corporations which are KENGEN, GDC, REREC, and KETRACO. None of these state corporations had a female chief executive officer and most senior management officers were men.

35%

OF THE TOTAL STAFF IN THE MINISTRY OF ENERGY ARE WOMEN.

15%

WOMEN IN TECHNICAL LEADERSHIP POSITIONS

28 Energy Act, Section 26 (16)
29 African Development Bank,' Strengthening Gender Mainstreaming in Kenya's Energy Sector,' < https://www.afdb.org/en/news-and-events/events/strengthening-gender-mainstreaming-kenyas-energy-sector-42179 >
30 https://nation.africa/kenya/counties/concerns-over-low-numbers-of-kenyan-women-engineers-201656

Number of Men and Women in Board and Senior Management				
Organization	Board		Senior Management	
	Men	Women	Men	Women
KPLC	9	3 (25%)	9	3 (25%)
NUPEA	9	1 (10%)	8	2 (20%)
GDC	8	1 (11%)	5	4 (44%)
KETRACO	9	3 (25%)	7	2 (22%)
KENGEN	9	3 (25%)	7	3 (30%)
REREC	10	1 (10%)	25	8 (24%)

The Gender Policy seeks to mainstream gender issues in the energy sector. The policy recognizes that energy uniquely affects men and women and promotes the formulation of gender-responsive measures. The goal of the policy is to achieve gender equality and equity in the energy sector by strengthening the institutional framework for gender equality; ensuring constitutional compliance on gender; promoting gender awareness in the energy sector; integrating gender programmes; and promoting clean cooking solutions. The policy recognizes the importance of accelerating clean cooking, which is very crucial for women. This is especially motivated towards improving their livelihoods, promoting economic empowerment, and preventing the negative health effects associated with the use of fossil fuels. Civil societies can advocate for full implementation of the Gender Policy.

3.3 Other laws and Policies

Other laws and policies in the sector are provided in the table below.
Table 3.1

LEGAL INSTRUMENT	BRIEF REVIEW
Constitution of Kenya, 2010	Outlines the Constitutional rights and responsibilities for management of natural resources, including energy resources. It provides the foundation for the regulatory and institutional frameworks for the energy sector. It also establishes the constitutional right to public participation in all policy and legislative processes.
Least Cost Power Development Plan 2020-2040	This sets out the national demand forecasting, generation planning, identification of target transmission network and undertaking relevant simulations to come up with the optimal future network and estimation of costs and analysis of tariffs derived from the planned generation and transmission network. The plan is developed through a collaborative approach involving government entities and major utilities in the power sector.
Kenya National Electrification Strategy	This is a government policy paper that informs government strategy towards universal access to power.
Kenya National Energy Efficiency and Conservation Strategy	This is a government policy towards building efficiency in the power sector
Environmental Management and Coordination Act	It guides regulations on environmental protection and management, treatment and disposal of waste and pollution
Access to Information Act, 2016	It guides regulations on the manner in which access to information on activities in the energy industry can be accessed and for transparency and accountability
Land Act, 2012	It guides regulations on opening up areas for operations for energy infrastructure
Renewable Energy Auctions Policy 2021	The policy provides the framework for the procurement of wind and solar energies
Feed in Tariffs Policy 2021	The policy promotes small scale power projects such as hydro, wind and solar.

4.0 CURRENT GOVERNANCE STRUCTURE OF THE ELECTRICITY UTILITY IN KENYA

THE GOVERNANCE STRUCTURE OF ELECTRICITY UTILITY IN KENYA

As mentioned above, Kenya's utility sector is mainly characterized by one dominant national electricity power retailer, the Kenya Power and Lighting Company (KPLC). KPLC is the single off-taker having Power Purchase Agreements (PPAs) with all the generation companies, including KenGen and the Independent Power Producers (IPPs). There are other small off-grid utility companies such as the Kenya Tea Development Agency (KTDA) that supply electricity to tea factories under its regulatory mandate. Kenya has about 158 mini-grid sites that are mostly owned by the KPLC and REREC that offer off-grid solutions.[31]

Although the Energy Act supports licensing of other power utility entities and the sale of power directly to consumers, no entity has been licensed to distribute power through the national grid and the regulator is yet to formulate regulations to allow power producers to sell power directly to consumers. This includes the Wheeling regulations that can support power producers and retailers to sell power to consumers. Wheeling has been defined under Section 3 of the Energy Act as the act of allowing transmission or distribution licensees to use the transmission or distribution systems or facilities of another person for the conveyance of electricity upon payment of wheeling charges. It is expected that the wheeling of transmission and distribution systems will encourage the entry of other power utility companies.

In accordance with Section 2 of the State Corporations Act, CAP 446, KPLC is classified as a state corporation due to the government being its majority shareholder at 50.1 %.[32] Kenya's energy sector is vertically unbundled which entails the separation of generation, transmission and distribution. This was stipulated as a condition for the World Bank's funding in 1996, which required the unbundling of KPLC leading to the formation of KenGen.[33] KenGen took over generation while KPLC remained with transmission and distribution. The Energy Act 2019 supports full vertical unbundling by providing for separate licenses for transmission which is undertaken by KETRACO.

The State Corporations Act, enacted in the year 1986, is the principal statute governing the establishment, control, management, and operations of parastatals. The Act defines a state corporation to include a company incorporated under the Companies Act of which the whole or majority share or stock is owned by the government.[34] KPLC was incorporated under the Companies Act and it is currently a public limited company. It is also a listed company on Nairobi Stock Exchange (NSE) which subjects it to the Capital Markets Act. These three statutes inform the governance structure of KPLC which has a board that is elected as per its Articles of Association and the State Corporations Act. The Capital Market Act also provides rules on the structures of listed companies. The governance structure of KPLC mainly comprises the board and senior management.

The senior management comprises the Managing Director, 13 general managers and 8 regional managers whereby general managers report to the managing director. The general managers form committees to look into the policies and strategies of the company. They monitor performance and provide recommendations to the board. The regional managers manage regional units of KPLC across the country. Their duty entails managing the functions that have been devolved to the regional units.

31 EPRA, Regulatory Impact Assessment https://www.epra.go.ke/wp-content/uploads/2021/05/MINIGRID-REGULATIONS-REGULATORY-IMPACT-STATEMENT-FINAL-1.pdf accessed on 12th June 2023

32 KPLC Annual Report and Financial Statements, 2022

33 Catrina Godinho,' The Eskom Crisis Update : Where are we now" < https://energyforgrowth.org/wp-content/uploads/2023/03/The-Eskom-crisis-update_-Where-we-are-now-2-2.pdf> July 2023

34 Laws of Kenya, State Corporations Act, Section 3

The board of directors are elected by the shareholders as provided by its Board Manual. The manual requires shareholders to elect a minimum of seven members to the board and a maximum of ten members. It requires the elected directors to have a mix of skills, age, experience, gender, regional representation and team roles. It requires the board to have a balance of executive and non-executive members with at least a third of them being non-executive independent members. The Government takes most of the positions on the board with the membership of the Cabinet Secretary for the National Treasury and the Principal Secretary for the State Department of Energy. It also can elect most of the board members due to its shareholding. This gives the government a firm grip on the board in driving its agenda. This has compelled KPLC to fulfil the government's social mandate of providing universal access to power in addition to its commercial mandate to operate profitably.

The role of the board is provided for under KPLC's Board Manual which provides its roles and responsibilities including monitoring and evaluating the performance of top management. Section 4 of the Act provides for the roles of the Board which include exercising leadership, determining company purpose and value, ensuring compliance with relevant laws and monitoring and evaluation of the company's strategies. The chairperson is appointed by the Board.

At the operational level, KPLC's management is structured into thirteen functional divisions, each headed by a general manager who reports to the Managing Director. These general managers form a core management committee that considers policies and strategic measures for optimal business performance; monitors performance and makes recommendations to the board. The divisions have various departments headed by managers who coordinate the implementation of business functions.

KPLC is subject to the provisions of the State Corporations Act, the Companies Act 2015 as a public limited company and also the Capital Markets Act as a listed company. This subjects KPLC to overlapping regulations, especially under the Companies Act 2015 and the State Corporations Act. As a state corporation, the government exercises control over KPLC through the Ministry of Energy and Petroleum. This is especially on approval of annual estimates, expenditure and disposal of assets.[35] The numerous approval requirements under the Act constrain directors from making commercial decisions.[36] Successive Kenyan governments have been highly reluctant in implementing structural reforms to give KPLC more independence as it has always been considered a strategic entity, especially for political influence and source of revenue.[37]

One inadequacy or a limiting aspect of the State Corporations Act is that it does not differentiate commercial state corporations from the non-commercial ones. Although the Act allows a state corporation to be exempt from provisions that may limit its commercial activities, such an exemption must be obtained from the President.[38] The President is also limited on the scope of exemptions his or her office can give as he cannot exempt a state corporation on the requirement for approval of the borrowing and annual estimates.

There have been efforts to overhaul the State Corporations Act to provide a framework that promotes good corporate governance. One of these attempts was the Presidential Taskforce on Parastatal Reforms. The Taskforce called for the overhaul of the State Corporations Act and part of their recommendations included differentiating commercial state corporations from the non-commercial ones. This was to allow commercial state corporations to operate fully on a commercial basis, minimize their dependence on the National Treasury and remove political interference. It also sought to remove political appointments in commercial state corporations by having directors in state corporations competitively appointed through the Government Investment Corporation Limited. This would make the elect competent directors and reduce ministerial control.

The Taskforce called for further reclassification of commercial state corporations where there would be commercial parastatals that have independence to operate commercially and on the other hand have Commercial State Corporations with strategic functions. KPLC would be under this category as it carries the strategic function of power supply. The recommendations of the Taskforce to overhaul the State Corporations Act were never actualized. The government only implemented the recommendation for the creation of guidelines for corporate governance which led to the adoption of the Mwongozo, Code of Governance for State Corporations.

35 State Corporations Act, Section 11, 12 and 13
36 Kiarie Mwaura,' The Failure of Corporate Governance in State Owned Enterprises and the Need for Restructured Governance in Fully and Partially Privatized Enterprises: The Case for Kenya,' (2007) 31 Fordham International Law Review, page 57
37 Ibid Catrina
38 Ibid Section 5A

The Mwongozo, Code of Governance was formulated by the Kenyan government to improve corporate governance in state corporations. This is especially on the effectiveness of the board, accountability, transparency, risk management, disclosure, internal controls, accountability, ethical leadership and accountability. The Code borrows heavily from corporate governance best practices such as the Convention of the Organization for Economic Corporations.

Corporate governance is defined as a system by which a company is controlled and directed.[39] It is majorly concerned with the establishment of an appropriate legal, economic and institutional environment that facilitates, supports and allows businesses to thrive and maximize shareholders' value while safeguarding stakeholders' interests.[40] Good corporate governance leads to efficient, effective and sustainable corporations.[41] A good corporate governance structure leads to good corporate performance.[42] It is out of good corporate governance that companies get a structure to set their objectives and monitor their performance in achieving the objectives.[43] Although the code provided the principles for good corporate governance, it lacks the foundational aspects which were to be brought through the overhaul of the State Corporations Act.

KPLC has experienced a high turnover of the Chief Executive Officer and also board shake-ups. In Kenya's budget for 2023-2024, the government committed to structuring its governance by reducing its members to give the private sector shareholders a fairer representation to enhance performance.[44] The high turnover in management adversely affects governance which in turn affects performance. In the 2020/2021 Report on Evaluation of the Performance of State Corporations and Tertiary Institutions released in October 2022, KPLC performance was found to be good with a score of 3.16. The performance evaluation was based on the performance contract KPLC had with the government. The score showed a satisfactory performance which was below the higher categories of excellent and very good.

