



Strathmore University

Law School

THE FUTURE OF ENERGY IN KENYA: BRIDGING THE ACCESS GAP FOR SOCIOECONOMIC DEVELOPMENT

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By

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Prepared under the supervision of

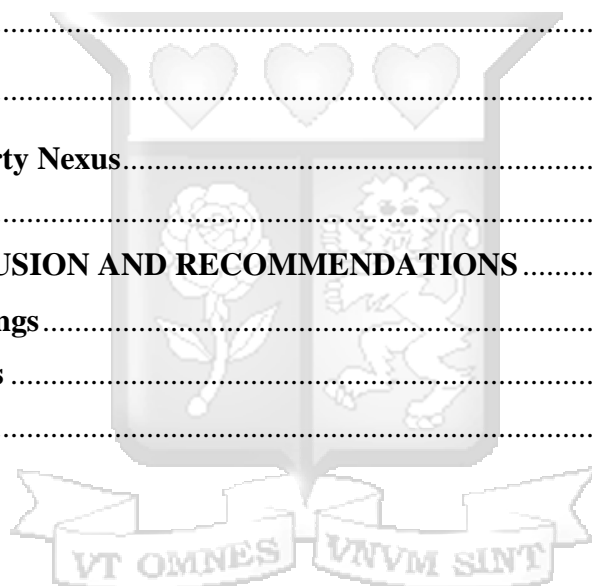
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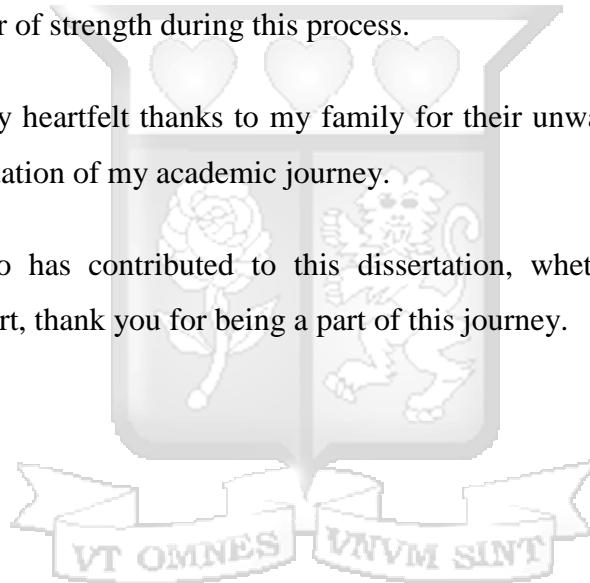
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Dedication

I would like to dedicate this dissertation to my late father, Ndolo Kioko Musyimi, whose wisdom, love, and unwavering belief in me continue to guide my path.

To my mother, whose strength and sacrifices have shaped the person I am today.

To my brother and sister, for their constant support and encouragement.

To my very close friends, who have stood by me through every challenge and triumph.

This journey would not have been the same without you.

I am eternally grateful to you all.



Declaration

I, **RIANNA KIOKO**, do hereby declare that this research is my original work and that to the best of my knowledge and belief, it has not been previously, in its entirety or in part, been submitted to any other university for a degree or diploma. Other works cited or referred to are accordingly acknowledged.

Signed: 

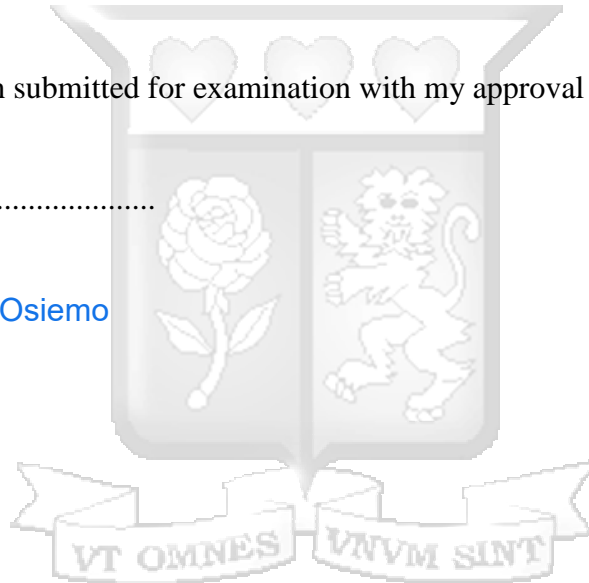
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Supervisor Name: **Dr. L. Osiemo**

1 April 2025



Abstract

Kenya stands at a pivotal moment in its energy transition, it is filled with both immense promise and pressing challenges. While significant strides have been made in expanding electricity access, far too many Kenyans still remain in the dark, (both literally and figuratively) and many struggle to achieve meaningful access beyond grid connectivity. The centralisation of energy distribution due to Kenya Power Limited Company (KPLC) has led to inefficiencies, high costs, and unreliable service, leaving millions without the electricity they need to transform their lives.

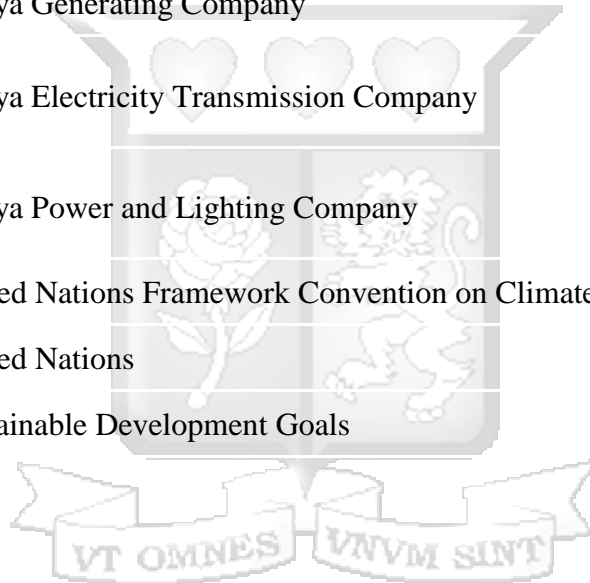
This research is driven by a fundamental question: Can Kenya's energy policies truly deliver equitable and meaningful access to electricity, or do they merely reinforce existing disparities? Electricity is more than just a utility—it is one of the backbones of socio-economic development, shaping the future of education, healthcare, and economic empowerment. Yet, barriers such as monopolistic control, prohibitive costs, and limited infrastructure continue to restrict meaningful access for countless households and businesses.

Through a critical examination of Kenya's energy policies, particularly the Energy Act 2019 and the Competition Act 2010, this study uncovers the deep-rooted challenges within the current system. It argues that decentralising energy distribution could be the key to breaking this cycle and thus empower local communities, foster innovation, and accelerate the adoption of renewable energy.

Ultimately, this research underscores the importance of a holistic and inclusive energy policy that prioritises equitable access to electricity as a catalyst for sustainable socio-economic development. It provides actionable recommendations for policymakers and energy providers to bridge the energy access gap, reduce inequalities, and foster a more dynamic and efficient energy market in Kenya.

List of Abbreviations

CAK	Communications Authority Kenya
EPRA	Energy and Petroleum Regulatory Authorities
ERB	Electricity Regulation Board
ERC	Electricity Regulation Commission
IPO	Initial Public Offering
IPPS	Independent Power Producers
KenGen	Kenya Generating Company
KETRACO	Kenya Electricity Transmission Company
KPLC	Kenya Power and Lighting Company
UNFCCC	United Nations Framework Convention on Climate Change
UN	United Nations
SDG	Sustainable Development Goals



List of Cases

Okiya Omtatah Okiiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others [2020] KEHC 2508 (eKLR).



List of Legal Instruments

Competition Act, No. 12 of 2010

Energy Act, No. 1 of 2019

The Constitution of Kenya 2010



CHAPTER 1: INTRODUCTION

1.1. Introduction

Energy access has been well recognised as a pivotal driver of socio-economic development, with the UN's SDG 7 stressing on the need for access to modern, clean and affordable energy.¹ Due to this strong and positive correlation between access to electricity and socio-economic development, it can be reasoned that those without access trail behind in terms of development.² Currently, most households situated in urban areas have steady and reliable access to electricity, while only 32% of households in rural or underserved areas are electrified.³ The stark disparity in access to electricity lays bare a more deep seated issue—how inequitable access to essential resources in Kenya significantly undermines the pursuit of socio-economic development.⁴

Access to electricity is not only about powering homes, but it is also a catalyst of unlocking opportunities across multiple sectors.⁵ Modern, clean energy sources such as solar, wind, and geothermal power offer sustainable alternatives to traditional fuels like charcoal and kerosene, which are not only costly, but also harmful to health and the environment.⁶ Reliable electricity, particularly for women, plays a pivotal role in alleviating the labour-intensive tasks associated with cooking over firewood or charcoal by allowing the use of modern energy efficient cooking methods.⁷ This reduces health risks and empowers women to pursue education or engage in income-generating activities, thus fostering economic empowerment, social inclusion and overall

¹ Boliko CM and Ialnazov DS, 'An Assessment of Rural Electrification Projects in Kenya Using a Sustainability Framework' 133 *Energy Policy* 110928, 2019, 10.

² Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts Amherst, 2021, 2-3.

³ Moksnes N, Korkovelos A, Mentis D and Howells M, 'Electrification Pathways for Kenya—Linking Spatial Electrification Analysis and Medium to Long Term Energy Planning' 12(9) *Environmental Research Letters* 095008, 2017, 11.

⁴ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts Amherst, 2021, 2-3.

⁵ Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16.

⁶ Rao ND and Pachauri S, 'Energy access and living standards: some observations on recent trends' 12(2) *Environmental Research Letters* 024011, 2017, 3-4

⁷ Rao ND and Pachauri S, 'Energy access and living standards,' 3-4.

well-being.⁸ The benefits of accessing electricity further extend to children, particularly in terms of education.⁹ It enhances learning environments and supports the use of modern technology, such as computers and the internet, enabling access to online learning resources and educational programs.¹⁰

This study will therefore examine the effectiveness of the current energy policy and legal framework in ensuring the equitable and meaningful access of energy. To do so, chapter 2 will discuss the theoretical frameworks underpinning this study providing a foundation for understanding energy justice through the lens of human rights, sustainable development and transformative constitutionalism. These frameworks offer critical insights into the reasons why legal and regulatory mechanisms must actively promote equitable and meaningful access to energy. Building on this, Chapter 3 will examine the concepts of centralisation and decentralisation in energy distribution, analysing how despite the intentions of the Energy Act 2019 and sector reforms to promote a decentralised and liberalised system to ensure equitable and meaningful access, this goal has yet to be fully realised.

The study will then end with a concluding chapter summarising the discussion and findings of the paper and a summation of the recommendations on the same.

1.2 Background

Kenya's energy roadmap began in 1996, in this first wave power generation was unbundled from transmission and distribution allowing for generation to be liberalised.¹¹ The preceding year, KenGen (which was primarily state owned) became responsible for the generation of assets, while Kenya Power and Lighting Company (KPLC) assumed responsibility for all distribution and

⁸ Rao ND and Pachauri S, *Energy access and living standards*, 3-4.