The governance issues faced by KPLC are not unique to it as its counterparts in Africa are also experiencing the same. Moreover, KPLC has had better performance than many of Africa's power utilities.[45] Eskom, the equivalent power utility company in South Africa, has been undergoing similar governance and leadership instabilities. The utility had a high turnover of management with 10 CEOs in the span of 10 years which is similar to KPLC which has had 5 CEOs in the last 5 years. Likewise, it has had massive financial challenges including huge debts on its balance sheet, enormous levels of irregular expenditures and was making losses.[46]

Eskom's leadership developed a long-term strategy to attain financial stability which was presented to the South African parliamentary committees of public enterprises and on Energy in 2018. The measures suggested included streamlining internal procedures and taking accountability measures such as lifestyle audits on the management. It also involved unified efforts by authorities against fraud, corruption and maladministration. This was to be achieved through the use of whistle-blowing channels, stringent procurement processes, criminal prosecutions and money recovery procedures.

In its long-term strategy, Eskom adopted a four-stage strategy which was to start by cleaning up its management to put a transparent and effective corporate governance framework, addressing the issue of irregular payments and qualified audit reports. The second stage was to implement a financial stabilization strategy to address its huge debts through various measures such as reducing capital, maintenance and operating expenditures. The third stage was efficiency optimization to enhance revenue and the final step was to position Eskom for the future. The strategy, which was presented to Parliament in 2018, has not been actualized and Eskom still suffers from unsustainably high debts and inability to efficiently supply power.[47] KPLC's East African counterparts have also experienced governance reforms which have had an impact on their governance. In Uganda, Umeme which is fully unbundled is more financially stable than KPLC and Tanzania's TANESCO. TANESCO, unlike KPLC and Umeme, is far less autonomous as the government significantly influences its management directly.

39 Report of the Committee on the Financial Aspects of Corporate Governance, Burgers Science Press, London, (1992), page 14, para 2.5< http:www.cadbury.cjbs.achios.info/report>accessed 26th July 2023

40 Principles for Corporate Governance in Kenya and a Sample Code of Best Practice for Corporate Governance, Private Sector Initiative for Corporate Governance, page 1< http:www.ecgi.org. principles_ 2 pdfs>accessed 26th July 2023.

41 Ibid.

42 Miringu Alice, Muoria Esther, 'An Analysis of the Effect of Corporate Governance on Performance of Commercial State Corporations in Kenya', (2011) 1 International Journal of Business and Public Management, page 36

43 Peter Muelbert,'Corporate Governance of Banks after Financial Crisis : Theory , Evidence & Reforms, (2009) ECGI Law Working Paper

44 Government of Kenya, Budget Statement Financial Year 2023/24, page 35 < https://www.treasury.go.ke/wp-content/uploads/2023/06/Budget-Statement-for-the-FY-2023-24.pdf> accessed on 1st August 2023

45 Eberhard, A. et al. (2018.) Kenya's lessons from two decades of experience with independent power Producers. Elsevier Utilities Policy, Volume 52, 2018, Pages 37-49, ISSN 0957-1787 Retrieved from: https://doi.org/10.1016/j.jup.2018.04.002

46 Parliamentary Monitoring Group, 'Eskom Update on Governance Challenges : Coal Power Stations , Key Performance Targets,' < https://pmg.org.za/committee-meeting/26925/

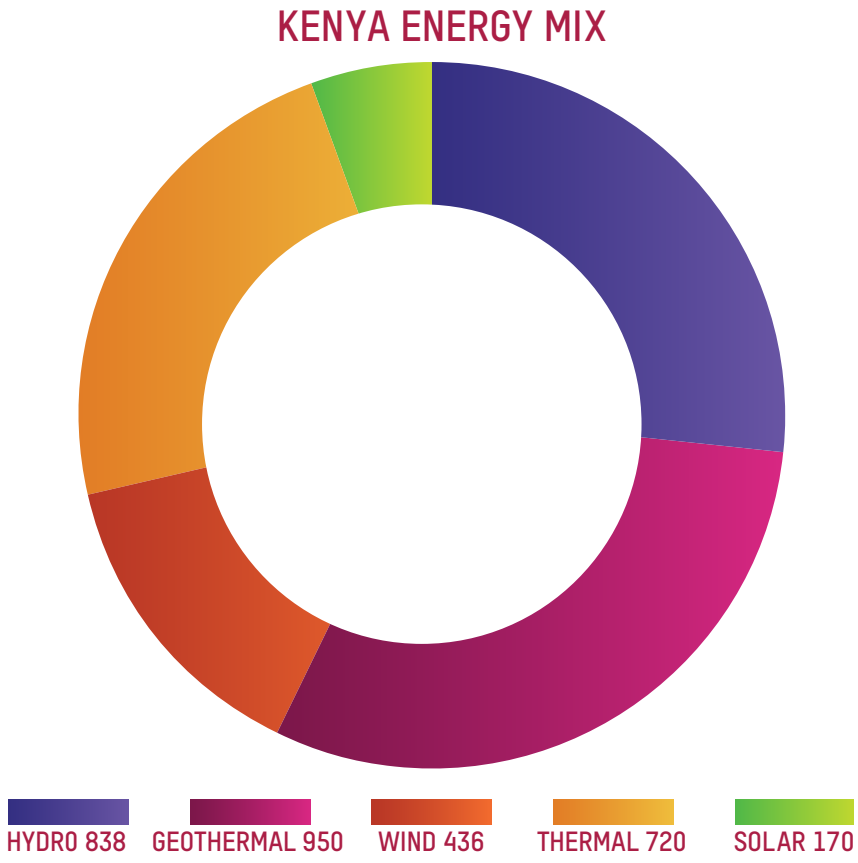
47 Catrina Godinho,' The Eskom Crisis Update : Where are we now" < https://energyforgrowth.org/wp-content/uploads/2023/03/The-Eskom-crisis-update_-Where-we-are-now-2-2.pdf> July 2023

5.0 CURRENT ECONOMIC AND FINANCIAL STATE OF ELECTRICITY UTILITY

5.1.1 Economic State of Electricity Utility

5.1.1.1 State of Demand and Supply of Electricity Utility in Kenya

Kenya's power demand had been steadily increasing over the years due to factors such as population growth, urbanization, industrialization, and economic development. The government has prioritized projects to expand and diversify its power generation capacity to meet this growing demand. It has made significant investments in the power sector to reduce its dependence on imported fossil fuels and to promote sustainable energy generation. To manage and meet these demands, there have been projects focusing on expanding the power generation capacity, improving the reliability of the power supply, and implementing policies to promote energy efficiency and conservation in both domestic and commercial sectors. As of June 2022, Kenya's electricity supply came from a total installed capacity of approximately 3,074MW, largely derived from renewable sources. The country's energy mix



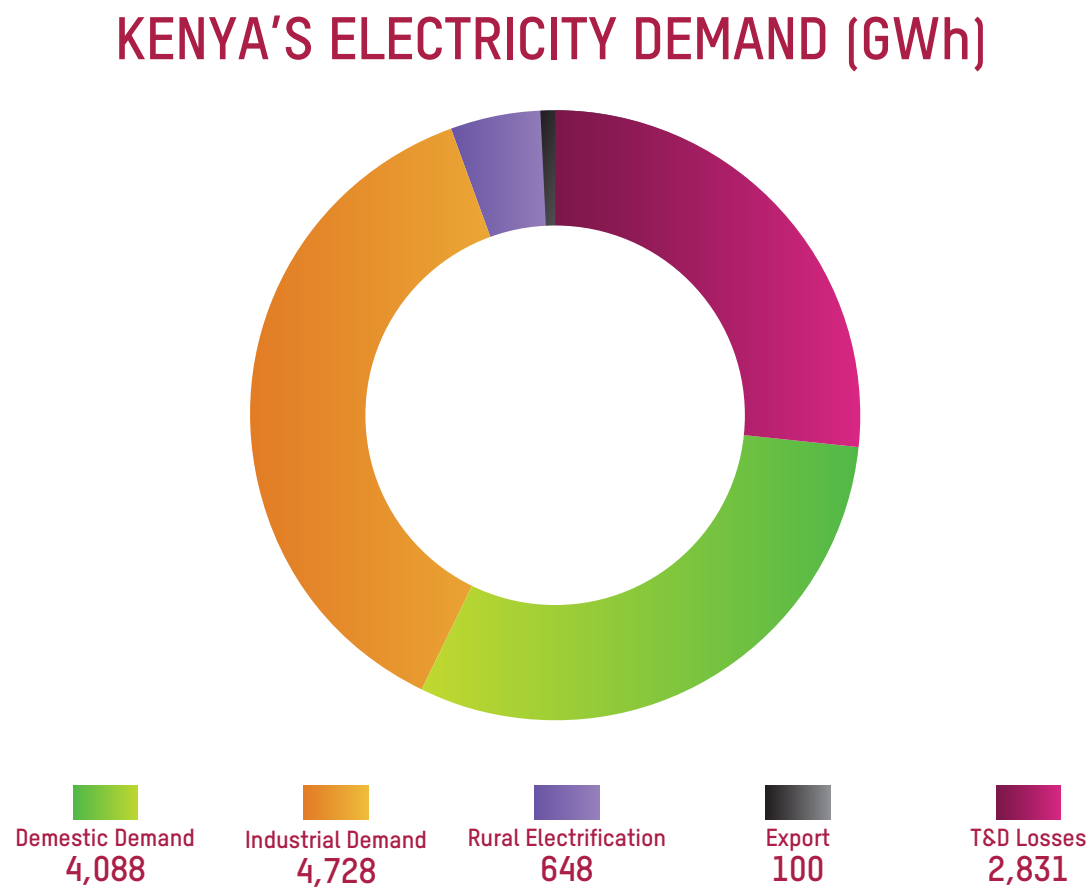
comprises hydropower which provides 838 MW, geothermal at 950 MW, thermal at 720 MW, wind at 436 MW, and solar at 170 MW.[48] KPLC has a supply network of about 84, 681 kilometres across the country. This places Kenya's energy production and network higher than the regional average.

The total domestic demand as of 2021 was 9,565.4 GWh supplied from a domestic generation of 12,126.7 GWh.[49], supplemented by imports of 288.0 GWh, while system losses, being commercial and technical losses, stood at 2,831 GWh. The demand came largely from domestic and small commercial needs, at 4,088 GWh, and industrial needs at 4,728 GWh.

48 EPRA, Energy & Petroleum Statistics Report 2022, page 8
49 KNBS Economic Survey 2022

Other needs were street lighting at 99 GWh and rural electrification at 648 MW. These details are summed up in Figure 3.1 below:

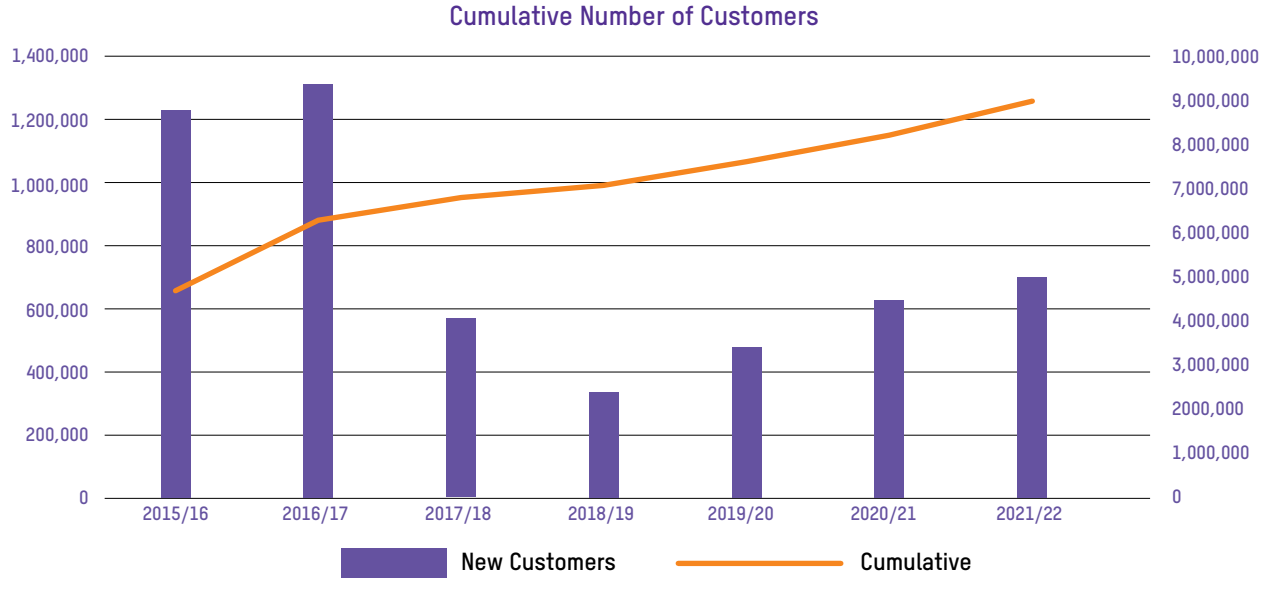
Figure 3.1: Energy Consumption in Kenya



Source: EPRA, Energy & Petroleum Statistics Report 2022

Kenya's demand for electricity has been significantly increasing with record monthly demands seen in July 2022 and January 2023. In January 2023, Kenya had its highest electricity demand ever, which was 2132 megawatts. This is against 1993 megawatts recorded in 2022. The changes in consumption patterns over the recent past are captured in Figure 3.2 below.

Figure 3.2: Patterns of Consumer Growth 2015-2022



Source: EPRA, Energy and Petroleum Statistics Report, 2022

The reasons for increased electricity increase in demand include growing consumer numbers and the expansion of electricity needs by existing consumers. There has also been increased demand as a result of the inducements made possible by demand for government programmes geared towards universal access to electricity in rural areas and public schools. All these developments have forced the government to increase supply through the generation of more electricity and the importation of power from neighboring countries such as Ethiopia. The increase in demand is reflected in the region and the entire continent with Africa having an increase of 1.5% in 2022.[50]

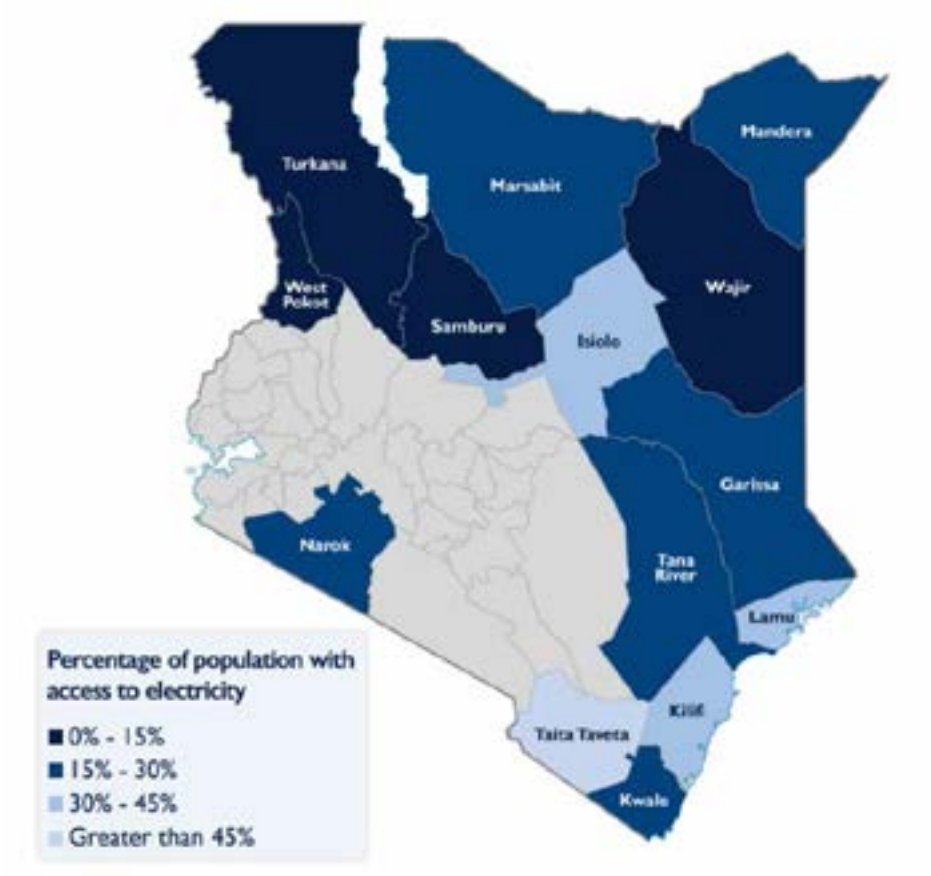
5.1.1.2 State of Electricity Access

Kenya has been making significant progress in improving electricity access, especially in rural and underserved areas. The government, in collaboration with various partners and international organizations, has been working to expand the electricity grid and increase the percentage of the population with access to electricity. The programmes carried out include the rural electrification programme under REREC, grid expansion through the Last Mile Connectivity Programme and public-private partnerships for transmission lines.

KPLC has remained the single off-taker of power from KENGEN and the IPPs and the sole retailer in the national grid. It also operates 19 mini-grids in areas that are not connected to the national grid. As such, and through several government initiatives such as the Last Mile Connectivity Project, access has been expanded to about 75% of Kenyan households.[51] KPLC has been used by the government to expand the project. It also forms part of the Kenya Offgrid Solar Project's (KOSAP) Component 1 which is to develop mini-grids for community facilities, enterprises and households. This will involve 120 mini-grids in 14 underserved counties in Kenya

Although Kenya has made great progress in improving access to electricity, some citizens still lack access to quality, affordable and reliable supply of electricity services. This is seen in the distribution of electricity under the national grid, which shows limited connectivity in some parts of the country. The most affected are about fourteen of the forty-seven counties. The fourteen counties are underserved by the national grid.[52] The map below shows the spread of electricity connectivity in the country and highlights the counties with the least connectivity.

Figure 1.2 – Kenya's access to electricity by counties



Source: Kenya Off-Grid Solar Access Project (KOSAP)

50 IEA,' Electricity Market Report 2023,' < https://iea.blob.core.windows.net/assets/255e9cba-da84-4681-8c1f-458ca1a3d9ca/ElectricityMarketReport2023.pdf> accessed on 18thMay 2023.
51 EPRA, Energy & Petroleum Statistics Report 2022, page 15 & Kenya National Electrification Strategy: Key Highlights 2018
52 Power Africa , Off Grid Solar Market Assessment Brief for 14 underserved counties in Kenya, 2020 < https://assets.ctfassets.net/nvxmg7jt07o2/3l19Dr9ZBd2UJ2lxR9Gtul/6aabde01f6be59b3f6d57fd98e6e57e9/Power-Africa-Off-Grid-solar-Kenya-Underserved-Counties-Brief.pdf>

Even in urban areas, residents of informal settlements generally lack access to electricity due to the high electricity unit costs, and lack of property rights – which are usually prerequisites for legitimate connection to the national grid.[53] This results in illegal power connections which currently stand at about 680,000 as per the Kenya Bureau of Statistics (KNBS).[54] In Kibera, an informal settlement in Nairobi, it is estimated that while 70 to 80% of the households are legally connected to the grid, most of the rest have illegal connections connection.[55] The same trend manifests in other similar settlements such as Mathare and Mukuru.[56]

Inadequate access has also had implications on gender since most of the top leaders in the energy sector are men.[57] This is contrary to the overall development agenda that recognises the importance of gender parity in all sectors of the economy. This is especially urgent since every aspect of development relies on access to energy. This is also reflected in professions in the sector, especially in technical areas such as engineering.[58] The gender disparity in positions of leadership in the energy sector has reduced the participation of women in positions where they can influence policy and government programmes.

Inadequate access to electricity has numerous effects on women, particularly those living in rural areas. One, limited electricity access affects girls' education as it makes studying challenging, hindering their ability to complete homework and study effectively. This can lead to lower academic performance and reduced educational opportunities for girls. It has more effect on girls, especially in African rural homes where they are expected to carry out household chores and still find time to study. In such societies, lack of access to modern energy sources increases the time and effort required for household chores, placing an additional burden on women and limiting their time for education, income-generating activities, and personal development. Compared to approximately 95% access in urban households, the urban-rural disparity in electricity access contributes to the educational gender gap for girls in rural areas.

It is also noteworthy that lack of electricity access impacts healthcare services, including women's reproductive health. Women in areas without reliable electricity supply struggle to access essential health services such as maternal healthcare, which places them at risk of maternal mortality. Lack of access also affects their income-generating opportunities hindering their ability to contribute to the household economy. This is particularly so since in many African communities, very few women own assets. This deprives them of opportunities to access power and thus exposes them to challenges in starting or operating businesses, accessing knowledge on and implementing modern agricultural practices such as mechanization and value addition. Ultimately, all these dynamics restrict women's ability to generate income and improve their economic conditions. Therefore, promoting gender-responsive energy policies can significantly improve the lives of women in Kenya, empowering them with better educational opportunities, healthcare access, economic prospects, and overall well-being.

5.1.3 Financial State of Electricity Utility in Kenya

The financial performance of KPLC has not been consistent having recorded net losses and profits over the last decade. Similar to many state corporations, KPLC's financial performance has been constrained with huge debts on its balance sheet. However, over the last 20 years, KPLC revenues have gradually increased from about 23 billion in 2004 to 272 billion as of 2022 which is a rate of about 10 % to 13 % per annum.[59] The revenues of KPLC come from the sale of electricity to consumers, both domestic, commercial and industrial. Its customers have also increased from 1.8 million in 2011 to 8.9 million in 2023.

KPLC's annual financial statement for 2022 showed its growing profitability. Its net income had increased by 135% from about Kshs. 1.49 Billion in the year 2020/2021 to 3.5 Billion in 2021/2022 from revenues of 272 billion. The only year it recorded a loss in the last 5 years was in 2020 but bounced back to profitability in 2021 and 2022. However, for the year 2023, it has already projected a loss of 5.5 Billion which will be its biggest loss in seven years.[61]

Although KPLC has had increasing profits, its financial cost has continued to rise. It had a 40.2 % increase in the 2021/2022 financial year. This was largely contributed by the weakening of the Kenyan currency. The slump of the Kenyan shilling has increased the cost of power making KPLC shoulder extra expenses in paying the power producers and servicing its dollar-denominated debts. This increased its finance costs in 2022 to Kshs. 12.9 billion up from Kshs. 9 billion in the previous year. These costs were passed to consumers making the cost of electricity higher.

53 Simeon Lesirma, 'Energy Access among the Urban Poor in Kenya: A Case Study of Kibera Slums,' (2016) 1 International Journal of Environmental Sciences,
54 KNBS Statistical Releases 2022
55 John, 'The Status and Challenges of Universla Electricity Connection in Informal Settlements, <Njihiahttp:// erepository.uonbi.ac.ke/bitstream/handle/11295/153974/Njihia%20J_The%20Status%20and%20Challenges%20of%20Universal%20Electricity%20Connectivity%20in%20Urban%20Informal%20Settlements%2c%20a%20Case%20of%20Silanga%20in%20Kibera%20Informal%20Settlement%2c%20Nairobi-kenya.pdf?sequence=1&isAllowed=y> accessed on 18th May 2022.
56 KPLC, Kenya Power Enlists Support of Informal Settlement Communities to address illegal connections < https://www.kplc.co.ke/content/item/3951/kenya-power-enlists-support-of-informal-settlement-communities-to-address-illegal-connections> accessed on 18th May 2023.
57 World Bank,' Kenya's Women Energy Leaders : Sharing the Importance of Women in STEM,' <https://www.worldbank.org/en/news/feature/2020/07/14/kenyas-women-energy-leaders-sharing-the-importance-of-women-in-stem> accessed on 18th May 2022
58 Ibid
59 https://www.kplc.co.ke/content/item/3920/kenya-power-bounces-back-to-post-a-kshs.8.2-billion-pre-tax-profit
60 Page 93
61 https://www.businessdailyafrica.com/bd/corporate/companies/kenya-power-now-projects-sh5-5-billion-pre-tax-loss--4313366

The utility has huge debts in its books. This comprises loans owed to lenders such as the World Bank, China Exim Bank, Nordic Development Fund and the Agence Francise de Development (AFD). However, it enjoys a moratorium from the government on repayment of Kshs. 25.12 billion by the government as the guarantor up to June 2024. On the other hand, the utility is still owed Kshs. 19.35 Billion for electricity connections under the rural electrification programme.