⁹Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16.

¹⁰ Ye G, *The Impact of Electricity Access on Education in Kenya*, 16.

¹¹ Janho R. 'Renewable Energy in Kenya: An Examination of the Legal Instruments and Institutional Changes that Successfully Attracted Foreign Investment,' Energy Central, 18 November 2020. <<https://energycentral.com/c/pip/renewable-energy-kenya-examination-legal-instruments-and-institutional-changes>> on 18 February 2024, 12.

transmission duties.¹² This was a seemingly novel step in the energy sector as it allowed for the conditions of the new funding agreements to be met making KenGen and KPIC the first IPP's.¹³

In 2002 under President Mwai Kibaki's regime, a milestone was witnessed that saw KenGen change from a primarily state-owned entity to partially privatised through the introduction of an IPO.¹⁴ This move was notably innovative because the infusion of private capital allowed KenGen to access additional resources for the expansion and modernisation of its operations, fostering innovation and growth in the energy sector.¹⁵ In 2008, the establishment of the Kenya Electricity Transmission Company (KETRACO) marked a significant milestone in the unbundling of Kenya's energy sector, completing the separation of power generation and transmission functions.¹⁶ Amongst these three entities, KPLC serves as the main entity responsible for distribution in the central grid.¹⁷ As the main provider, KPLC acts as the direct link between customers and electricity access, playing a critical role in ensuring the delivery of reliable and affordable energy.¹⁸ The unbundling of the energy sector was a crucial step in ensuring the efficiency and liberalisation of Kenya's energy landscape.¹⁹ By separating generation, transmission and distribution functions, the reforms aimed to enhance access to electricity by enabling a more decentralised system to take the fore.²⁰ Generation has witnessed a significant increase in private sector involvement through IPPs allowing for the expansion, modernisation of its operations and exploration of renewable energy.²¹ However, the same cannot be said for distribution. KPLC has retained its position as the

¹² Achola. K, 'The Past, Present and Future of Kenya's Power Sector', *Kenyan Engineer*, 2023 15.

¹³ Gondinho C, and Ederhard A, 'Learning from Power Sector Reform: The Case of Kenya', Policy Research Working Paper No. WPS 8819, World Bank Group, Washington D.C., 16 April 2019, 20.

¹⁴ Gondinho C, and Ederhard A, 'Learning from Power Sector Reform: The Case of Kenya', Policy Research Working Paper No. WPS 8819, World Bank Group, Washington D.C., 16 April 2019, 20.

¹⁵ Achola. K, 'The Past, Present and Future of Kenya's Power Sector', *Kenyan Engineer*, 2023, 15.

¹⁶ Ye G, 'The Impact of Electricity Access on Education in Kenya' Master's Thesis, University of Illinois at Urbana-Champaign, 2017, 8.

¹⁷ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts Amherst, 2021, 3.

¹⁸ Bonnell CJ, 'Energy Policy in Kenya', 2-3

¹⁹ Achola. K, "The Past, Present and Future of Kenya's Power Sector." *Kenyan Engineer*, 2023, 15.

²⁰ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

²¹ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

dominant player and sole distributor, limiting competitive dynamics and thus affecting meaningful and equitable access.²²

Following these critical reforms, the government launched Kenya vision 2030 in 2008, a twenty-two yearlong development plan that set out a path for Kenya to become a sustainable and middle-income country by 2030.²³ Kenya's vision 2030 was set to bring transformative change in the improvement of energy supply, access and finally the advancement of socio-economic development.²⁴ The launch of Kenya Vision 2030, alongside the promulgation of the new Constitution of Kenya in 2010 marked the beginning of the second portion of Kenya's energy roadmap.²⁵ The energy Act 2019 makes an attempt to incorporate socio-economic rights in Section 2, defining *Social Impact Assessment* as, “a means a method of analysing the impacts of a proposed activity, project or plan on the social aspects of the environment which include, without limitation, the way;²⁶

- (a) people cope with life through their economy, social systems, and cultural values;
- (b) people use the natural environment, for subsistence, recreation, spiritual activities and cultural activities;
- (c) people use the built environment for shelter, making livelihoods, industry, worship, recreation and gathering together;
- (d) communities are organised and held together by their social and cultural institutions and beliefs; and
- (e) of life that communities' value as expressions of their identity

²² Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

²³ Achola. K, "The Past, Present and Future of Kenya's Power Sector." *Kenyan Engineer*, 2023, 15.

²⁴ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 12.

²⁵ United Nations Economic Commission for Africa (UNECA) and RES4Africa Foundation, *Regulatory Review of the Electricity Market in Kenya: Towards Crowding-in Private Sector Investment*, 2022, 27.

²⁶ Section 2, *Energy Act* (No 1 of 2019).

It is commendable that Kenya's energy roadmap has reached the point of codifying the need for socio-economic development through the defining Social Impact Assessment.²⁷ However, it has not made sufficient progress in comprehensively linking socio-economic rights and development with the legislative mandate for universal access to energy as outlined in Section 4 of the Act.

The actualisation of socio-economic rights is seemingly becoming a topic of interest and focus amongst many African countries.²⁸ Socio-economic rights can be defined as, “rights that generally refer to the social and economic conditions accepted as necessary for individuals and groups to live sustainably in dignity and freedom within society.”²⁹ These rights are essentially both a means to livelihood and an end due to the pillars of human integrity.³⁰ Therefore, it is important that they are recognized and enforced through the most effective mechanism which is the Constitution. The Constitution of Kenya through Article 43 enshrines these rights stating that every person has the right to;

- a) the highest attainable standard of health, which includes the right to health care services, including reproductive health care
- b) to accessible and adequate housing, and to reasonable standards of sanitation
- c) to be free from hunger, and to have adequate food of acceptable quality
- d) to clean and safe water in adequate quantities
- e) to social security and;
- f) to healthcare.³¹

The recognition of socio-economic rights within Kenya’s constitutional framework underscores their significance in fostering human dignity and socioeconomic development.³² However, the

²⁷ Osiemo M R, ‘Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,’ Published LLM Thesis, University of Nairobi, 2012, 12.

²⁸ Farese G, ‘Socio-Economic Rights. In: International Human Rights, Social Policy and Global Development: Critical Perspectives’, Cambridge University Press, 3 March 2021, 110-112.

²⁹ Farese G, ‘Socio-Economic Rights. In: International Human Rights, Social Policy and Global Development: Critical Perspectives’, Cambridge University Press, 3 March 2021, 110-112.

³⁰ Farese G, ‘Socio-Economic Rights. In: International Human Rights, Social Policy and Global Development: Critical Perspectives’, Cambridge University Press, 3 March 2021, 110-112.

³¹ Article 43(1) Constitution of Kenya 2010

³² Farese G, ‘Socio-Economic Rights’, International Human Rights, Social Policy and Global Development, Cambridge University Press, 3 March 2021, 110-112.

realisation of these rights remains largely contingent on the availability and accessibility of essential services, with energy access playing a pivotal role.³³ Without meaningful and equitable access through a decentralised energy distribution system, the enforcement of these rights is hindered.³⁴ Additionally, the fulfilment of socio-economic rights is intrinsically linked to the state's capacity to provide essential infrastructure and services that enable individuals and communities to live with dignity.³⁵ Energy access, much like access to clean water, healthcare, and education, forms the foundation upon which these rights can be realised.³⁶ Beyond its direct impact on individual well-being, energy access is also crucial for national progress.³⁷

The socioeconomic implications of centralised distribution systems are profound due to the fact that limited access exacerbates social inequalities.³⁸ For instance, the right to education, as enshrined in Article 43(1)(f) of the Constitution, is significantly affected by inconsistent energy access.³⁹ This is because schools in off-grid or poorly electrified regions struggle to integrate modern teaching tools, digital resources, and online learning platforms.⁴⁰ Students are often forced to rely on inefficient lighting sources such as kerosene lamps, which are both costly and harmful to health.⁴¹ As a result, the digital divide between urban and rural schools widens, limiting

³³ Joskow PL, 'Lessons Learned from Electricity Market Liberalization' *The Energy Journal*, Special Issue, 2008, 11-12.

³⁴ Farese G, 'Socio-Economic Rights', *International Human Rights, Social Policy and Global Development*, Cambridge University Press, 3 March 2021, 115.

³⁵ Farese G, 'Socio-Economic Rights', *International Human Rights, Social Policy and Global Development*, Cambridge University Press, 3 March 2021, 115.

³⁶ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 20.

³⁶ Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16.

³⁷ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 20.

³⁷ Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16.

³⁸ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 20.

³⁹ Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16.

⁴⁰ Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16-18

⁴¹ Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16-18.

opportunities for students in energy-poor regions to compete on an equal footing with their counterparts in well-electrified areas.⁴² Similarly, the right to healthcare under Article 43(1)(a) is compromised by unreliable electricity supply, which affects the functioning of hospitals and clinics.⁴³ Medical facilities require consistent power for the operation of life-saving equipment, storage of vaccines and medicines, and the general provision of quality healthcare.⁴⁴ Power outages in these facilities can be catastrophic, endangering lives and increasing mortality rates.⁴⁵

Therefore, moving forward, there is a need for Kenya's energy roadmap to prioritise the decentralisation of distribution as a key strategy for effectively bridging the energy access gap.

1.3 Problem Statement

The current energy policy in Kenya does not adequately address the challenges surrounding universal access to electricity. This research aims to highlight the gap in energy access across the country and demonstrate the critical need for the decentralisation of energy distribution in order to achieve equitable and meaningful access. By addressing these disparities, the research underscores the importance of ensuring that all citizens benefit from the advancements in energy infrastructure, ultimately fostering socio-economic development.

1.4 Research Objectives

1. To investigate the relationship between energy access and socio-economic development.
2. To evaluate the effectiveness of the current energy policy in ensuring equitable access to energy in Kenya.
3. To analyse to the extent to which the existing legal and regulatory framework has liberalised the energy sector.

⁴² Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 16.

⁴³ Sule I K, Yusuf A M and Salihu M-K, 'Impact of energy poverty on education inequality and infant mortality in some selected African countries', *Energy Nexus*, 5 100034, 2022, 1-2.

⁴⁴ Sule I K, Yusuf A M and Salihu M-K, 'Impact of energy poverty on education inequality and infant mortality in some selected African countries', *Energy Nexus*, 5 100034, 2022, 1-2.

⁴⁵ Sule I K, Yusuf A M and Salihu M-K, 'Impact of energy poverty on education inequality and infant mortality in some selected African countries', *Energy Nexus*, 5 100034, 2022, 1-2.

1.5 Research Questions

1. To what extent does the current energy policy ensure equitable access to energy in Kenya?
2. What are the shortcomings in the energy policy and how do they affect equitable access to energy?
3. In what ways does access to energy interact with socio-economic development?

1.6 Hypothesis

The current centralised energy distribution model in Kenya dominated by the Kenya Power Limited Company (KPLC), inadequately addresses the challenges of equitable energy access, resulting in inefficiencies such as high costs, unreliable supply, and limited service delivery. A shift toward a decentralised energy distribution system, supported by robust legal and regulatory frameworks, would enhance competition, improve affordability, and ensure reliable electricity access. This decentralisation would not only bridge the energy access gap but also foster socio-economic development by empowering local communities, promoting renewable energy adoption, and creating a more inclusive and sustainable energy market.