On 29th March 2021, the then President of the Republic of Kenya appointed the Presidential Taskforce on Review of Power Purchase Agreementswhose role was to comprehensively review the power purchase agreements entered by KPLC. The task force concluded that KPLC was incurring significant exchange losses as all its PPAs were denominated in dollars. This was in 30 PPAs with IPPs. The Taskforce called for local currency-denominated PPAs and proposed for a policy to support the same.

On its revenues, despite the increase in customers, net consumer revenues have reduced due to cheaper captive power and alternative renewable sources.[62] Nevertheless, there have been tariff increases which have increased revenue growth for KPLC enabling it to meet its costs. This was in 2008, 2011, 2013 and 2023. During these years, the tariffs were increased by 24 %, 46 % and 40 % which increased revenues by about 18 %. In terms of revenues during this period, KPLC was able to maintain profit growth up to 2019. However, after 2019 there were inadequate tariff reviews and revenues slumped in 2020 due to the Covid-19 pandemic until the review was done in 2023.

22% - 25%

LOSSES INCURRED BY KPLC BETWEEN JUNE AND DECEMBER 2022

Currently, KPLC is in a net current liability position. In 2021, the Auditor General raised concerns on KPLC's going concerns due to its current liabilities exceeding its current assets. The company had remained on negative working capital for five years consecutively, with huge costs from power purchase agreements which accounted for 52% of the total cost of sales which is bound to affect the performance of KPLC. The Presidential Taskforce on Review of Power Purchase Agreements, in 2022, called for the renegotiation of the same which is still undergoing review. It was also raised by the Auditor General that capacity charge cost was higher than the cost of energy purchased which indicated that the IPPs were operating below their capacity.

5.1.4 Productive and Allocative Efficiency of the Electricity Utility in Kenya

Efficiency is defined as the ability of an entity to minimize its input or maximize its output. In terms of operational efficiency, it can be defined as the ratio between the gained output from the input used to run the business operation. This entails reducing the wastage of resources in input such as materials and time while looking to maximize the quality of a product or service. On the other hand, allocative efficiency entails that the marginal cost consumers are willing to incur its equivalent to the marginal utility they get. Critically, the utility sector relies heavily on levels of electrification, cost and reliability.[63]

KPLC's financial statements indicate its position on productive efficiency. This is especially in terms of cost and output efficiencies. The amount owed to power producers and the development partners, which is tabulated in dollars, has resulted in huge financial costs in its books. The Report of the Presidential Taskforce on the Review of Power Purchase Agreements considered having Kenya shillings as the currency for power purchase agreements. This was intended to reduce the burden on its books of account. Coupled with the amount owed by the government on rural electrification, KPLC has not been able to maintain control of its cost efficiency.

One aspect touching on its production inefficiency is system losses. KPLC has had huge system losses which are commercial and technical losses of about 22% to 25% against EPRA's recommended levels of 19%. Between June 2022 and December 2022, it purchased 6, 671 GWh and sold 5, 104 GWh.[64] Statistics for the year show that KPLC bought 12, 131 GWh but sold 9,203 GWh. The commercial losses were mostly from illegal connections. The KPLC report showed power losses of 2,899 GWh which reflects about

62 Murefu Barasa. The problem with Kenya Power's revenue model in three graphs [Blog]. Aug 17, 2020. Energy for Growth Hub. Retrieved from: https://energyforgrowth.org/article/the-problem-with-kenya-powers-revenue-model-in-three-graphs/

63 Diego Rodrigues,' Efficiency of Electricity Distribution Companies,' (2020) 55 RAUSP Management Journal

64 EPRA , Bi-Annual Energy and Petroleum Statistics Report for the Financial Year 2022/2023,' < https://www.epra.go.ke/biannual-energy-and-petroleum-statistics-report-for-the-financial-year-2022-2023/>

24 % of the units sold which is about Kshs. 39,667,708,000. The Kenya National Bureau of Statistics (KNBS) in its report stated that about 678,684 Kenyan households were illegally connected to the grid. The technical losses occur naturally and were mostly caused by long transmission lines. KPLC, in the key informants' interviews, stated that it was working on moving to high-voltage lines and using thicker lines to minimise the losses. However, it has to balance the high costs of such infrastructure and the technical losses it can allow.

Kenya's Auditor General's Report reveal challenges to KPLC's cost efficiency, especially on high levels of capacity charges paid- for idle power from the thermal power produces.[65] There were also concerns about the impairment of loss on stalled products. Some projects had been paid for but had no activity over a long period. Another concern was that KenGen supplied 70% of the power but took 44 % of the cost of power purchase while IPPs supplied 30% but took 56% of the cost. The Auditor General's report found that KPLC had expensive PPAs and sometimes it was selling power below the cost price. For instance, buying at 195 per KWh and selling at 15.66 KWh. In the 2022 report, KENGEN supplied 63% of KPLC's supply but took 41 % of the cost of purchase while IPPs supplied 37% and took 63% of the cost of purchase. In 2022, the Auditor General also reported an increase in fuel charge cost by 137% which was not matched to the actual units bought which had increased by 68% from 940 GWh to 1577 GWh. Other concerns were over expenditure in terms of the approved budget.

The findings of the report highlighted that there was material uncertainty on KPLC as a going concern as its current liabilities far exceeded its current assets. Its current liabilities were Kshs 110,431, 165,000 while its current assets were about Kshs 66, 479.167,000. KPLC had remained in this position for six years consecutively. The company also had huge financial costs which was attributed to the weakening of the Kenyan shilling. The Presidential Taskforce on Review of Power Purchase Agreements called for a forensic audit on power purchase agreements, procurement of heavy fuels, system losses and supply chain processes.

The Auditor Report for 2021 and 2022 showed internal efficiencies in KPLC. The Auditor General noted irregular secondment of staff which was without the approval of the Public Service Commission, hiring of a managing director, failure to observe guidelines on board of directors meetings and lack of annual governance audit.[66] Key concerns raised were non-compliance with the maximum number of board meetings which raised issues on the board becoming operational thus interfering with KPLC's normal operations. This contravened compliance with the Mwongozo Code of Governance. In 2021, there were concerns about the Board of Directors and committee meetings. Notably, the Auditor General noted that the Board of Directors had thirty-three (33) full board meetings, which were way beyond the six recommended by the Office of the President. There were also eighty-nine (89) committee meetings that, in the opinion of the Auditor General, made the board an operations entity and thus usurped the operational role of the senior management. The board meetings involve the Board of Directors while committee meetings are for the committees created by the board to address specific matters such as audit. The numerous meetings resulted in KPLC paying high costs on allowances and remuneration that had not been budgeted for. This in turn affects production efficiency as it uses more resources that are not needed, without demonstrating value for money.

On the other hand, KPLC has improved its efficiency in services. KPLC power outages have significantly reduced showing improvement in the reliability of power. World Bank's, Doing Business Report 2020, showed Kenya had significantly improved the ease of getting electricity. This was measured on procedures, time and cost of getting connected to the grid. The global average time was 83 days. Kenya's average time was 97 days. UAE and Korea had the least time of 3 days. Kenya's level of power outages was 25 days annually or 600 hours per annum. South Africa had 120 hours. In Uganda, it was 18 days, in Tanzania 20 days. It is estimated KPLC is losing 5.5 % of its annual sales from the blackouts which can be valued at 3 billion. Nonetheless, reliability on supply has improved.

65 Office of the Auditor General, 'Report of the Auditor General of Kenya Power and Lighting Company PLC for Year Ended 30 June 2022. ,' < http://www.parliament.go.ke/sites/default/files/2023-03/Report%20of%20the%20Auditor-General%20and%20Financial%20Statements%20for%20Kenya%20Power%20and%20Lightening%20Company%20PLC%20for%20the%20year%20ended%2030th%20June%2C%202022.pdf>

66 Kenya Power, Kenya Power and Lighting Company Plc, Audited Financial Results for the Year 30 June 2022,'

6.0 OPPORTUNITIES FOR CIVIL SOCIETY TO ENGAGE IN UTILITY GOVERNANCE

The previous sections of the report have discussed the status of the sector in terms of its governance structure, finance, economic and efficiency aspects. This was intended to establish the role of civil societies in electricity utility governance. In the introductory part, civil society participation was defined as the involvement of non-governmental organizations (NGOs), individuals, community groups and citizen-led entities in the decision-making processes and oversight. This involves observing issues of accountability, transparency, governance and democracy in the decision-making processes.

There are notable civil societies in the electricity utility sector. However, there are few with the capacity to fully advocate for the plight of electricity consumers. One is the Electricity Consumers Society of Kenya which is fully committed to factors that affect consumers of power utilities. The organization is led by professionals in the electricity sector who understand the sector. They have been involved in matters such as tariff setting, consumer awareness, training and legal reforms. Other CSOs include ACCESS, ESAK, HIVOS and KCCWG. ACCESS has been widely involved in promoting clean energy. This is especially on policies that promote renewable energy development and sustainable energy practices. They have been involved in the creation of awareness on clean energy solutions and training of private and public organizations on aspects such as the integrated national energy plan.

In electricity utility governance, civil society participation recognizes that electricity utilities play a vital role in providing an essential service which is electricity service. It identifies that electricity service has a major impact on people's lives. This is especially on their social and economic development. Due to the nature of the service, civil society participation in electricity utility governance ensures that the operations of electricity utilities are beneficial to the community they serve and responsive to their concerns. The opportunities that exist in the sector that require civil society participation are as follows.

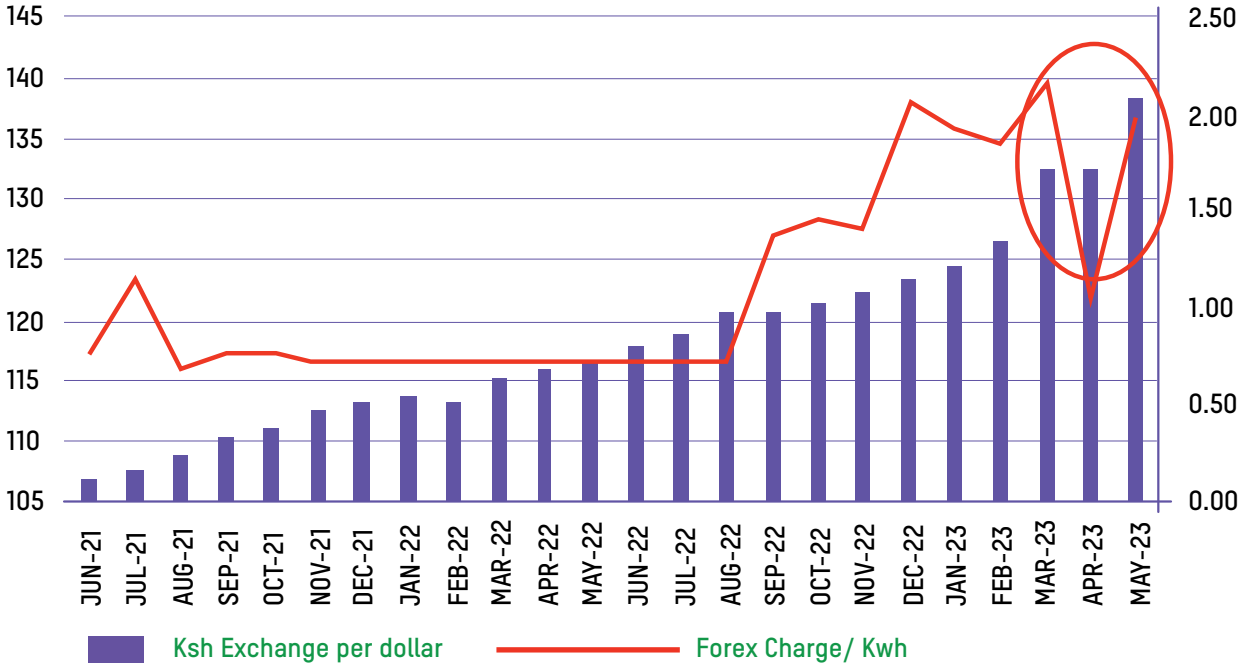
1. Monitoring Governance in the Electricity Utility Sector

Civil society organizations serve are watchdogs who can monitor the performance and behavior of electricity utilities. By monitoring the governance of the utility sector, they can help ensure that the utility industry adheres to the laws, regulations, and ethical practices.