1.7 Literature Review

In Bonnell's thesis, *Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development*, access to energy and electrification are framed as critical determinants of socio-economic equity and sustainable development. The author argues that despite Kenya's commendable progress in energy generation and electrification rates, significant gaps persist.⁴⁶ Central to these challenges is the fact that KPLC functions as the primary distributor of electricity.⁴⁷ Its centralised role, coupled with systemic inefficiencies and regulatory inadequacies, has created a bottleneck in Kenya's electrification agenda.⁴⁸ The centralisation of energy distribution poses a significant obstacle to achieving universal electrification as monopolisation limits competition and innovation leaving many underserved communities without reliable or affordable access to energy.⁴⁹ This centralisation of distribution exacerbates disparities

⁴⁶ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 5.

⁴⁷ Oxfam, *Electricity Utility Governance in Kenya: A Comprehensive Report*, Oxfam International, 2023, 14-15.

⁴⁸ Oxfam, *Electricity Utility Governance in Kenya: A Comprehensive Report*, Oxfam International, 2023, 14-15.

⁴⁹Oxfam, *Electricity Utility Governance in Kenya: A Comprehensive Report*, Oxfam International, 2023, 14-15

between urban and rural/underserved areas, with the latter facing disproportionately high costs and limited coverage.⁵⁰

The thesis highlights that while the Energy Act 2019 establishes the regulatory structure for the energy sector, it fails to adequately address critical issues such as grid reliability, financial accessibility, and the integration of marginalised communities into the electrification framework.⁵¹ Section 143 of the act establishes the Rural Electrification Program Fund is, however, Bonnell notes that this provision lacks specificity in implementation and oversight, leading to inefficiencies and inequitable outcomes.⁵² Additionally, there is insufficient emphasis on holding KPLC accountable for service delivery standards or incentivizing innovation to address gaps in grid management.⁵³

Bonnell keenly highlights the tension between Kenya's energy policies and its broader development goals. While the Kenya vision 2030 and Section 4 of the Energy Act aim to achieve universal electrification, current policies prioritise industrial growth over equitable access.⁵⁴ His exploration extends to broader implications of centralised systems on electrification strategies, stating that the reliance on a single entity like KPLC limits the flexibility needed to address regional disparities in energy demand and supply.⁵⁵ The thesis advocates for a decentralised approach, drawing from global examples such as Bangladesh's community-based electricity cooperatives and Brazil's urban housing programs.⁵⁶ These models demonstrate how localised solutions can enhance grid management, improve affordability, and foster community trust—elements largely absent in Kenya's current framework.⁵⁷ In spite of Section 139 of the Energy Act allowing for the licensing of other distributors, Kenya's electricity distribution remains dominated by KPLC, limiting regional adaptability and equitable access.

⁵⁰ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 5.

⁵¹ Bonnell, 'Energy Policy in Kenya', 20.

⁵² Bonnell CJ, 'Energy Policy in Kenya', 20.

⁵³ Oxfam, *Electricity Utility Governance in Kenya: A Comprehensive Report*, Oxfam International, 2023, 14-15

⁵⁴ Bonnell CJ, 'Energy Policy in Kenya', 20.

⁵⁵ Oxfam, *Electricity Utility Governance in Kenya: A Comprehensive Report*, Oxfam International, 2023, 14-15

⁵⁶ Bonnell CJ, 'Energy Policy in Kenya', 10-12.

⁵⁷ Bonnell CJ, 'Energy Policy in Kenya', 10-12.

In, *Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches*, Muigua Kariuki provides a compelling connection between socioeconomic development and a just energy transition. He emphasises that many of the socioeconomic and environmental challenges afflicting the African continent stem from the pursuit of equitable access to energy resources.⁵⁸ Kenya, in particular, stands out as one of the nation's still grappling with an energy crisis and a significant socioeconomic deficit.⁵⁹ Ranked as the third poorest lower-middle-income country in the world, the World Bank's *State of Economic Inclusion Report 2021* reveals that over forty percent of Kenyans live in abject poverty.⁶⁰ In order to lift these individuals out of poverty and realise their socioeconomic rights, access to a stable income is essential and a factor closely tied to the availability and effective utilisation of energy resources.⁶¹

The paper also discusses the implications of energy access for social equity, as those without reliable energy sources often struggle to participate fully in economic activities and face challenges in education and health.⁶² Kariuki asserts that achieving Sustainable Development Goal 7 (SDG 7), which aims for universal access to affordable, reliable, sustainable, and modern energy, is intertwined with broader efforts to eradicate poverty and promote economic growth.⁶³ Kariuki critiques current policies and regulatory frameworks, pointing out that they often fail to address the unique needs of different communities.⁶⁴ The paper advocates for innovative approaches, such as decentralised energy systems, which could enhance access for underserved populations while reducing reliance on non-sustainable energy sources.

⁵⁸ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches', Published Ph.D, University of Nairobi, Faculty of Law, 2024, 8

⁵⁹ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches', Published Ph.D, University of Nairobi, Faculty of Law, 2024, 9.

⁶⁰ World Bank State of Economic Inclusion Report 2021

⁶¹ Jefferson W, Elisabeth M, Michael J, Michael W, and William A, '*Sustainable Energy: Choosing Among Options in Sustainable Energy*,' MIT Press, Boston, 2005, 3.

⁶² Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches', Published Ph.D, University of Nairobi, Faculty of Law, 2024, 12

⁶³ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches', Published Ph.D, University of Nairobi, Faculty of Law, 2024, 12

⁶⁴ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches', Published Ph.D, University of Nairobi, Faculty of Law, 2024, 13-14

1.8 Justification of the study

Access to electricity is a fundamental driver of socio-economic development, playing a critical role in improving education, healthcare, and economic opportunities. However, despite Kenya's notable progress in expanding energy generation, access remains highly inequitable. Millions of Kenyans, particularly in underserved rural areas, still face significant barriers to obtaining reliable and affordable electricity. This disparity is largely due to the centralised distribution model dominated by the Kenya Power and Lighting Company (KPLC), which has led to inefficiencies such as high costs, limited accessibility, and unreliable service delivery.

This study is justified by the urgent need to address these systemic inefficiencies and advocate for a decentralised distribution model that fosters competition, enhances service delivery, and promotes renewable energy adoption. By critically analysing Kenya's energy policies, particularly the Energy Act 2019 and the Competition Act 2010, this research highlights the need for a legal and regulatory framework that prioritises equitable access to electricity. The study provides evidence-based recommendations to policymakers, aiming to bridge the energy access gap and advance Kenya's development goals, including the SDGs and Vision 2030.

1.9 Significance of the Study

Energy access extends beyond infrastructure—it is a question of dignity, opportunity, and economic empowerment. The lack of access to reliable electricity perpetuates cycles of poverty, restricting individuals from accessing essential services such as healthcare, education, and financial systems. This study is significant in shedding light on the urgent need for energy sector reforms that prioritise and ensure that energy access is not just a privilege, but a fundamental right for all Kenyans.

Moreover, the study underscores the intersection between energy access and socio-economic development, demonstrating how equitable energy distribution can drive industrial growth, support small businesses, and improve overall quality of life. By presenting actionable solutions for decentralisation, including policy reforms and regulatory enhancements, the study provides valuable insights for stakeholders, including policymakers, regulatory bodies, and energy providers, on how to foster a more competitive, inclusive, and sustainable energy sector.

1.10 Research Design

This study will constitute the following major parts: Chapter 2 will discuss the vital connection between electricity access and socio-economic development. It will explore how reliable access to electricity acts as a catalyst for improvements in various sectors, including education, healthcare, and economic empowerment. This chapter will highlight the disparities in energy access, particularly in rural and underserved areas, and analyse how these inequities hinder socio-economic progress.

Subsequently, Chapter 3 will evaluate the current energy policies in Kenya, focusing on the decentralisation of KPLC as the main distributor of electricity. This chapter will assess the effectiveness of existing provision of the Energy Act 2019 and the role of the Energy and Petroleum Regulatory Authority EPRA in promoting meaningful and equitable access to energy through the decentralisation and liberalisation of energy distribution.

The study will be reliant on qualitative evidence from secondary sources, including journals, articles, books, and chapters in books. It will also draw on primary sources such as the Constitution of Kenya, the Energy Act 2019 and the Competition Act 2010 to provide a comprehensive analysis of the energy landscape in Kenya.

1.11 Chapter Breakdown

The first chapter provides an overview of the research, outlining the background and context of Kenya's energy sector. It highlights the historical milestones in Kenya's energy roadmap, including the unbundling of the energy sector, the privatisation of KenGen, and the establishment of KETRACO. The chapter also introduces the central problem of the study: the inefficiencies in Kenya's centralized energy distribution system, dominated by the KPLC, and its impact on equitable energy access. The research objectives, questions, and hypothesis are presented, along with the justification and significance of the study.

In chapter two, the paper explores the theoretical foundations underpinning the research. It introduces three key theories: transformative constitutionalism, human rights theory and sustainable development. Transformative constitutionalism is discussed in the context of

addressing deep-seated inequalities and promoting equitable resource distribution, while human rights theory emphasises the importance of energy access as a derivative right essential for fulfilling basic human needs such as education, healthcare, and economic opportunities. These theories provide a lens through which the study examines the relationship between energy access and socio-economic development.

Following this, chapter three focuses on the centralisation of Kenya's energy distribution system under KPLC and its associated inefficiencies, such as high costs, unreliable supply, and limited accessibility. It contrasts centralised and decentralised energy distribution systems, emphasising the benefits of decentralisation, including enhanced competition, improved service delivery, and greater flexibility in addressing regional energy needs. The chapter also analyses the legal and regulatory frameworks governing Kenya's energy sector, particularly the Energy Act 2019 and the Competition Act 2010, and assesses their effectiveness in promoting decentralisation and fostering a more competitive energy market.

The second last chapter, chapter 4, delves into the critical role of energy access in driving socio-economic development. It examines the concept of "meaningful access" to energy, which goes beyond mere connectivity to include affordability, reliability, and sustainability. The chapter highlights the energy-poverty nexus, illustrating how limited access to electricity perpetuates poverty by hindering economic activities, education, and healthcare. It also evaluates Kenya's progress in expanding energy access, particularly through the Rural Electrification and Renewable Energy Corporation (REREC), while identifying gaps in addressing the socio-economic barriers faced by underserved populations.

The final chapter summarises the key findings of the research, reiterating the challenges posed by Kenya's centralised energy distribution system and the potential benefits of decentralisation. It provides actionable recommendations for policymakers and energy providers, emphasising the need for a more inclusive and equitable energy policy. The recommendations include fostering competition in the distribution sector, promoting renewable energy adoption, and ensuring that energy access is affordable, reliable, and sustainable. The chapter concludes by highlighting the

transformative potential of decentralised energy systems in driving socio-economic development and reducing inequalities in Kenya.

1.12 Limitations of the Study

This study acknowledges several limitations. The reliance on secondary data sources may introduce biases or gaps in information, as the quality and availability of data can vary significantly. Furthermore, the focus on qualitative analysis may not capture all quantitative aspects of energy access and its socio-economic impacts.



CHAPTER 2: THEORETICAL FRAMEWORK

This paper seeks to test the aforementioned hypothesis using two main theories: the theory of transformative constitutionalism and the human rights theory.

2.1 Transformative Constitutionalism theory

Transformative constitutionalism, as popularised in post-apartheid South Africa, was designed to not just establish a democratic government but also to transform society by addressing the deep-seating inequalities and injustices.⁶⁵ Karl Klare describes transformative constitutionalism as an enterprise of inducing large-scale social change through nonviolent political processes grounded in law.⁶⁶ In order to transform societies or bring about radical change, the theory calls for the equitable and beneficial reallocation of power and resources.⁶⁷ The ultimate goal of this social transformation is to ensure that the state reaches a level of substantive equality where all persons are able to lead a life consistent with human dignity.⁶⁸

Equality is a foundational value that underpins the 2010 Constitution of Kenya, with the framers of the new constitution recognising it as a cornerstone for achieving justice, and inclusive development.⁶⁹ Article 27 of the Constitution guarantees the right to equality and freedom from discrimination, with subsection six going a step further to mandate that the Government takes deliberate measures to bridge disparities and promote equitable distribution of resources.⁷⁰ Therefore, the relevance of this theory is that it offers a lens through which justice can be embedded

⁶⁵ Hailbronner M, 'Transformative Constitutionalism: Not Only in the Global South', *American Journal of Comparative Law*, 65(3), 2017, 532.

⁶⁶ Klare KE, 'Legal Culture and Transformative Constitutionalism' 14(1) *South African Journal on Human Rights*, 1998, 150.

⁶⁷ Mwenda M, *The Context of Transformative Constitutionalism in Kenya*, 2010, 2-3 <https://ssrn.com/abstract=2624928>.

⁶⁸ Mwenda M, *The Context of Transformative Constitutionalism in Kenya*, 2010, 2-3 <https://ssrn.com/abstract=2624928>.

⁶⁹ Mwenda M, *The Context of Transformative Constitutionalism in Kenya*, 2010, 3-4.

⁷⁰ Mwenda M, *The Context of Transformative Constitutionalism in Kenya*, 2010, 3-4.

for the equitable access of energy resources with the aim of not only meeting environmental goals but also ensuring socio-economic upliftment for all.⁷¹

2.2 Human rights theory

Human rights theory is grounded on the fundamental notion that every individual is entitled to certain inalienable rights that uphold their dignity, regardless of their background or identity.⁷² These rights encompass basic freedoms such as the right to life, liberty, and security, along with the rights to education, health, and adequate living standards.⁷³ Scholar John O'Manique posits that human rights are based on evolution and human development, and conceptualises a three-step process into understanding the basis of human rights;

- (a) Man ought to survive
- (b) X is necessary for his survival
- (c) Therefore, he ought to have X.⁷⁴

From this three-part conceptualisation, John O'Manique asserts that a human being must have access to essential resources (life, education, healthcare, clean water) in order to survive, and these resources as well as man's ability to access them should be safeguarded. In context of his conceptualisation, access to energy can therefore be viewed as a means to the fulfilment of human rights and a requirement for substantive equality and non-discrimination.⁷⁵ Therefore, access to energy can be viewed as a derivative human right, where the inability to access it impacts the basic human needs such as clean water, modern healthcare and better standards of living.⁷⁶

⁷¹ Liebenberg S, *Socio-Economic Rights: Adjudication Under a Transformative Constitution* Juta and Company Ltd, Cape Town, 2010, 10.

⁷² 'Overview of the Human Rights Framework' *International Justice Resource Center* <https://ijrcenter.org/ihr-reading-room/overview-of-the-human-rights-framework/> on 10 December 2024.

⁷³ 'Overview of the Human Rights Framework' *International Justice Resource Center* <https://ijrcenter.org/ihr-reading-room/overview-of-the-human-rights-framework/> on 10 December 2024.

⁷⁴ O'Manique J, 'Universal and Inalienable Rights: A Search for Foundations' 12(4) *Human Rights Quarterly*, 1990, 465-485.

⁷⁵ Huhta K, 'Conceptualising Energy Justice in the Context of Human Rights Law' 41(4) *Nordic Journal of Human Rights*, 2023, 385-386.

⁷⁶ Huhta K, 'Conceptualising Energy Justice in the Context of Human Rights Law' 41(4) *Nordic Journal of Human Rights*, 2023, 385-386.

In addition to John O'Manique's conceptualisation, the question of whether access to energy should be considered a human right can be approached from three perspectives: (a) as a contractual right (b) as a derived right (c) as a universal human right.⁷⁷

Firstly, access to energy as a contractual right is one that arises from specific agreements or relationships within a community, such as rights granted to citizens by the state.⁷⁸ Through this view, access is not an inherent right but rather a privilege or entitlement that is granted based upon membership in a particular society.⁷⁹ John Rawls' theory of justice provides a philosophical foundation for this perspective because he argues that in a just society, individuals would agree to a set of primary goods (rights) that are necessary for a good life.⁸⁰ Electricity as an energy carrier could be considered one of these primary goods as it enables individuals to improve their material and socioeconomic conditions.⁸¹

Secondly, access to energy as a derived right is one that is based on other more fundamental rights.⁸² From this perspective, access to energy is not a standalone right, but is necessary for the fulfilment of other recognised human rights such as the right to adequate housing, health, education and adequate standards of living.⁸³ Olasupo Owoyeye argues that electricity access is already implicit in human rights frameworks because it is often linked to rights such as non-discrimination, equality, adequate living standards and sustainable development.⁸⁴

⁷⁷ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 713.

⁷⁸ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 714-715.

⁷⁹ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 714-715.

⁸⁰ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 714-715.

⁸¹ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 714-715.

⁸² Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 716-717.

⁸³ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 716-717.

⁸⁴ Owoeye. O, 'Access to Energy in Sub-Saharan Africa: A Human Rights Approach to the Climate Change Benefits of Energy Access' *Environmental Law Review* 284, 2016, 285-289.

Finally, access as a universal human right argues that access to electricity should be recognised as a universal human right that is independent of other rights.⁸⁵ This approach is founded on the idea that electricity is essential for human dignity and self-respect, particularly in modern societies where its important in nearly every aspect of human daily life.⁸⁶



⁸⁵ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 718.

⁸⁶ Löfqvist L, 'Is there a universal human right to electricity?', *The International Journal of Human Rights*, 24(6), 2020, 718.

CHAPTER 3: THE CASE FOR DECENTRALISATION IN KENYA'S ENERGY DISTRIBUTION

3.1 Introduction

As discussed in chapter three, access to energy does not simply mean physical access (installed infrastructure), but also encompasses the broader aspect of meaningful access. In chapter two the paper recognised that Kenya has made great strides in ensuring access, however, it noted that many still lack meaningful access due to high energy costs, inconsistent supply, and reliance on unsustainable energy sources such as biomass and kerosene. Former UN Secretary-General Kofi Annan expressed that, “the governance of power utilities is at the heart of Africa's energy crisis”, illustrating how governments often treat utilities, such as electricity and water, as mere vehicles for corruption and sites for political patronage.⁸⁷ Decentralisation of distribution in the energy sector is therefore a crucial strategy needed in order to ensure meaningful access and to address the persistent gaps.⁸⁸

The unbundling of the electricity sector was a crucial step in decentralisation, the rationale behind it was that parts of the electricity value chain, such as distribution, are open to competition, whereas transmission and generation tend to be natural monopolies.⁸⁹ By separating these functions, Kenya aimed to create a more efficient, reliable and competitive energy market that would improve access.⁹⁰ However, while generation has seen increased private sector involvement through IPP's, allowing for the expansion and modernisation of its operations, distribution remains monopolised by KPLC.⁹¹ The centralisation of distribution has resulted in inefficiencies such as unreliable

⁸⁷ Zalengera C, To L.S, Sieff R., Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R, and Batchelor S, ‘Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?’, *Journal of Environmental Studies and Sciences*, 10(2), 2020, 272-273.

⁸⁸ Zalengera et al., ‘Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?’ 273.

⁸⁹ Twesigye P, ‘Structural, Governance, & Regulatory Incentives for Improved Utility Performance: A Comparative Analysis of Electric Utilities in Tanzania, Kenya, and Uganda’ 79 *Utilities Policy*, 2022, 6.

⁹⁰ Achola. K, “The Past, Present and Future of Kenya’s Power Sector.” *Kenyan Engineer*, 2023, 15.

⁹¹ Achola. K, “The Past, Present and Future of Kenya’s Power Sector.” *Kenyan Engineer*, 2023, 15.

supply, high costs and slow grid expansion to rural and underserved areas, thus hindering meaningful access to energy.⁹²

This chapter will discuss centralised and decentralised energy systems and provide a case for the decentralisation of energy distribution. In addition to that, the chapter will examine the role of competition laws in the decentralisation of electricity distribution by analysing the legal and regulatory framework governing competition in public utilities in the Competition Act 2010 and the Energy Act 2019.

3.2 Centralised and decentralised energy distribution systems

3.2.1 Centralised energy distribution systems

Centralised energy distribution systems typically involve a single entity taking up responsibility for the distribution of electricity from a central point to consumers across a broader area.⁹³ This model usually relies on a large utility company or state-run entity to manage the generation, transmission and distribution of electricity.⁹⁴ Following the reforms under president Mwai Kibaki, Kenya made an attempt at decentralising the energy distribution system through the introduction of KenGen which became responsible for the generation of assets.⁹⁵ The intention behind these reforms was to enhance efficiency, introduce competition and encourage the private sector involvement through the introduction of IPOs, which would facilitate the infusion of capital to assist in expansion and development.⁹⁶ However, despite the reforms being aimed at decentralisation, the core structure of centralised energy distribution remained unchanged due to KPLC retaining its dominant role as the sole distributor.⁹⁷

KPLC's dominance stems from the fact that grid electricity transmission and distribution in many African countries operate as powerful monopolies that are susceptible to state capture and

⁹² Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

⁹³ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 2.

⁹⁴ Sieff R, 'Why Decentralisation of Energy Governance Matters: The Case of Kenya' *Policy Brief*, June 2021, 1-3.

⁹⁵ Achola K, 'The past, present and future of Kenya's power sector', *Kenyan Engineer*, 2023, 15.

⁹⁶ Achola K, 'The past, present and future of Kenya's power sector', *Kenyan Engineer*, 2023, 15.