Some civil society organizations have been widely involved in this space. This includes ECLOS and ESAK that have been involved in public forums, media, hearings before parliamentary committees and public participation events. Through their presence they have been able to engage representatives from the utility company and regulatory bodies on aspects that electricity utility governance. The most recent areas they have contributed on is monitoring the cost of electricity, the review of tariffs, and the electricity pricing system.

They have advocated for compliance to legislation and regulations on how KPLC delivers its services to the consumers. In its address to the 13th Parliament, ECLOS spoke on matters of transparency in electricity pricing and whether the pricing mechanism complied with the formulae set in regulations or was influenced by the government. In their findings, they noted that there were disparities between the current exchange rate and the forex charge in the electricity bills. While it is expected that the changes in the dollar to Kenya shilling will be commensurate with the forex charges, forex charges were found to be increasing by a higher rate compared to that of the market's dollar to Kenya Shilling Exchange rate.

Dollar Exchange Rate vs Forex Charge on Bills



Source: ECLOS Presentation to Parliament on the 27th of June 2023

Through such actions, civil society organizations contribute to creating a more transparent, accountable, and sustainable utility sector that can benefit the country. This is especially by monitoring the financial reporting of utilities like KPLC to assess how they are performing and checking their operational performances and decision-making processes. Since KPLC is a listed company, civil societies can easily access the relevant reports and highlight issues of poor governance.

Civil society can help to establish benchmarks for measuring the quality of decision-making processes in electricity utilities. Civil Society organisations can further help to develop a common language about good governance that can facilitate communication among government, regulators, business, and civil society. The combination of an operational framework and common language can then be used by civil society as an advocacy tool that creates more formal processes for the representation of the public interest with the ultimate goal of providing a space for rendering differing perspectives and options when defining a problem. This would both offer an alternative to legal challenges and also improve the operations of the sector.

2. Public Consultations and Stakeholder Management

Civil society organizations can also help regulatory bodies understand areas for improvement in utility functioning and provide feedback on the quality of service. They can provide policy recommendations, conduct data collection and analysis, and help facilitate a fair and just regulatory process. For utilities, civil society organizations can better communicate with communities and help utilities to create awareness on issues such as illegal connections, energy efficiency and complaints mechanisms. They have on ground information and can be intermediaries between communties with government and development institutions. The United Nations Sustainable Energy for All (SE4ALL) reported that its initiatives for sustainable energy would have limited impact if it lacked meaningful civil society participation.[67] These were in its initiatives in Indonesia, Kenya, Nepal, Nigeria, Zimbabwe and Nicaragua. In its assessment, the report established that Kenya had a good framework for public participation in decision-making, a fair commitment to stakeholder engagement, inclusive participation, access to information, and interlinkages with CSOs. CSOs such as Hivos and Practical Action assisted

67 United Nations, Civil Society Participation in the Sustainable Energy Initiative. Retrieved from: https://hivos.org/assets/2021/02/civil-society-participation-in-the-sustainable-energy-for-all-initiative.pdf

SE4ALL in organizing and funding all their national workshops.[68] CSOs can drive an inclusive energy process and ensure there is gender inclusiveness, collaboration in universal access to electricity services,

3. Consumer Education

Civil societies can provide accurate and understandable information about electricity services, billing, tariffs, and energy conservation practices. They can also develop educational materials such as news pamphlets, online resources such as articles and YouTube or carry out workshops to educate and spread information. Civil societies such as ACCES have educational reports on their website that can inform and educate.

4. Public Interest Litigation

Civil societies have gone to court to champion for rights of consumers and good governance in the utility sector. The organization has also filed public litigation cases on behalf of consumers. One case is ***Apollo Mboya & Electricity Consumers Society of Kenya versus Kenya Power and Lighting Company Petition Number 6 of 2018.***[69] In this case, ECLOS and Law Society of Kenya's the Managing Director challenged KPLC's billing system where consumers were overcharged. The case ended with an out of court settlement where KPLC would not disconnect power for consumers who had queried the bill, consumers had 30 days to raise billing complaints and postpaid consumers would have their actual metre reading bills weighed against estimates to determine their costs. ***Another case is Okiya Omtatah versus KPLC Petition 392 of 2018.***[70] The case was a constitutional petition and sought for declarations including to have KPLC declared a monopoly, declare that the regulator had failed in licensing other players, cancel PPA's between KPLC and IPPs, order unbundling of KPLC to reduce its dominance. Although the petition was found premature, it represents how CSOs can use public interest litigation to promote transparency and accountability in the sector.

5. Assistance in the Implementation of Programs and Complementing Energy Access Initiatives

Civil societies, through their ground mobilization techniques and expertise, can assist in the realization of energy projects for development partners and governments. They can assist to communicate energy needs and help the government to prioritize projects that address the needs of a particular community. CSOs have assisted the Kenyan government in implementing programs in rural areas such as clean cooking and complementing government efforts in access to energy. SNV, an energy entity, has partnered with civil society organizations to deliver clean cooking solutions through Voice for Change Partnership Programme. It has partnered with the Clean Cooking Association of Kenya and Grassroots Associations Operating in Sisterhood. The program is funded by the Dutch Ministry of Foreign Affairs. They can enhance community ownership of energy projects as they can help communities get energy projects and access funding for energy infrastructure such as solar home systems.[71] Improved Stoves Association of Kenya (ISAK) has contributed in delivering clean cooking stoves that is affordable. This shows how CSOs can provide linkages to actualize access to electricity and also assist to deliver it.

6. Expert Advisory

CSOs can leverage their knowledge, expertise and insights to provide informed guidance to various stakeholders, including government agencies and policymakers. Through technical assistance and advisory, CSOs can contribute valuable expertise to policy and decision making processes. CSOs can achieve this by giving input in the formulation of policy and regulations, advising lawmakers, providing technical advice on complex technical issues, research, capacity building and independent audits. ACCESS, ESAK and ECLOS have been participating and giving their views on draft regulations presented by EPRA.

Other opportunities for civil society participation include facilitating the resolution of conflicts between utilities and communities, especially in cases where energy projects might have an impact on environments or livelihoods. They can also promote the adoption of renewable energy sources and sustainable practices within the electricity sector. They can advocate for a transition away from fossil fuels and the promotion of clean energy technologies.

68 Ibid
69 Apollo Mboya & another v Cabinet Secretary of the National Treasury & 6 others [2019] eKLR. Retrieved from: http://kenyalaw.org/caselaw/cases/view/176422/
70 Okiya Omtatah Okoiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others [2020] eKLR. Retrieved from: http://kenyalaw.org/caselaw/cases/view/202018/
71 Bernard Buok, The Role of Civil Society Organizations in Low Carbon Innovation in Kenya,' (2015) Innovation and Development Journal

7.0 BEST PRACTICES IN UTILITY GOVERNANCE: LESSONS FOR KENYA

As demonstrated in the previous sections analyzing electricity utility governance, there are gaps that need to be addressed to promote universal access to electricity. This entails looking at practices in the electricity utility sector that can be defined as effective in building good corporate governance. Further, this assessment entails setting a standard of excellence in a particular area based on evidence, experience and demonstrated success in a given practice. Best practices are often identified through research, analysis, and observation of successful examples in various contexts. Adopting best practices can lead to improved performance and enable better decision-making. However, best practices are not adaptable to all scenarios and must be tailored to fit the needs of a country and its goals.

The study selected some states in establishing best practices. It selected jurisdictions from developed jurisdictions which include Norway, Finland, Iceland and Sweden. It also selected some countries in Africa namely Cameroon, Ghana, Egypt, Uganda and South Africa. The selection was based on the fact that they are African states that have experienced similar challenges to Kenya. The study also considered India as a study on access to electricity focusing on rural electrification. The areas of examination for best practices centered on private sector participation, independent regulation, restructuring or unbundling, transparency and accountability.

Poor financial performance of electricity utilities in developing countries in the early 1980s prevented many of these Countries from accessing capital markets. This was because many of these countries were perceived to lack creditworthiness, worsened by institutional governance weaknesses. Such factors undermined any meaningful economic and financial sustainability of the Electricity Supply Industry (ESI).[72] To address these growing challenges, many countries implemented several reforms to promote good governance.

For instance, Norway, Sweden and Iceland have 100% access to electricity with 100%, 88 and 83 clean cooking respectively. Similarly, Egypt has 100% access to electricity and clean cooking, while South Africa has 89 % access to electricity with 88 access to clean cooking but with 10% renewable energy in its energy mix. On the other hand, Ghana had 86 % access to electricity but low renewable energy of 40 % in its energy mix and 30% access to clean cooking. Cameroon has 65% access and 23 % access to clean cooking and 79 % of its electricity is from renewable sources. The best practices that Kenya can learn from are in the areas discussed below.

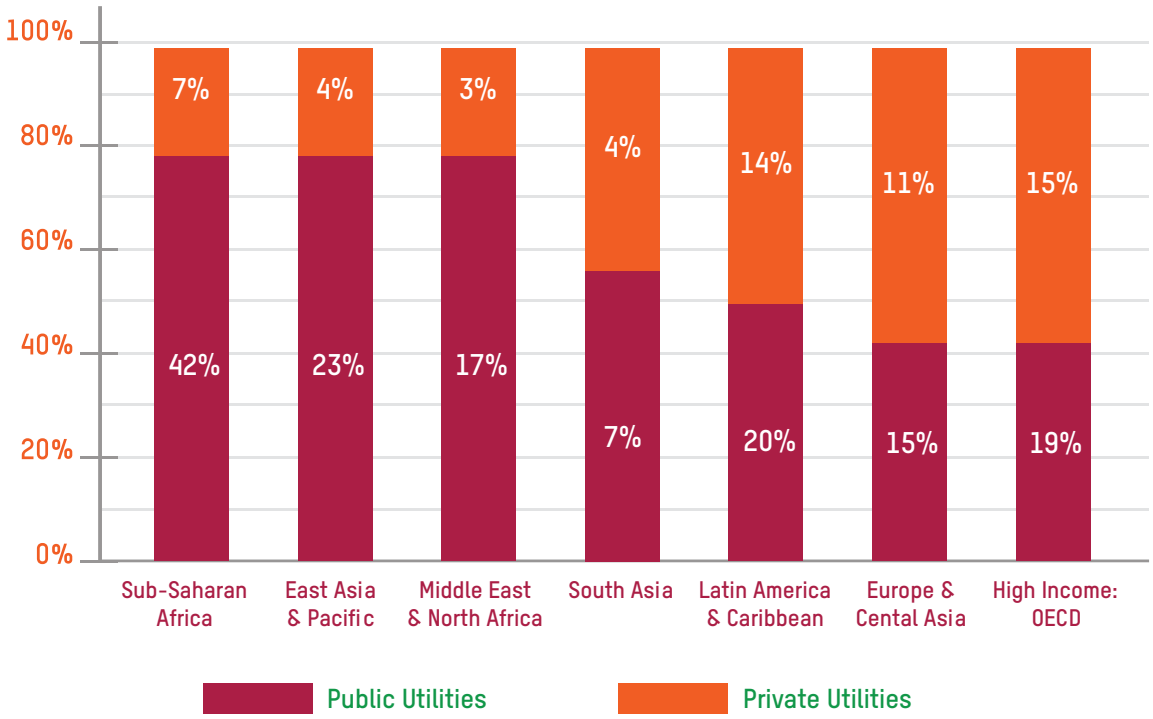
i) Privatization and Private Sector Participation (PSP)

Privatisation involves the transfer of ownership from the government to private investors in exchange for shares/ equity in the commercial entity. The goal of privatization is often to increase efficiency and competitiveness in the energy market, attract private investment, and reduce the burden on government finances. The electricity sector, especially in developing countries, has been undergoing privatization, deregulation and liberalization.[73] Since the late 1990s, privatization has been believed to address the challenges of state-owned entities which are believed to be congenitally inefficient. Privatization is believed to create better incentives for the management and thus promote performance, promote greater accountability, and provide clear and unequivocal targets which is intended to maximize shareholder value and reduce the financial constraints that usually face state-owned electricity utility companies.[74] However, privatization has not always worked in the power sector. Countries such as Pakistan, have managed to privatize generation and not distribution and transmission. Privatization in power distribution has equally not demonstrated success in developing countries.