⁹⁷ Sieff R, 'Why Decentralisation of Energy Governance Matters: The Case of Kenya' *Policy Brief*, June 2021, 1-3.

inefficiency, which often results in limited access to reliable electricity, lack of accountability, and high costs for consumers.⁹⁸ This monopolistic control contributes to governance issues because the absence of competition allows for KPLC to operate without strong incentives for transparency or performance improvement thus further exacerbating inefficiencies.⁹⁹ The centralised distribution model further entrenches these governance challenges by creating bottlenecks in the supply chain, limiting access and greatly increasing the risk of systemic failures.¹⁰⁰

In addition, this model often fails to provide meaningful access even in areas where the infrastructure already exists due to its inherent structural and operational limitations.¹⁰¹ By its nature, the centralised system is designed to operate on a large scale, prioritising efficiency and cost-effectiveness over flexibility, quality and responsiveness to local demands.¹⁰² This rigidity results in an inconsistent, unaffordable, unaccountable energy delivery system, which in essence encapsulates the very nature of KPLC and their operations.¹⁰³

3.2.2 Decentralised energy distribution systems

A decentralised energy distribution system is characterised by the dissolution of vertical integrated utilities with the aim of creating a more competitive market that allows for multiple distributors.¹⁰⁴

The purpose of this model is to enhance efficiency, improve service delivery, enable widespread

⁹⁸ Zalengera C, To L.S, Sieff R., Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R, and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?', *Journal of Environmental Studies and Sciences*, 10(2), 2020, 272-273.

⁹⁹ Zalengera C, To L.S, Sieff R., Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R, and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?', *Journal of Environmental Studies and Sciences*, 10(2), 2020, 272-273

¹⁰⁰ Zalengera C, To L.S, Sieff R., Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R, and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?', *Journal of Environmental Studies and Sciences*, 10(2), 2020, 272-273

¹⁰¹ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 5.

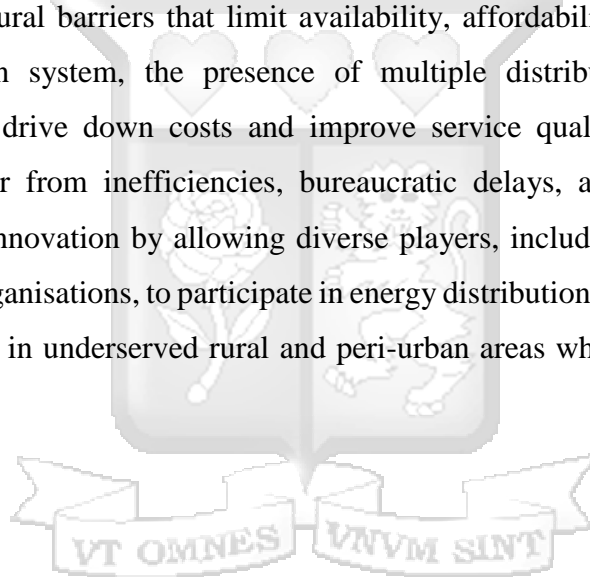
¹⁰² Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 3.

¹⁰³ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 20.

¹⁰⁴ Rotenberg J, 'Energy Efficiency in Regulated and Deregulated Markets' *Cambridge Working Papers in Economics*, University of Cambridge, 2019, 8-9.

access and promote fair competition by reducing the reliance on a single distributor.¹⁰⁵ Additionally, the push for decentralisation comes in largely because of its potential to lower consumers costs and reduce inefficiencies, as it eliminates the monopolistic hold of the centralised system and introduces market dynamics that highly incentivise performance.¹⁰⁶ One of the key benefits of decentralised energy systems is the stimulation of competition, particularly in distribution and enhancing access.¹⁰⁷ In many cases, vertically integrated utilities have been resistant to efficiency improvements because they do not face competitive pressure and Kenya's centralised distribution system is no exception to this fact.¹⁰⁸

Decentralisation plays a crucial role in ensuring broader and more meaningful access to energy, by breaking down structural barriers that limit availability, affordability and reliability.¹⁰⁹ In a decentralised distribution system, the presence of multiple distributors leads to increased competition, which can drive down costs and improve service quality.¹¹⁰ Unlike centralised systems that often suffer from inefficiencies, bureaucratic delays, and monopolistic control, decentralisation fosters innovation by allowing diverse players, including private sector entities and community-based organisations, to participate in energy distribution.¹¹¹ This, in turn, enhances accessibility, particularly in underserved rural and peri-urban areas where centralised grids may not extend.¹¹²



¹⁰⁵ Rotenberg, 'Energy Efficiency in Regulated and Deregulated Markets,' 8-9.

¹⁰⁶ Rotenberg, 'Energy Efficiency in Regulated and Deregulated Markets,' 8-9.

¹⁰⁷ Joskow PL, 'Lessons Learned from Electricity Market Liberalization' *The Energy Journal*, Special Issue, 2008, 11-12

¹⁰⁸ Joskow PL, 'Lessons Learned from Electricity Market Liberalization' *The Energy Journal*, Special Issue, 2008, 11-12.

¹⁰⁹ Joskow PL, 'Lessons Learned from Electricity Market Liberalization' *The Energy Journal*, Special Issue, 2008, 11-12.

¹¹⁰ Joskow PL, 'Lessons Learned from Electricity Market Liberalization' *The Energy Journal*, Special Issue, 2008, 11-12.

¹¹¹ Zalengera C, To LS, Sieff R, Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?' 10(2) *Journal of Environmental Studies and Sciences*, 2020, 272-273

¹¹² Zalengera C, To LS, Sieff R, Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?' 10(2) *Journal of Environmental Studies and Sciences*, 2020, 272-273

3.3 The case for decentralising energy distribution in Kenya: An analysis on the legal framework

As discussed in the previous section, Kenya's centralised energy distribution system has resulted in significant inefficiencies including, high electricity costs, unreliable supply, and limited access to energy. The monopolistic control of distribution has limited competition, reduced incentives for efficiency, transparency and service improvement. These challenges have contributed to an energy sector that struggles to provide meaningful access to electricity. To address these pertinent issues, decentralisation (as discussed in the previous section), seemingly presents a viable and necessary solution/alternative. Decentralisation of the energy distribution system allows for the introduction of competition which can drive down consumer costs, enhance access and create a more responsive and adaptable energy market.

This section will explore the case for decentralising Kenya's energy distribution, focusing on the legal and regulatory framework governing the energy sector and the potential challenges and gaps that must be addressed in order to decentralise distribution. A key aspect of this discussion will be to assess the extent to which the Energy Act 2019 and EPRA support decentralisation and enable alternative distribution models. In addition to that, the section will analyse the Competition Act 2010 and its role in preventing monopolistic (centralised) control over energy distribution.

3.3.1 The Energy Act 2019

The Energy Act 2019 plays a crucial role in shaping Kenya's energy landscape by consolidating the country's laws on energy regulation.¹¹³ One of the act's primary objectives is to facilitate access to affordable, reliable and sustainable energy services for all, thus aligning with the global push for universal access outlined in the UN SDG7.¹¹⁴ Due to the centrality of energy in socioeconomic development, the act establishes EPRA to oversee and streamline the energy sector.¹¹⁵ EPRA is tasked with regulating the generation, importation, exportation, transmission, distribution and

¹¹³ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches' 2024, 8-9.

¹¹⁴ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches' 2024, 8-9.

¹¹⁵ Section 10, *Energy Act* (Act No 1 of 2019).

supply of energy in Kenya.¹¹⁶ Its mandates include licensing energy providers, setting tariffs, ensuring compliance with environmental standards and protecting consumer interests.¹¹⁷

Prior to the unbundling of the electricity sector, KPLC performed the generation, distribution and transmission of electricity as an integrated utility, however, following reforms in the energy sector these functions were split.¹¹⁸ The act formalises these structural reforms and reflects them through providing explicit provisions that define the functions of generation, transmission, and distribution.¹¹⁹ This structured separation aims to reinforce the sector's unbundling, stimulate competition, enhance efficiency and improve regulatory oversight.¹²⁰ This is particularly evident in energy generation, where the inclusion of IPPs in energy generation has enabled them to compete alongside public utilities to supply electricity to the national grid.¹²¹ However, the same cannot be said for distribution as it remains highly centralised with KPLC operating as the sole distributor, limiting competition and consumer choice in the sector.¹²²

Conversely, the lack of competition in distribution is contradictory given that section 139 of the act permits the registration and inclusion of additional distributors, thus implying that the energy distribution system ought to be decentralised.¹²³ Despite this provision KPLC continues to dominate distribution, raising questions about whether the Act has effectively enabled decentralisation or merely provided a theoretical framework without proper implementation mechanisms.¹²⁴ A significant challenge when it comes to breaking down KPLC's distribution

¹¹⁶ Section 10, *Energy Act* (Act No 1 of 2019).

¹¹⁷ Section 10, *Energy Act* (Act No 1 of 2019).

¹¹⁸ Omollo J, *Institutional Framework of Kenya's Public Electricity Utilities, Legal Labyrinths and Their Prospective Solutions in Regulation of State-Owned Monopoly Utilities*, University of Nairobi, 2014, 4.

¹¹⁹ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 35.

¹²⁰ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches' 2024, 9.

¹²¹ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 35.

¹²² Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 35.

¹²³ Muigua K, 'Achieving Just Energy Transition: Examining the Efficacy of Kenya's Policy and Regulatory Approaches' 2024, 10.

¹²⁴ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 37.

dominance is their control over the distribution infrastructure which creates substantial entry barriers for potential competitors.¹²⁵

Unlike the generation sector where IPPs can develop their own power plants, distribution is heavily reliant on pre-existing networks.¹²⁶ The act in sections 139-142 does not address this barrier to entry as it fails to provide a clear framework for how new distributors can access existing infrastructure or develop their own networks.¹²⁷ While it acknowledges the potential for multiple distributors, it does not establish wheeling regulations or mandatory open-access provisions which require KPLC to allow fair and non-discriminatory use of its distribution network.¹²⁸ Open-access provisions are important in the decentralisation of distribution as they allow for the existence of multiple industrial and commercial distributors and improves accessibility as well as energy security within the sector.¹²⁹ This lack of regulatory enforcement undermines the intent of Section 139 which theoretically allows for new distributors but does not provide the necessary mechanisms to ensure their participation.

3.3.2 Energy and Petroleum Regulation Authorities (EPRA)

Under Section 10 of the Energy Act, EPRA is primarily mandated to focus on licensing, tariff regulation, and compliance monitoring in the energy sector.¹³⁰ While these functions are important for ensuring orderly and efficient energy distribution, they do not provide proper implementation mechanisms to allow for the entrance of new distributors.¹³¹ EPRA's role does not extend to actively fostering and facilitating the decentralisation of distribution as it lacks the necessary

¹²⁵ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 3.

¹²⁶ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 38.

¹²⁷ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 3.

¹²⁸ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 3.

¹²⁹ National Association of Regulatory Utility Commissioners (NARUC), 'Kenyan Regulators Advance Open Access Market Framework and Rule to Expand Electricity Access and Promote Regional Power Trade', 2020, 1-2/

¹³⁰ Section 10, *Energy Act* (Act No 1 of 2019).