72 Gratwick, K. N., & Eberhard, A. (2008b). Demise of the standard model for power sector reform and the emergence of hybrid power markets. Energy Policy

73 Paul Stevens.' Energy Privatization: Sensitization and Realities,' (1997) 23 Journal of Energy and Development,

74 Ibid



Source: World Bank's Doing Business

Regardless of whether utilities are public or private, it is quite noticeable that power utility service has been improved in both sectors.[75] Access to electricity in developing states has improved even with state-owned power utilities. Aspects such as power outages have mostly been associated with production capacity rather than the ownership structure of the electricity utility company. Thus, this shows that the solution does not lie in privatization but in deregulation and liberalisation to allow private sector participation thus creating competition and promoting efficiency. Many utilities have a mixed ownership structure between the public and the private sector. Public-private partnerships as opposed to having fully private or public ownership may be more conducive to utility performance.

Norway is one of the countries in Europe that has the highest private participation in the power utility sector with high levels of power trade.[76] It is fully vertically integrated with companies designated as trading or generating companies. However, it has shifted from the collaboration of vertically integrated utility companies to create an international market where power is traded. This is also practised in Finland and Sweden. All these states at one time had an oligopoly structure with dominant state-owned entities before they opened to international markets for power. Africa has four regional power pools and there have been efforts to connect the four regional power pools to create an African Power Market.[77]

The state largely owns the generating sector while distribution is full of private companies. The grid is largely owned by the central government but by municipalities and private companies. In terms of power distribution, there are power trading companies which encourage competition. It has an international power pool to balance costs across different regions, promote operational efficiencies in distribution, and efficiently develop the power sector. Kenya introduced the Renewable Auctions Policy which introduces competition in the purchase of power. This introduces a market-based structure in Kenya similar to power trading jurisdiction and encourages private sector participation.

Private sector participation has been put forward to change managerial incentives towards profits, cost control and customer orientation. Without unbundling, privatization could entail the creation of a private monopoly electricity company. In many developing countries, the performance is so poor that it would be hard to attract bids for the entire utility.[78] In Cameroon, privatization created a private

75 Ahmad Alkhuzam, Jeaan Arlet and Silvia Lopez, 'Private Private versus public electricity distribution utilities: Are outcomes different for end-users? World Bank Blogs < https://blogs.worldbank.org/developmenttalk/private-versus-public-electricity-distribution-utilities-are-outcomes-different-end-users> accessed on 6th September 2023

76 World Bank, Public Policy for Private Sector, Internnational Power Trade,' < https://documents1.worldbank.org/curated/en/674141468746743919/pdf/19063-Replacement-file-171CARLS.pdf>

77 AfronomicsLaw,' Journeying Towards an African Electricity Market " An International Economic Law Perspective, < https://www.afronomicslaw.org/category/analysis/journeying-towards-african-electricity-market-international-economiclaw#:~:text=This%20power%20pool%20currently%20has,lack%20of%20adequate%20transmission%20interconnectors.>

78 Eberhard, A., & Dyson, G. (2019, September 25). Revisiting reforms in the power sector in Africa. African Development Bank Group

monopoly with American Electricity Services being a natural monopoly in charge of generation, transmission and distribution.[79] The outcomes of privatization can vary as it can also lead to increased prices for consumers, reduced access to electricity in some areas, and decreased investment in renewable energy sources.

ii. Commercialization

Commercialization of the electricity utility aims to increase efficiency, lower costs, maximize profits and improve the quality of service for customers while also maintaining reliable and affordable electricity service to customers. [80] It aims to transform the utility into a separate legal entity, from the ministry and government, operating as a company with associated rights and obligations under the governance regulatory structure of the Company's Act.[81] This separate legal entity has a defined shareholding, transacts independently of the line government, assumes an independent identity, and has a diversified ownership portfolio.[82] The Company's Act further enables the corporatized utility to independently undertake choices in managing budgets, borrowing or accessing capital markets, earning commercially competitive returns on equity capital, and having the autonomy to manage procurement, labour employment, payment of taxes and dividends.[83] Hence, such a move represents progress towards cost recovery in pricing, metering, up-to-date maintenance checks, revenue collections, incorporating globally recognized accounting best practices, as well as subsidy accountability.

Chile introduced market-based reforms in the 1980s and 1990s, transitioning from a state-controlled electricity sector to a competitive market. The reforms encouraged private investment, increased generation capacity, and led to improved reliability and reduced costs for consumers. Countries like Norway, Sweden, Finland, and Denmark commercialized by establishing the Nord Pool electricity market, one of the world's first international electricity markets. The cross-border market allows electricity to be traded and transmitted between participating countries, promoting efficient resource utilization and competition.

Good corporate practices, particularly regarding human resources and financial discipline, were associated with improvement in electricity utility performance and were more prevalent among commercialized utilities.[84] Broadly, governance scores tend to be systematically higher for private utilities, falling in the 60–90% range, compared to 50% for public utilities because of improved managerial focus, increased transparency and accountability.[85] Commercialization and corporatization of an electricity utility further allow for greater alignment of regulatory incentives corresponding to the level of investment, cost of service and efficiency levels, as well as to managerial incentives.

ii. Restructuring and Unbundling

Unbundling is the process of separating the different functions of an electricity utility into different units. This essentially involves separating the generation, transmission, distribution, and supply functions into separate units to promote competition and reduce the monopoly power of a vertically integrated utility. Unbundling leads to increased efficiency and lower prices for consumers and is often implemented to promote competition and improve the functioning of electricity markets. Vertical unbundling entails breaking the value chain from one state-owned monopoly into different entities which can be fully or partially owned by the government or fully privatized.[86] These entities are generation, transmission, distribution and supply.

In Africa, only about ten countries have partially or completely unbundled the electricity sector. These include Kenya, Algeria, Egypt, Nigeria, Angola, Ghana, Sudan, Uganda, Ghana and Ethiopia. In most instances, generation, transmission and distribution have been separated for operations, but they remain commonly owned under a state-owned entity.[87] Unbundling allows the possibility of introducing more competition in the market, between generators and distributors, as well as among them. This provides a further push to improve efficiency since lower costs can be used to increase market share as prices are lowered to be at par with rivals.[88] Through this, end users benefit from the change in market settings. In Kenya, generation has been unbundled, leaving transmission and distribution vertically integrated. This has thus allowed KenGen, the power generator, to operate on a commercial

79 Eniola Victor,' Privatization of Electricity Service Delivery in Developing Nations: Issues and Challenges,' (2015) International Journal of Built Environment and Sustainability
80 Foster, V., & Anshul, R. (2019, September 10). Rethinking power sector reform in the developing world. World Bank: Understanding Poverty,
81 Foster, V., & Anshul, R. (2019, September 10). Rethinking power sector reform in the developing world. World Bank: Understanding Poverty,
82 Gratwick, K. N., & Eberhard, A. (2008b). Demise of the standard model for power sector reform and the emergence of hybrid power markets. Energy Policy
83 Understanding Structural, Governance and Regulatory Incentives for Improved Utility Performance: A Comparative Analysis of Electricity Utilities in Tanzania, Kenya and Uganda by Peter Rwakifaari Twesigye
84 Eberhard, A., Gratwick, K. N., Morella, E., & Antmann, P. (2016). Independent power projects in Sub-Saharan Africa: Lessons from five key countries
85 Foster, V., & Anshul, R. (2019, September 10). Rethinking power sector reform in the developing world. World Bank: Understanding Poverty
86 Catrina Godinho,' Learning from Power Sector Reform : The Case of Kenya ,' < https://documents1.worldbank.org/curated/en/451561555435655366/pdf/Learning-from-Power-Sector-Reform-The-Case-of-Kenya.pdf> accessed on 25th May 2023.
87 Eberhard, A., & Dyson, G. (2019, September 25). Revisiting reforms in the power sector in Africa. African Development Bank Group
88 Foster, V., & Anshul, R. (2019, September 10). Rethinking power sector reform in the developing world. World Bank: Understanding Poverty.

basis. Unbundling has also enabled easy market entry for more independent power producers.

iii) Regulatory Independence

Another best practice in electricity utility governance globally involves the establishment of an independent regulatory entity that oversees the electricity sector, operates without political interference, and has the authority to enforce regulations and standards. The purpose of regulatory independence is to ensure fair pricing, tariff setting, safety standards, and quality of service in the electricity sector. With an independent regulator, electricity utilities can be held accountable for their omissions and commissions, and decisions made by the regulator are not influenced by political or commercial interests. This ultimately helps to ensure that the interests of the end consumers are considered and protected.

In Kenya, the Energy and Petroleum Regulatory Authority (EPRA) and its predecessors (Energy Regulatory Commission and Electricity Regulatory Board) have, for close to twenty years, managed to conduct about only three reviews with minimal changes in tariff prices. In the latest tariff review, KPLC sought an increase in the tariff prices on the basis that income from electricity had largely remained the same while revenue requirements had increased. These were the total revenues it required to cover its costs, especially for domestic consumers. However, the government has on numerous occasions prevented the actualization of full tariff reviews.[89] In 2023, the government sought to reduce tariffs, especially for low-income earners and manufacturers.[90]

Interference of the government in influencing tariffs is one form through which political interference affects the utility industry. The delinking of regulatory authority from political decision-makers to an independent regulator enables the development of the expertise needed to resolve technical regulatory matters. It also helps to move towards information symmetry between the agent and principals (government), while still minimizing the information rents enjoyed by utilities.[91] The regulation also enables monitoring of the performance of private agents to minimize information asymmetry and other conflicts of interest since certain actions of utilities cannot be ordinarily observed by the regulator who only sees the outcome.[92]

The establishment of an independent regulatory entity is the only reform measure adopted in most electricity sectors in Africa. Yet, many countries favour regulatory reform as a solution to improve oversight regulatory procedures and for transparency in decision-making. Establishing independent regulation tends to create an equitable, rules-based playing field for electricity service providers, consumers, and private operators through the establishment of clear rules and mechanisms to oversee the sector and for spelling out cost-reflective tariffs for utilities.

A Electricity Regulatory Index survey conducted by the African Development Bank in 2020 ranked, for the third time in succession, Uganda as the best-performing electricity utility regulator on the African continent, followed by Tanzania and Kenya in 2020. This is an indication that Kenya is on the right trajectory regarding regulatory independence, although in practice the government still asserts some authority over the regulatory entity.

iv) Transparency and Accountability

Transparency and accountability in an electricity utility governance are also two major critical components. Transparency in governance thrives when there is an open and accessible channel of decision-making processes and information related to the operations and management of the utility are readily accessible and available. This can be achieved through accurate and transparent financial reporting, incorporating risk management practices, and availing critical information that stakeholders, including customers, regulators, and investors required to make informed decisions.

Accountability on its part envisages that the electricity utility managers and decision-makers act in the best interest of the sector stakeholders and are answerable for their actions and inactions, which in itself includes being solely responsible for the utility performance, ensuring compliance with regulations and standards, and being responsive to stakeholders needs.

Kenyan electricity utility is lacking to a greater extent in transparency and accountability. It could greatly benefit from incorporation of the two components in its governance to ensure that the utility is providing reliable and affordable service, while also protecting the public interest which can be achieved through clear governance structures, independent oversight mechanisms, and effective regulatory frameworks.

v) Stakeholder Engagement

Stakeholder engagement is also a best practice in electricity governance. Stakeholder engagement involves considering the interests and perspectives of key stakeholders in

89 Godinho, C., & Eberhard, A. (2019b). Learning from power sector reform: The case of Kenya.
90 https://www.president.go.ke/president-ruto-government-to-review-electricity-tariffs/
91 Eberhard, A. (2006). Infrastructure Regulation in Developing Countries: An exploration of hybrid and transitional models. Retrieved from: https://regulationbodyofknowledge.org/wp-content/uploads/2013/03/Eberhard_Infrastructure_regulation_in_developing_countries.pdf
92 Pardina, M. R., & Schiro, J. (2019). Taking stock of economic regulation of power utilities in the developing countries: A literature review.

electricity utility governance. These stakeholders include customers, employees, investors, regulators, civil society, community groups, and environmental organizations, among others. The goal of stakeholder engagement is to ensure that the utility is accountable to its stakeholders and that its decisions and actions align with their priorities.

By engaging in effective stakeholder engagement, the Kenyan electricity utility sector can encourage better decision-making, improve public trust in the utility, and increase support for its policies and initiatives. This participatory approach can also help to identify and address potential risks and challenges in the utility's operations and find solutions that benefit all stakeholders.

vi) Competition and Market Liberalization

Competition and market liberalization refer to the process of opening up the electricity sector to private sector participation and creation of a competitive environment. The process involves transforming a traditionally regulated and monopolistic electricity sector into one that encourages private sector participation, competition, and market-driven outcomes. This includes unbundling the power sector, creating wholesale and retail markets, preventing market manipulation and moving from regulated tariff system to market based one.

This process can lead to increased efficiency and better prices for consumers. In a liberalized market, the role of government is often limited to that of a regulator, setting rules and standards for the market to ensure fair competition. Market liberalization can result in the emergence of new electricity service providers, increased investment in the sector, and improved technology. However, it can also lead to the loss of public control over the sector and decreased reliability. The success of market liberalization depends on a number of factors, including the structure of the market, the level of regulation, and the level of competition.

The purpose of competition is to promote efficiency and innovation by creating competitive pressures among service providers. When multiple companies compete simultaneously among themselves for consumers, a market discipline is created, resulting in the pressure to keep costs low to efficient or optimal levels as well as to improve and innovate with regard to service quality.[93]

Although some African countries, Kenya included, have embraced competition of actors in the energy sector, these countries have only moved as far as introducing Independent Power Producers, with much more limited adoption of the Single Buyer Model.[94] Notably, if well managed, competition and private sector participation in the form of IPPs can result in greater investment choices and attraction of efficient technologies[95] such as auctions for renewable energy, including hydro, solar PV and wind. [96] Indeed, competition can help to open capital investment flows in the Kenyan power sector.

vii) Investment in Infrastructure and Technology

Investment in infrastructure and technology plays a crucial role in electricity utility governance, as it helps to improve the reliability, efficiency, and sustainability of the system. In a well-functioning electricity market, private-sector investment can drive innovation and lead to the deployment of new technologies. Governments can also encourage investment in the sector by providing incentives, such as tax credits, subsidies, or grants, or by providing stable and predictable regulatory frameworks. Investment in electricity infrastructure can include building new power plants, upgrading existing ones, and constructing transmission and distribution networks. Investment in technology can also entail research and development of new energy sources, energy storage systems, and smart grid technologies, among others.

In Kenya and in other developing countries, investment in infrastructure and technology can be a challenge due to high financial costs and lack of financing options. However, public-private partnerships can leverage private sector expertise and investment to build and improve the power system. Overall, investment in infrastructure and technology is essential for ensuring a reliable, efficient, and sustainable electricity system, and is a key component of effective electricity utility governance.

viii) Efficient Distribution and Transmission Systems

Efficient distribution and transmission of electricity is crucial for the effective governance of electricity utilities. This includes reliable and safe delivery of electricity from the power generation source to the end user, with minimal losses and outages. This can be achieved through proper maintenance and upgrading of the transmission and distribution infrastructure, implementation of modern technologies such as smart grid systems, and adoption of industry best practices. Effective governance also involves effective regulation and market design to ensure fair pricing, access to electricity and protection of consumers.

93 Foster, V., Witte, S., Banerjee, S. G., & Moreno, A. (2017). Charting the diffusion of power sector reforms across the developing world
94 Foster, V., Witte, S., Banerjee, S. G., & Moreno, A. (2017). Charting the diffusion of power sector reforms across the developing world
95 Vagliasindi, M., & Besant-Jones, J. E. (2013). Power market structure: Revisiting policy options
96 Ibid

ix) Employee Training and Development

Employee training and development is an important aspect of electricity utility governance. It helps ensure that employees have the necessary skills and knowledge to carry out their duties effectively and efficiently. This can include technical training on equipment and systems, safety training, and customer service training. Regular training and development opportunities also help keep employees up to date with industry advancements and best practices, which can benefit the utility and its customers. In addition, investing in employee training and development can also improve job satisfaction and employee retention. Effective governance in this area can help ensure that the electricity utility has a highly skilled and motivated workforce, which can contribute to its success and reliability.

From the foregoing, the best practices in electricity utility governance that Kenya can borrow from other countries include independent regulation, fully unbundling, employee training and development, transparency and accountability in decision-making, effective stakeholder engagement, commercialization and market liberalization, and a focus on long-term planning and investment in renewable energy sources. These practices have been proven to result in efficient, reliable, and sustainable electricity supply, which is essential for socio-economic development. By adopting these best practices, Kenya can create an ESI that provides reliable and affordable power to its citizens, supports economic growth, and contributes to the country's transition to a low-carbon economy.

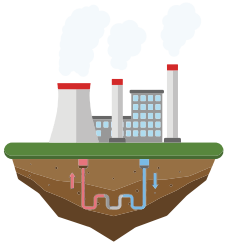
Studies have shown that countries that have implemented best practice measures have seen much improved performance of all aspects in the governance of their electricity utilities. It is encouraging that the government has recognized the essence of embracing best practice measures as these have a role to play in our current electricity utility governance system. In the 2023 Draft Budget Policy Statement, the government recognises that one of the key contributors to both the cost and quality of power is the aging transmission and distribution network and that the investment required to upgrade the network is considerable, more so in the difficult financial situation that the country is in.

To improve reliability and bring down the cost of power, the government commits to mobilize the resources needed to revamp the transmission and distribution network; accelerate geothermal resources development; and develop Liquified Natural Gas (LNG) storage facility in Mombasa, with a view to phasing out heavy fuel oil (HFO) from the power generation portfolio recognizing that this will contribute to meeting Kenya's emission reduction commitments. The government also commits to enforce transparency and public accountability of the electricity sector requiring EPRA to publish quarterly system, financial and operational performance reports. Further, the government commits to delink development initiatives from KPLC and support the company to operate on commercial principle and to also institute policy, regulatory and financing framework for off-grid community-owned development projects (mini and micro-grids).

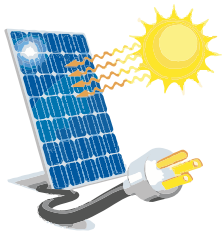
8.0 ROLE OF UTILITIES IN RELATION TO CLIMATE CHANGE AND ENERGY TRANSITION.

The success of energy transition in the Kenyan relies on meeting the constitutional and policy objectives which include achieving sustainable development, increasing energy access, and reducing greenhouse gas emissions. Kenya has actively worked towards reducing its reliance on fossil fuels and increasing use of renewable energy in its power sector. This has been seen through a number of measures including renewable energy developments, energy efficiency measures and formulation of supportive policies. With its significant renewable energy potential, mainly in geothermal, wind, solar, and hydroelectric power, Kenya has made substantial progress in the renewable energy sector in a number of ways including:

1.



SIGNIFICANTLY SCALING UP ITS GEOTHERMAL POWER THROUGH GDC AND KENGEN.



2.

SOLAR POWER EXPANSION THROUGH LARGE-SCALE SOLAR PROJECTS SUCH AS THE 50 MW GARISSA SOLAR POWER PLANT.

3.

DEVELOPMENT OF WIND FARMS SUCH AS 300 MW LAKE TURKANA WIND POWER PROJECT.

4.

EXPANSION OF MINI-GRIDS AND OFF-GRID SOLUTIONS

There has also been policies and regulations to promote energy transition by encouraging private investment in renewable energy projects. This includes the Feed in Tariff Policy, 2021 which seeks to promote power generation from renewable energy sources for small hydropower projects of up to 20MW. The policy guarantees power producers a pre-determined tariff for 20 years. There is the Renewable Energy Auctions Policy 2021 which provides a competitive process to obtain a generation license for all solar and wind projects as well as hydropower projects above 20MW. The policy aims to provide competitive pricing that is aligned to the National Integrated Energy Plan and the Least Cost Power Development Plan (LCPDP).

From interviews with key respondents within the firm, it emerged that KPLC has spearheaded Kenya's energy transition by promoting the use of renewable energy even at the national grid. In this regard, KPLC has enhanced its purchase of renewable energy while simultaneously reducing power purchases from non-renewable sources. It is also noteworthy that KPLC has deployed smart grid technologies, advanced metering infrastructure, and other grid optimization measures as well as demand-side management programmes which promote energy efficiency and conservation among electricity consumers. Besides, the company is involved in managing the demand side management programmes that seek to reduce energy wastage, encourage energy-efficient practices, and raise awareness of the benefits of energy conservation.

KPLC has also invested in research and development efforts to explore innovative technologies and solutions for a more sustainable energy system. This includes studying emerging energy technologies, evaluating their feasibility, and piloting new initiatives to advance the energy transition in Kenya. KPLC also actively engages with government agencies, regulatory bodies, and industry stakeholders to advocate for supportive policies and regulations that promote renewable energy, energy efficiency, and low-carbon solutions. The interviewees also mentioned the promotion of clean cooking initiatives such as the adoption of electric cooking as a clean and efficient alternative to traditional cooking methods and conducting awareness campaigns and customer education programs to promote energy efficiency measures leading to clean cooking technologies.

9.0 CONCLUSION

Based on the analysis in the report, the report has identified that Kenya has made significant progress and reforms in the governance of its utility sector. There have been significant policy and regulatory reforms towards building an electricity utility sector that promotes universal access to power. The reforms have provided civil society with opportunities to participate in electricity utility governance, especially through public participation, monitoring, expert advisory, policy and legislative review lobbying and public interest litigation. It is also noted that there has been increased participation of civil societies over the years in assisting governments and development partners in expanding access to energy.

The study has established that the Energy Act, 2019 has created a strong regulator, EPRA, to oversee good governance and open up the sector to competition. The policy and regulatory reforms have also put a lot of focus on transparency, accountability, public participation and technology which are crucial to good governance in the sector. However, although the Act is transformative, a lot of regulations are yet to be actualized as they are still in the draft stage. This has derailed some reforms such as wheeling, the establishment of a system operator and net-metering regulations.

On matters of gender inclusivity, it is clear that Kenya's power utility sector is not inclusive. Women are very few in positions of leadership and are also in the profession and as such they have not been able to adequately influence policy and legislation. Many boards, despite being state corporations, have not met the two-thirds gender rule. Thus, the contribution of women in the sector is very low with women only making around 20-25 % in leadership.

An analysis of KPLC shows that it holds a dominant position in the electricity supply market with significant monopoly power. This has resulted in limited competition leading to high prices for consumers, as well as reduced incentives for the company to innovate and improve services. Despite provisions in the Energy Act meant to encourage competition, they have not been realized due to a lack of regulations to support it. This includes regulations such as Wheeling regulations that can enhance private sector participation in power distribution thus encouraging competition and efficiency.