¹³¹ Section 10, *Energy Act* (Act No 1 of 2019).

enforcement powers to facilitate the entry of other distributors, and thus allows for distribution to remain centralised.¹³²

Additionally, EPRA's tariff-setting function, while crucial for protecting consumers and regulating the market, does not address the market distortions caused by the centralisation in distribution.¹³³ Due to the fact that KPLC remains as the sole off-taker of electricity from IPPs, EPRA's tariff interventions primarily affect consumer pricing rather than providing structural changes to the market itself.¹³⁴ The absence of other distributors means that EPRA's ability to regulate tariffs effectively is constrained because there is no competitive pricing pressure to drive down costs or improve efficiency.¹³⁵ KPLC operating as the sole off-taker and distributor of electricity significantly reduces the effectiveness of EPRA as a regulatory body because the centralised system undermines EPRA's ability to foster a more dynamic and efficient market.¹³⁶

However, EPRA as a regulatory body has faced significant criticism for its role in perpetuating the dominance of KPLC in distribution.¹³⁷ The actions and inactions of EPRA have often aligned with the interests of KPLC rather than fostering a competitive and efficient market.¹³⁸ The regulatory authority has been criticised for failing to enforce performance standards despite widespread complaints about poor service delivery, frequent power outages, lack of access and system

¹³² Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 38.

¹³³ Karekezi S and Kimani J, 'Status of Power Sector Reform in Africa: Impact on the Poor' 30(11-12) *Energy Policy*, 2002, 927-928.

¹³⁴ Karekezi S and Kimani J, 'Status of Power Sector Reform in Africa: Impact on the Poor' 30(11-12) *Energy Policy*, 2002, 927-928.

¹³⁵ Karekezi S and Kimani J, 'Status of Power Sector Reform in Africa: Impact on the Poor' 30(11-12) *Energy Policy*, 2002, 930-932.

¹³⁶ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 38.

¹³⁷ Constant Munda, 'Kenya Power Monopoly to End Early Next Year' *Business Daily Africa*, 1 October 2024 <https://www.businessdailyafrica.com/bd/corporate/companies/kenya-power-monopoly-to-end-early-next-year-4782544> on February 18 2025.

¹³⁸ Constant Munda, 'Kenya Power Monopoly to End Early Next Year' *Business Daily Africa*, 1 October 2024 <https://www.businessdailyafrica.com/bd/corporate/companies/kenya-power-monopoly-to-end-early-next-year-4782544> on February 18 2025.

losses.¹³⁹ EPRA's inability to hold KPLC accountable for its inefficiencies barricades consumers' ability to achieve meaningful access to energy.

3.3.3 The Competition Act 2010

The Competition Act in Kenya was enacted to promote fair competition, protect consumers and prevent monopolistic practices across various sectors, including energy.¹⁴⁰ However, the legal framework for competition in the energy sector has historically been weak, particularly due to the institutional monopolies and the lack of clear regulatory enforcement and thus hindered decentralisation.¹⁴¹ Despite the liberalisation efforts seen in energy generation where IPPs can compete alongside KenGen, the CAK has little jurisdiction over distribution, meaning that cases of abuse of market dominance or unfair pricing structures within distribution are often unaddressed.¹⁴² This lack of or limited jurisdiction has allowed KPLC to retain its monopoly as the sole distributor, reinforcing barriers to meaningful energy access and perpetuating systemic inefficiencies.¹⁴³

The failure to introduce clear guidelines on how competition should be enforced within the energy sector, particularly regarding open-access/wheeling regulations to enable access to the distribution infrastructure is one of the critical gaps of the Competition Act.¹⁴⁴ While section 139 of the Energy Act allows for the inclusion of additional distributors, there is no clear framework that mandates KPLC to provide fair and non-discriminatory access to its infrastructure.¹⁴⁵

¹³⁹ Constant Munda, 'Kenya Power Monopoly to End Early Next Year' *Business Daily Africa*, 1 October 2024 <https://www.businessdailyafrica.com/bd/corporate/companies/kenya-power-monopoly-to-end-early-next-year-4782544> on February 18 2025.

¹⁴⁰ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 5.

¹⁴¹ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 38.

¹⁴² Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 38.

¹⁴³ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

¹⁴⁴ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

¹⁴⁵ Zalengera C, To LS, Sieff R, Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?' 10(2) *Journal of Environmental Studies and Sciences*, 2020, 274.

3.3.4 Okiya Omtatah Okiiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others [2020] KEHC 2508 (KLR).

The absence of a well-defined competition framework that aligns with the Energy Act has resulted in legal disputes, most notably in *Okiya Omtatah Okiiti v Attorney General & 3 others* (2021). In this case, Okiya Omtatah and his co-petitioners brought a constitutional challenge against KPLC and CAK with their primary argument being that KPLC's monopoly over distribution was unconstitutional and contrary to competition laws.

They contended that the exclusivity granted to KPLC violated Articles 10, 19, 46, 227 and 232 of the Constitution of Kenya by limiting consumer choice and fostering inefficiencies in the energy sector.¹⁴⁶ They claimed that the Energy Regulatory Commission (ERC), now EPRA, had failed in its duty under Section 27 of the Energy Act by not licensing additional distributors.¹⁴⁷ Similarly, they argued that the CAK had neglected its obligations under Sections 9 and 50 of the Competition Act by failing to investigate or take action against KPLC's dominance.¹⁴⁸ The petition sought multiple declarations including finding that KPLC was a monopoly, an order compelling CAK to break KPLC's dominance and additionally, a directive requiring that EPRA license new distributors.¹⁴⁹

In response to the petitioners, KPLC, EPRA and CAK opposed their petition primarily on jurisdictional grounds.¹⁵⁰ The respondents argued that;

- (a) The petitioners had failed to exhaust the available statutory and alternative procedures provided by statutes

¹⁴⁶ *Okiya Omtatah Okiiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁴⁷ *Okiya Omtatah Okiiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁴⁸ *Okiya Omtatah Okiiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁴⁹ *Okiya Omtatah Okiiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁵⁰ *Okiya Omtatah Okiiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

- (b) The petition is premature as the petitioners did not submit their grievances to the ERC as required under Section 6 (1) of the Energy Act with the option to appeal to the Energy Tribunal under Section 26 and 107.

The High Court of Kenya ultimately struck out the petition ruling that it lacked jurisdiction to hear the matter at that stage.¹⁵¹ The court emphasised that the doctrine of exhaustion requires parties to first seek redress through the specialised regulatory bodies before approaching the judiciary.¹⁵² It held that EPRA was the appropriate authority to handle disputes regarding electricity distribution and competition, with any appeals directed to the Energy Tribunal.¹⁵³ Similarly, competition-related complaints fell under CAK's mandate, with appeals to be heard by the Competition Tribunal.¹⁵⁴ The court reasoned that regulatory bodies possess the necessary technical expertise to address such matters and that judicial intervention should only occur after these mechanisms have been exhausted.¹⁵⁵

However, the question of whether the court genuinely lacked jurisdiction is debatable. While the exhaustion doctrine is designed to promote efficiency and respect for specialised agencies, courts have the discretion to intervene in exceptional circumstances, such as where regulatory bodies are ineffective, unwilling to act or the pursuit of alternative procedures would be futile.¹⁵⁶ Additionally, the court may exercise discretion where the dispute involves fundamental constitutional questions that go beyond regulatory enforcement, therefore, if a case presents significant constitutional issues the High Court may be justified in hearing the matter directly

¹⁵¹ *Okiya Omtatah Okoiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁵² *Okiya Omtatah Okoiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁵³ *Okiya Omtatah Okoiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁵⁴ *Okiya Omtatah Okoiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁵⁵ *Okiya Omtatah Okoiti & another v Kenya Power and Lighting Company Limited (KPLC) & 4 others* [2020] KEHC 2508 (eKLR).

¹⁵⁶ Odera C and Arora R, 'Way to go: Exhaustion of alternative remedies and exceptional circumstances in judicial review' Oraro & Company Advocates, 2024. <https://www.oraro.co.ke/way-to-go-exhaustion-of-alternative-remedies-and-exceptional-circumstances-in-judicial-review/> Accessed on 16th February 2025

rather than deferring it to administrative bodies.¹⁵⁷ The petitioners in this case invoked various constitutional provisions when arguing that KPLC's monopoly and the inaction of the regulatory body infringed on consumer rights and broader constitutional principles.¹⁵⁸

While the court dismissed the petition for failure to exhaust alternative remedies, it could have taken a more flexible approach given the constitutional dimension of the case.¹⁵⁹ One of the key constitutional issues presented by the petitioners was the right to consumer protection under Article 46 of the Constitution.¹⁶⁰ The petitioners argued that the centralised distribution system caused by KPLC's monopoly resulted in high electricity costs and poor service delivery, effectively depriving consumers fair and reasonable access to energy.¹⁶¹

3.4 Conclusion

Decentralisation of energy distribution in Kenya is a critical step toward achieving meaningful access to electricity. While Kenya has made notable progress in unbundling the electricity sector, distribution remains highly centralised under KPLC, leading to inefficiencies such as high costs, unreliable supply, and limited accessibility. The persistence of this centralised structure contradicts the principles of competition and efficiency that initially motivated the sectoral reforms.¹⁶²

This chapter has demonstrated that centralised distribution systems, by their nature, create structural barriers that limit competition, consumer choice and affect access, while decentralised

¹⁵⁷ Odera C and Arora R, 'Way to go: Exhaustion of alternative remedies and exceptional circumstances in judicial review' Oraro & Company Advocates, 2024. <https://www.oraro.co.ke/way-to-go-exhaustion-of-alternative-remedies-and-exceptional-circumstances-in-judicial-review/> Accessed on 16th February 2025

¹⁵⁸ Odera C and Arora R, 'Way to go: Exhaustion of alternative remedies and exceptional circumstances in judicial review' Oraro & Company Advocates, 2024. <https://www.oraro.co.ke/way-to-go-exhaustion-of-alternative-remedies-and-exceptional-circumstances-in-judicial-review/> Accessed on 16th February 2025

¹⁵⁹ Odera C and Arora R, 'Way to go: Exhaustion of alternative remedies and exceptional circumstances in judicial review' Oraro & Company Advocates, 2024. <https://www.oraro.co.ke/way-to-go-exhaustion-of-alternative-remedies-and-exceptional-circumstances-in-judicial-review/> Accessed on 16th February 2025

¹⁶⁰ Omollo J, 'Institutional Framework of Kenya's Public Electricity Utilities, Legal Labyrinths and Their Prospective Solutions in Regulation of State-Owned Monopoly Utilities,' University of Nairobi, 2014, 4.

¹⁶¹ Omollo J, 'Institutional Framework of Kenya's Public Electricity Utilities, Legal Labyrinths and Their Prospective Solutions in Regulation of State-Owned Monopoly Utilities,' University of Nairobi, 2014, 4.

¹⁶² Omollo J, 'Institutional Framework of Kenya's Public Electricity Utilities, Legal Labyrinths and Their Prospective Solutions in Regulation of State-Owned Monopoly Utilities,' University of Nairobi, 2014, 4.

systems encourage efficiency, reliability, and affordability. Although the Energy Act 2019 provides a framework for competition in distribution, its lack of enforcement mechanisms has allowed KPLC to maintain its central role in distribution. Additionally, EPRA's role as a regulator remains limited in its capacity to actively promote decentralisation. Finally, the Competition Act is a key legal instrument intended to encourage market competitiveness, however, its effectiveness in the energy sector remains questionable as it has not been sufficiently leveraged to decentralise distribution or encourage new entrants.



CHAPTER 4: ENERGY ACCESS AND SOCIOECONOMIC DEVELOPMENT

4.1 Introduction

Access to energy is not simply about the readily availability of usable energy sources but also about the transformative impact such access has on human development.¹⁶³ Energy is a cornerstone of modern life, it drives industrialisation, fosters innovation, and improves the overall quality of life.¹⁶⁴ Access to electricity, in particular, is essential to human development as it allows for the basic functioning of modern societies and significantly improves the quality of life.¹⁶⁵ Electricity enables critical services such as lighting, heating, cooling, and communication, all of which are fundamental to daily living and socio-economic progress.¹⁶⁶ This chapter will consider the nature of energy access, examining what constitutes meaningful and sustainable access beyond mere availability. It will then explore the energy-poverty nexus, highlighting how limited energy access exacerbates poverty by hindering economic and social opportunities.

4.2 What constitutes meaningful access?

In the past, access to energy was synonymous with the ability to power a home for basic needs such as lighting, cooking, and heating.¹⁶⁷ However, meaningful access to energy goes far beyond mere availability; it encompasses reliability, affordability, and sustainability, ensuring that energy supports education, healthcare, and economic productivity.¹⁶⁸ Despite this expanded understanding, rural and underserved areas often struggle to meet even the most basic energy needs

¹⁶³ Odarno L, 'Linking Electricity Access and Development Outcomes in Africa: A Framework for Action' *World Resources Institute*, 29 July 2020, 5-7 <https://www.wri.org/research/linking-electricity-access-and-development-outcomes-africa-framework-action> on 20 December 2024.

¹⁶⁴ Odarno L, 'Linking Electricity Access and Development Outcomes in Africa: A Framework for Action' *World Resources Institute*, 29 July 2020, 5-7 <https://www.wri.org/research/linking-electricity-access-and-development-outcomes-africa-framework-action> on 20 December 2024.

¹⁶⁵ Odarno L, 'Linking Electricity Access and Development Outcomes in Africa.' 5-7.

¹⁶⁶ Ye G, 'The Impact of Electricity Access on Education in Kenya' *Master's Thesis, University of Illinois at Urbana-Champaign*, 2017, 1.

¹⁶⁷ Bhatia M and Angelou N, 'Beyond Connections: Energy Access Redefined' *Technical Report 008/15, Energy Sector Management Assistance Program, World Bank*, 2015, 1.

¹⁶⁸ Bhatia M and Angelou N, 'Beyond Connections: Energy Access Redefined' *Technical Report 008/15, Energy Sector Management Assistance Program, World Bank*, 2015, 1.

with many households lacking the ability to power their homes for essential activities.¹⁶⁹ Many rural and underserved areas are dependent on biomass, charcoal, or coal for basic functions such as heating, cooking, and lighting.¹⁷⁰ While providing some immediate solutions, these traditional energy sources are neither reliable nor sustainable.¹⁷¹

The Energy Act 2019 defines access as, “the non-discriminatory provision for the use of an electric transmission or distribution system by any licensee or consumer”.¹⁷² It can be drawn from the definition that access to energy focuses on the physical ability to connect to an electric transmission or distribution system, often adopting a binary approach that simplifies energy access into two categories: those who are connected and those who are not.¹⁷³ This means that once a household is connected to the grid, no matter how minimal or unreliable the connection may be, it is considered to have energy access.¹⁷⁴ Such an approach ignores the varying degrees of access, such as whether it is reliable, affordable or sufficient to meet the households needs.¹⁷⁵ Therefore, by framing energy access as a yes-or-no condition, the binary approach fails to account for the complex, multi-layered realities of energy needs.¹⁷⁶

4.2.1 Affordability

Affordability is a fundamental component of meaningful energy access, ensuring that households can utilise energy without financial strain. It goes beyond the mere presence of energy services to focus on whether individuals can consistently pay for energy in a way that does not compromise

¹⁶⁹ Bhatia M and Angelou N, ‘Beyond Connections: Energy Access Redefined’ *Technical Report 008/15, Energy Sector Management Assistance Program, World Bank*, 2015, 1.

¹⁷⁰ Pachauri S, ‘Energy Access for Development’ in *Global Energy Assessment*, International Institute for Applied Systems Analysis, 2012, 1408.

¹⁷¹ Pachauri S, ‘Energy Access for Development’ in *Global Energy Assessment*, International Institute for Applied Systems Analysis, 2012, 1408.

¹⁷² Section 2, *Energy Act (No 1 of 2019)*

¹⁷³ Bhatia M and Angelou N, ‘*Beyond Connections: Energy Access Redefined*’, Technical Report 008/15, Energy Sector Management Assistance Program, World Bank, 2015, 26.

¹⁷⁴ Bhatia M and Angelou N, ‘*Beyond Connections: Energy Access Redefined*’, Technical Report 008/15, Energy Sector Management Assistance Program, World Bank, 2015, 26.

¹⁷⁵ Osiemo M R, ‘Energy Sustainability in Kenya’s Electricity Sector: An Analysis of the Institutional and Legal Framework,’ Published LLM Thesis, University of Nairobi, 2012, 83.

¹⁷⁶ Bhatia M and Angelou N, ‘*Beyond Connections: Energy Access Redefined*’, Technical Report 008/15, Energy Sector Management Assistance Program, World Bank, 2015, 26.

other essential needs such as food, healthcare, and education. For energy access to be meaningful, pricing structures must account for the socio-economic realities of diverse communities, particularly in low-income and rural areas where the ability to pay for energy is often limited. The high cost of energy disproportionately affects marginalised communities, pushing many to rely on traditional energy sources such as charcoal, firewood, or kerosene.¹⁷⁷ These alternatives are often cheaper upfront but come with significant long-term costs, including health risks from indoor air pollution, environmental degradation, and inefficiency in meeting household energy needs¹⁷⁸

Addressing affordability involves designing solutions that enable low-income households to transition to cleaner and more reliable energy sources without facing prohibitive costs.¹⁷⁹ This can include targeted subsidies, pay-as-you-go systems, or community-based energy initiatives that spread costs over time and make energy more accessible.¹⁸⁰ When energy is affordable, it can drive economic activity by supporting small businesses, enhancing agricultural productivity, and enabling access to education and healthcare facilities.¹⁸¹ By addressing affordability, energy access can become a tool for sustainable development, empowering individuals and communities to thrive.¹⁸²

The Energy Act 2019 touches on affordability in Section 7(1), requiring that the Government facilitates the provision of affordable energy services to all persons in Kenya.¹⁸³ The Act lacks specific mechanisms or mandates for subsidising energy costs for vulnerable populations, relying instead on broad market-driven frameworks that often fail to address the unique challenges faced

¹⁷⁷ Rao ND and Pachauri S, 'Energy Access and Living Standards: Some Observations on Recent Trends' 12(2) *Environmental Research Letters* 024011, 2017, 3-4.

¹⁷⁸ Rao ND and Pachauri S, 'Energy Access and Living Standards: Some Observations on Recent Trends' 12(2) *Environmental Research Letters* 024011, 2017, 3-4.

¹⁷⁹ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

¹⁸⁰ Bonnell CJ, 'Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development' Published Honors Thesis, University of Massachusetts, Amherst, 2021, 10-12.

¹⁸¹ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 76.

¹⁸² Jefferson W, Elisabeth M, Michael J, Michael W and William A, 'Sustainable Energy: Choosing Among Options in *Sustainable Energy*' MIT Press, Boston, 2005, 3.

¹⁸³ Section 7(1), *Energy Act* (No 1 of 2019).

by rural and underserved areas.¹⁸⁴ Without explicit provisions to support affordability, the Act risks leaving behind the very populations most in need of affordable energy.¹⁸⁵

4.2.2 Reliability

Despite connection, the electricity supply remains unreliable or of poor quality in many parts of Kenya.¹⁸⁶ Frequent power outages, voltage fluctuations, and insufficient infrastructure continue to undermine the benefits of electricity access.¹⁸⁷ Power outages, in particular, have far-reaching implications.¹⁸⁸ For households, they mean interrupted daily routines and forced reliance on costly alternatives like kerosene lamps and diesel generators, which are both economically and environmentally unsustainable.¹⁸⁹ Businesses, especially small and medium enterprises, suffer financial losses due to halted operations, damaged equipment, and increased expenditures on backup power solutions.¹⁹⁰

While the Energy Act of 2019 and EPRA aim to regulate and improve the energy sector, their frameworks have yet to establish enforceable performance standards that are necessary to ensure reliable power supply.¹⁹¹ Section 141 of the act requires that distributors,

“Collect, analyse and maintain such data, information and statistics relating to his undertaking to enable him to monitor and report to the Authority on the reliability and quality of supply as well as quality of service.”¹⁹²

Section 141 places the responsibility of monitoring and reporting on distributors but does not go far enough to set mandatory benchmarks or penalties for failing to meet reliability standards.¹⁹³

¹⁸⁴ ACCESS Coalition, ‘Analysis of Kenya's Energy Act 2019: Towards Achieving Universal Energy Access’ 2020, 6 <https://access-coalition.org/wp-content/uploads/2020/01/Energy-Act-analysis-Final.pdf> on 27 January 2025.

¹⁸⁵ Bonnell CJ, ‘Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development’, Honors Thesis, 2021, 10-12

¹⁸⁶ Twesigye P, ‘Structural, Governance, & Regulatory Incentives for Improved Utility Performance: A Comparative Analysis of Electric Utilities in Tanzania, Kenya, and Uganda’ 79 *Utilities Policy*, 2022, 2-3.

¹⁸⁷ Twesigye P, ‘Structural, Governance, & Regulatory Incentives for Improved Utility Performance: A Comparative Analysis of Electric Utilities in Tanzania, Kenya, and Uganda’ 79 *Utilities Policy*, 2022, 2-3.

¹⁸⁸ Twesigye, ‘Structural, Governance, & Regulatory Incentives for Improved Utility Performance.’ 2-4

¹⁸⁹ Twesigye, ‘Structural, Governance, & Regulatory Incentives for Improved Utility Performance.’ 2-4.

¹⁹⁰ Twesigye, ‘Structural, Governance, & Regulatory Incentives for Improved Utility Performance.’ 2-4.

¹⁹¹ Bonnell CJ, ‘Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development’ Published Honors Thesis, University of Massachusetts, Amherst, 2021, 22.

¹⁹² Section 141, *Energy Act* (Act No 1 of 2019).

¹⁹³ Section 141, *Energy Act* (Act No 1 of 2019).