In terms of commercialization of the sector and public sector participation, Kenya can learn from countries such as Norway, Sweden and Finland which have been able to move from regulation of a regulatory-based tariff system to a market-based system which has increased power trade and created an international market. The study has concluded that the private ownership of power distribution is not necessarily the cure. The solution is in a public-private sector partnership. Privatization of the electricity utility services will not automatically lead to better efficiency and better access.

On the issues of finance, the study has concluded that KPLC has struggled with financial sustainability due to issues such as high debt levels, revenue losses from technical and non-technical losses, inadequate revenues to sustain its operations, huge finance costs as a result of the weakening of the Kenyan shilling against the dollar, slow review of tariffs to match its costs and the demand has also not grown enough to generate more revenues. These financial challenges have impacted its ability to invest in infrastructure upgrades and improvements.

KPLC governance has been facing challenges in its capacity as a state corporation. This is especially on the independence of the board. The board, with the government as the main shareholder, has undergone political interference which has posed a significant challenge to board independence. This has enabled the government to have undue influence in the appointment of board members, decision-making, or strategic direction. This has made KPLC invest in government initiatives such as the Last Mile Connectivity Programme which has led to high indebtedness which has affected its finances.

The current governance structure has been affected by the inadequacies of the State Corporations Act which has limited it from operating like a commercial entity. There have been recommended reforms to recognize state corporations such as KPLC as commercial entities with strategic functions and give them autonomy where they are not in control by the executives. This includes creating a body that will manage government shareholding instead of it being managed directly under the respective ministry. This is to enable commercial state corporations to function commercially.

The corporate governance framework for state corporations has also not been fully realizable as the State Corporations Act is yet to be reviewed comprehensively and replaced with a framework that would promote governance of commercial state

corporations and provide the independence and competence required to operate as state corporations. The government has used KPLC to carry out its social mandate of supplying electricity to rural areas. This has affected its ability to operate commercially. The current government has made plans to delink KPLC from government initiatives which will help KPLC to focus on commercial objectives.

The civil society space in the electricity utility sector has not been fully utilized. There are a few civil societies that have participated in the sector, especially on important issues such as tariff review, training, facilitating clean energy solutions and raising awareness. Notable civil societies include ELCOS which has experts with the capacity to understand the industry and participate in its reforms. Others are ACCESS and KCCWG.

Few civil societies in the sector have the required capacity to address the complexities of the utility sector. This has affected their ability to influence governance, especially in terms of encouraging good governance in the sector, building public accountability of government agencies and utility providers, and monitoring the quality of service and the safeguards for economic and social impacts.

Although there are laws on electricity tariffs, efficiency and pricing, most Kenyans are oblivious to its contents and implications. Additionally, the power sector has low levels of transparency, especially regarding information on the cost of power purchase, energy efficiency and tariffs. Most of the information is scattered in different instruments making it complex for consumers to internalise. Ultimately, this present several avenues for civil societies in the sector to provide value addition in terms of creating awareness, training and facilitating access to electricity

On productive efficiencies, the Report by the Auditor General shows that KPLC has not been fully efficient in its cost. This is especially on having expensive PPAs where IPPs that supply much less get paid more for their expensive cost. The books of account also showed a huge capacity charge. There were also labour efficiency issues where there was irregular secondment without following the laid down procedure. This is in addition to the lack of a substantive managing director. KPLC's productive and allocative efficiency relies heavily on its operations as a commercial entity. This requires that the government delinks its electrification initiatives from the entity to allow it to function on full commercial grounds. However, entities such as REREC do not have equal capacity to supply electricity and most of the government initiatives for electrification heavily rely on the KPLC's infrastructure.

KPLC has been exposed to several scandals which have led to a high turnover in its management. This has derailed its progress and affected operational efficiency. These scandals have affected universal access to electricity as they have affected the operational efficiency of the organization.

Energy affordability is a great challenge in Kenya's ESI. The prices of electricity in the country remain relatively high compared to jurisdictions in the global north and those in the sub-Saharan African region. Kenya has one of the most expensive powers in the continent at about Kshs. 24 per kWh compared to a global average of about Kshs. 15.
Although Kenya has made great progress in terms of access to electricity within the last decade, there are disparities in access in both the urban and rural areas. While households in urban areas have access to electricity, certain parts of the country have much-reduced access. This has made the power supply from the national grid highly unequal.

Although access to electricity has not been recognized as a human right in Kenyan and international human rights law, it has become a standard facet in life in improving lives and attaining the sustainable development goals. Although it is widely recognized in government policies that electricity is necessary for human development, inequalities have been witnessed in Kenya's ESI. This is especially in regards to access, cost and participation in decision-making.

The rural population has not been a suitable client considering that rural and slum populations mostly use electricity mainly for lighting only. Productive utilization of electricity is mostly non-existent. While rural populations have the REREC, there is no institution for the urban poor.

Inadequate access to power has disproportionately affected women in rural areas and informal settlements. Women in these areas continue to rely on traditional, time-consuming, and less efficient energy sources

11. RECOMMENDATIONS

like biomass for cooking and lighting, which negatively impact their daily lives and opportunities for socio-economic advancement.

Considering the foregoing, we make the following recommendations :

Government

1. There should be concerted efforts to address energy inequalities in Kenya by the Government of Kenya. Access to electricity should ensure gender equality and there should be gender mainstreaming as access to electricity affects men and women disproportionately.

2. KPLC's future success heavily relies on its focus on commercial activities with the government fully supporting retail supply in rural areas by passing the mandate fully to REREC as the retail supplier. This will allow KPLC to function commercially. The government also needs to restructure KPLC's debts. The government should recognize KPLC as a commercial state corporation with strategic functions. Whereas the government uses KPLC to provide universal access, it should pay KPLC in good time to avoid unsustainable debt pressures and the relationship should be commercial.

3. The government should also assist KPLC through debt restructuring to enable it to return to positive working capital. This should start with the government paying its bill for the programs it has run through KPLC, reforming the framework for power purchase agreements that would promote the use of local currency and monitor the uptake of debts.

4. There should be a collaboration between government and civil society in organizing and developing civic education on matters of electricity. This can be organized through media and digital platforms where consumers can be educated on energy efficiency, tariffs and electricity pricing. This will enable Kenyans to participate in energy matters.

5. The government, through REREC, should undertake grid expansion and rural electrification. It should expand the electricity grid to reach underserved areas, informal settlements and rural areas to promote economic development and reduce inequalities. It should leverage public-private partnerships for financing and implementing rural electrification projects.

6. The government should encourage the development of off-grid solutions for the urban poor. This is in addition to giving county governments the role of increasing access to electricity for slum populations and rural areas. The national and county governments should work towards building their own capacity to improve access to electricity without relying on KPLC.

7. The success of KPLC requires stable leadership where the management has the autonomy to carry out its work without any undue influence. There should be minimal political interference to enable KPLC to function independently and commercially.

8. In tariff review, EPRA should conduct a comprehensive review of electricity tariffs to ensure they reflect the true cost of production and distribution. Grant the regulatory authority adequate autonomy and resources to carry out its mandate effectively and implement cost-cutting measures within KPLC to reduce inefficiencies and operational expenses.

KPLC

1. Implement transparency measures to disclose financial information, operational performance, and decision-making processes to the public.

2. KPLC should improve its productive efficiency by reducing its cost. This entails renegotiation of the PPAs contracts, especially on the capacity charges for IPPs.

3. KPLC should prioritize investments in modern and reliable infrastructure to reduce transmission and distribution losses. It should Invest in technology and automation to improve system efficiency and reduce theft and losses.

4. The government should continue to promote the integration of renewable energy sources into the power generation mix to reduce reliance on fossil fuels and promote sustainability. It should encourage partnerships and investments in renewable energy projects.

5. KPLC should enhance its customer service. It should improve its customer service by streamlining billing processes, speeding up response times for complaints, and increasing accessibility to customer support. It should implement a customer-centric approach to service delivery.

6. There should be energy efficiency programs to promote energy efficiency programs to reduce overall energy consumption and encourage sustainable practices among consumers. It should provide incentives for businesses and individuals to adopt energy-efficient technologies.

7. KPLC should foster skills development. It should Invest in training and capacity building for KPLC employees to enhance technical skills and knowledge. It should also Foster a culture of innovation and continuous improvement within the organization.

8. KPLC should involve civil society organizations and the public in decision-making processes related to the power sector to ensure inclusivity and accountability. It should hold public consultations and forums to gather input on key policies and decisions.

9. KPLC should develop a sustainable financial strategy that ensures KPLC's long-term viability and reduces reliance on government subsidies. The government should explore opportunities for private sector participation in the power sector.

10. KPLC should implement strict anti-corruption measures and whistleblower protection mechanisms within KPLC to root out corrupt practices.

11. KPLC should establish performance benchmarks and key performance indicators (KPIs) to regularly assess KPLC's performance and track progress in implementing reforms.

CIVIL SOCIETIES

The Participation of civil societies is vital for utility governance, the recommendations for better participation of civil societies include:

1. LEGAL FRAMEWORK AND POLICIES: - Civil societies should advocate for the development and implementation of laws and policies that promote civil society involvement in power utility governance. Ensure that these policies include provisions for transparency, access to information, and public participation in decision-making processes.

2. CAPACITY BUILDING:- Provide training and capacity-building programs for civil society organizations (CSOs) and community leaders to enhance their understanding of power utility operations and governance structures. Offer technical training to help CSOs analyze power utility data and finances.

3. INFORMATION ACCESS: Promote transparency by advocating for easy access to information related to power utility operations, budgets, and plans. Civil societies should encourage power utilities to publish regular reports and hold public consultations on important decisions.

4. COMMUNITY ENGAGEMENT: Civil societies should encourage power utilities to engage with local communities and civil society organizations when planning and implementing projects that affect them. They should facilitate platforms for dialogue and collaboration between power utilities, civil society, and community representatives.

5. MONITORING AND OVERSIGHT: Civil Societies should establish independent monitoring mechanisms to assess the performance and compliance of power utilities with agreed-upon standards and regulations. They should conduct regular audits and report findings to relevant authorities.

6. ADVOCACY AND LOBBYING:- Civil society to advocate for policies and practices that prioritize the public interest, affordability, and sustainability in power utility operations. They should build alliances with other stakeholders, including policymakers and media, to amplify the voice of civil society.

7. PUBLIC AWARENESS CAMPAIGNS: Conduct awareness campaigns to educate the public about their rights and responsibilities regarding power utilities. Explain the importance of civic engagement in ensuring reliable and affordable electricity services. Civil society should develop an abridged booklet that can be used for consumer awareness in the sector. This can assist the consumer to source all important information on the sector from a single source. Civil society should also use the opportunity to educate Kenya on the existing electricity efficiency measures and initiatives.

8. CONFLICT RESOLUTION: Develop mechanisms for resolving disputes and conflicts related to power utility services through mediation and dialogue. Advocate for the establishment of independent ombudsman offices to address consumer complaints.

9. INTERNATIONAL PARTNERSHIPS: Collaborate with international organizations and donor agencies to access funding, technical expertise, and best practices for civil society engagement in power utility governance.

10. REGULAR ENGAGEMENT:- Maintain a sustained presence in power utility governance processes. Consistent engagement ensures that civil society's perspectives are considered in decision-making.

11. INCLUSIVITY:- Ensure that the participation of marginalized and vulnerable groups is prioritized, as they often bear the brunt of power utility decisions.

12. IMPACT ASSESSMENT:- Monitor and evaluate the impact of civil society engagement on power utility governance and service delivery to make necessary improvements.

13. NETWORKING: Foster networks and coalitions of civil society organizations working on energy and utility governance to share knowledge and coordinate efforts effectively.

14. ADVOCATE FOR RENEWABLE ENERGY:-Promote sustainable and environmentally friendly energy sources, advocating for a transition towards renewables to reduce the environmental impact of power utilities.

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