This lack of specificity is further evidenced through Section 166(2) which states that electricity providers are liable to pay “appropriate compensation” to a consumer for irregular or poor quality of electricity.¹⁹⁴

The act fails to define what constitutes “appropriate compensation”, or establish a standardised framework for determining the extent of liability.¹⁹⁵ While the section acknowledges the need for consumer protection, the lack of specificity weakens its potential impact by creating loopholes that allow electricity distributors to evade accountability.¹⁹⁶ This hinders meaningful access to energy as the unreliable supply disproportionately affects underserved and rural communities that lack the resources to secure alternative energy sources, often leaving them without electricity for days at a time.¹⁹⁷

4.3 The Energy-Poverty Nexus

Poverty extends beyond the absence of income to include the lack of access to essential resources that are crucial for basic well-being and development.¹⁹⁸ There is a reciprocal link between inadequate access to proper energy sources and poverty, often referred to as the “energy-poverty nexus”.¹⁹⁹ Households lacking energy access are trapped in a cycle of deprivation, with limited energy access reducing productivity, income generation, and opportunities for better living standards.²⁰⁰ This, in turn, results in low earnings and minimal surplus cash, leaving households unable to afford improved energy services, perpetuating both poverty and inaccessibility of electricity.²⁰¹ The World Commission on Environment and Development (Brundtland report) opined that,

“Energy supports the provision of basic needs such as cooked food, a comfortable living temperature, lighting, the use of appliances, piped water or sewerage, essential health care (refrigerated vaccines, emergency and intensive care), education aids, communication and

¹⁹⁴ Section 166 (2), *Energy Act* (Act No 1 of 2019).

¹⁹⁵ Bonnell CJ, ‘*Energy Policy in Kenya: Barriers to Electrification and Policy Solutions for More Equitable and Sustainable Grid Development*’, Published Honors Thesis, University of Massachusetts, Amherst, 2021, 22-23.

¹⁹⁶ Bonnell CJ, ‘*Energy Policy in Kenya*’, 22-23.

¹⁹⁷ Bonnell CJ, ‘*Energy Policy in Kenya*’, 22-23.

¹⁹⁸ Pachauri S, ‘Energy Access for Development’ in *Global Energy Assessment*, International Institute for Applied Systems Analysis, 2012, 1408.

¹⁹⁹ Pachauri S, ‘Energy access for development,’ 1408.

²⁰⁰ Pachauri S, ‘Energy access for development,’ 1408.

²⁰¹ Pachauri S, ‘Energy access for development,’ 1408.

transport. Energy also fuels productive activities, including agriculture, commerce, manufacture, industry, and mining. Conversely, lack of access to energy contributes to poverty and deprivation and can contribute to economic decline.”²⁰²

Energy plays a central role in fostering development by supporting essential services such as healthcare, education, and communication, as well as enabling productive activities across sectors like agriculture, manufacturing, and commerce.²⁰³ The Brundtland Report emphasised how energy is not only critical for basic survival, but for advancing economic and social progress. In areas without reliable energy, these services cannot function effectively, which in turn contributes to a broader cycle of poverty.²⁰⁴ Access to energy in rural and underserved areas in Kenya is widely regarded as a critical foundation for poverty alleviation and serves as the initial step toward modernisation.²⁰⁵

Kenya’s Energy Act 2019 in Section 43 establishes a central institution, the Rural Electrification and Renewable Energy Corporation (REREC), to spearhead efforts aimed at improving energy access in rural and underserved areas.²⁰⁶ REREC’s mandate encompasses expanding electricity infrastructure in rural areas and promoting the adoption of renewable energy technologies.²⁰⁷ However, despite its broad goals, the Act and REREC fall short of addressing the specific and diverse needs of rural and underserved areas, leading to a lack of meaningful energy access.²⁰⁸ The Act’s provisions largely focus on expanding infrastructure without adequately considering the socioeconomic realities and cultural contexts of rural populations.²⁰⁹ For many households,

²⁰² World Commission on Environment and Development, ‘Energy: Choices for Environment and Development in *Our Common Future*,’ United Nations, 1987, 140-160.

²⁰³ Bradbrook AJ and Gardam JG, ‘Placing Access to Energy Services within a Human Rights Framework’ 28(2) *Human Rights Quarterly*, 2006, 391.

²⁰⁴ Bradbrook AJ and Gardam JG, ‘Placing Access to Energy Services within a Human Rights Framework’ 28(2) *Human Rights Quarterly*, 2006, 391.

²⁰⁵ Chege NC and Kinoti FK, ‘Risks on the Rural Electrification Project Implementation Performance in Mukurweini Sub-County, Nyeri County, Kenya’ 3(5) *International Academic Journal of Information Sciences and Project Management*, 2019, 53.

²⁰⁶ Chege NC and Kinoti FK, ‘Risks on the Rural Electrification Project Implementation Performance in Mukurweini Sub-County, Nyeri County, Kenya’ 3(5) *International Academic Journal of Information Sciences and Project Management*, 2019, 53.

²⁰⁷ Abuyeka Z, ‘Functions of Rural Electrification & Renewable Energy Corporation’ *Victor Matara*, 2021 <https://victormatara.com/functions-of-rural-electrification-renewable-energy-corporation/> on 27 January 2025.

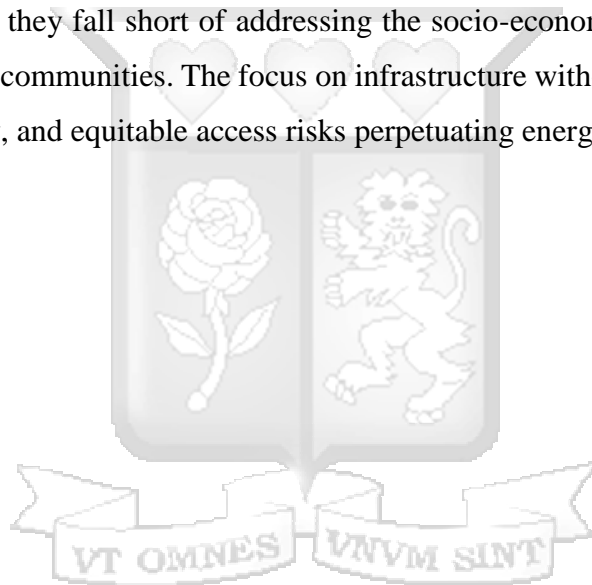
²⁰⁸ Bhatia M and Angelou N, ‘Beyond Connections: Energy Access Redefined’ *Technical Report 008/15, Energy Sector Management Assistance Program, World Bank*, 2015, 26.

²⁰⁹ Bhatia M and Angelou N, ‘Beyond Connections: Energy Access Redefined’ *Technical Report 008/15, Energy Sector Management Assistance Program, World Bank*, 2015, 26.

physical infrastructure alone does not equate to usable energy access; high connection fees, the cost of energy appliances, unreliable connection and the recurring expense of electricity make access unattainable for a majority of the rural poor.²¹⁰

4.4 Conclusion

In conclusion, access to energy is a cornerstone of socioeconomic development, essential for improving living standards, fostering productivity, and breaking the cycle of poverty. However, meaningful and sustainable energy access requires more than just infrastructure; it must address affordability, reliability, and adaptability to the unique needs of underserved populations. While Kenya's Energy Act 2019 and institutions like REREC have made progress in formalising efforts to expand energy access, they fall short of addressing the socio-economic barriers and localised challenges faced by rural communities. The focus on infrastructure without mechanisms to ensure affordability, adaptability, and equitable access risks perpetuating energy inequities.



²¹⁰ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 76.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

This study examined the effectiveness of Kenya's current energy policies and regulatory frameworks in ensuring meaningful and equitable access to energy and highlighted the challenges posed by a centralised distribution system. A key argument in this study is that decentralising the energy distribution system could bridge the access gap and help assure socio-economic development. Currently, KPLC maintains a monopoly over distribution, limiting competition and driving up costs while reducing incentives for efficiency and service improvement. This centralisation has led to inefficiencies including, high costs, inadequate service delivery and restricted consumer choice.

In the final chapter, the research further examined the broader implications of energy access on socioeconomic development by defining meaningful access and exploring the energy-poverty nexus illustrating how limited access to electricity perpetuates socio-economic inequalities. Through the examination of affordability and reliability of electricity, the chapter highlights how the cost of power remains prohibitive for many households, limiting access to a crucial resource for development. Additionally, it highlights how the persistent unreliability of KPLC services disrupts daily life, and stifles productivity. These challenges not only widen the energy access gap but also underscore the need for policy interventions that facilitate the decentralisation of energy distribution.

5.1 Summary of findings

This study examined the effectiveness of Kenya's energy policies and regulatory frameworks in ensuring equitable access to electricity, with a particular focus on the challenges posed by a centralised energy distribution system. The findings highlight that while the Energy Act 2019 provides a legal framework for introducing multiple distributors, the lack of proper enforcement mechanisms has hindered its implementation.²¹¹ Additionally, the Competition Act, which is designed to prevent anti-competitive practices and promote market fairness, has not been effectively applied to stimulate competition in the energy sector.²¹²

²¹¹ Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 37.

²¹² Osiemo M R, 'Energy Sustainability in Kenya's Electricity Sector: An Analysis of the Institutional and Legal Framework,' Published LLM Thesis, University of Nairobi, 2012, 37.

Furthermore, the study underscores the potential of decentralising the energy distribution system as a means to bridge the access gap and promote socio-economic development.²¹³ The lack of competitive forces in the sector has discouraged innovation and investment in alternative energy solutions, such as mini-grids and off-grid renewable systems, which could provide more affordable and sustainable electricity options.²¹⁴

Dominance in any sector breeds complacency, inefficiency and stagnation and nowhere is this more evident than in the energy distribution system.²¹⁵ When a single entity controls the market, consumers are left at its mercy, stripping people of choice and thus turning a basic necessity like electricity or access to energy into a privilege.²¹⁶ The study lays bare the harsh reality that the inability to access essential services deepens inequalities and stunts socioeconomic development.²¹⁷ Inaccessibility is not just an inconvenience, but it is a systemic failure that keeps millions of people trapped in cycles of poverty.

5.2 Recommendations

The inclusion and adoption of wheeling and open-access regulations, is a necessary recommendation, because one of the main barriers to decentralisation is KPLC's control over the distribution infrastructure, making it difficult for new distributors to enter the market. The introduction of mandatory open-access provisions would compel KPLC to allow other distributors to utilise its infrastructure under fair and transparent conditions. This would require strict regulatory oversight to prevent restrictive practices, therefore, EPRA must be empowered with stronger enforcement mechanisms to ensure compliance with these regulations and facilitate decentralisation.

²¹³ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 3.

²¹⁴ Norouzi N and Fani M, 'Monopoly and Competition in the Energy Market: A Legal Analysis' 15(2) *Global Journal of Business Management*, September 2021, 3.

²¹⁵ Zalengera C, To LS, Sieff R, Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?' *Journal of Environmental Studies and Sciences*, 10(2), 2020, 272-273.

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²¹⁷ Zalengera C, To LS, Sieff R, Mohr A, Eales A, Cloke J, Buckland H, Brown E, Blanchard R and Batchelor S, 'Decentralization: The Key to Accelerating Access to Distributed Energy Services in Sub-Saharan Africa?' *Journal of Environmental Studies and Sciences*, 10(2), 2020, 272-273.

Beyond regulatory reforms, the government should actively prompt investment in decentralised energy solutions such as mini-grids, community-based energy projects and off-grid renewable energy systems. Encouraging the private sector and local communities to participate in energy distribution would create localised solutions to energy access challenges. Incentives such as tax breaks, subsidies and streamlined regulatory approvals should be introduced to attract investment in decentralised energy projects.



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