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REPUBLIC OF KENYA

THE NATIONAL ASSEMBLY

THIRTEENTH PARLIAMENT – FOURTH SESSION – 2025

DIRECTORATE OF DEPARTMENTAL COMMITTEES

DEPARTMENTAL COMMITTEE ON ENERGY

....

ADDENDUM REPORT ON THE INQUIRY INTO THE MATTER OF THE REDUCTION OF ELECTRICITY COSTS IN THE COUNTRY BY THE DEPARTMENTAL COMMITTEE ON ENERGY

CLERK'S CHAMBERS

DIRECTORATE OF DEPARTMENTAL COMMITTEES

PARLIAMENT BUILDINGS

NAIROBI

NOVEMBER, 2025

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LIST OF ABBREVIATIONS AND ACRONYMS

BOO	Build Own Operate
BOOT	Build Own Operate Transfer
COD	Commercial Operation Date
EPRA	Energy and Petroleum Regulatory Authority
FY	Financial Year
GDC	Geothermal Development Corporation
GoK	Government of Kenya
GPL	Gulf Power Limited
GWh	Gigawatt hour
IPP	Independent Power Producers
KenGen	Kenya Electricity Generating Company
KETRACO	Kenya Electricity Transmission
KPLC	Kenya Power & Lighting Company
kWh	Kilowatt Watt hour
LCPDP	Least Cost Power Development Plan
LTWP	Lake Turkana Wind Power
MD	Managing Director
M.P-	Member of Parliament
MoEP	Ministry of Energy
MW	Megawatts
MWh	Megawatt hour
PPA	Power Purchase Agreement
PPP	Public Private Partnership
REAP	Renewable Energy Auction Policy
REREC	Rural Electrification and Renewable Energy Corporation
S.O-	Standing Order
TNT	The National Treasury
USD	US Dollars
EPPs	Emergency Power Producers
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
SPDs	Small Power Distributors

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CHAIRPERSON'S FOREWORD

This report details the consideration of the motion on Reduction of the Cost of Electricity in the Country by the Departmental Committee on Energy. The Member for Laikipia County, Hon. Jane Kagiri, OGW, MP on Wednesday 22nd March 2023, moved a motion on Reduction of the Cost of Electricity in the Country pursuant to the National Assembly Standing Order 47. On Wednesday 20th April 2023, pursuant to the provisions of Standing Order 53, the House resolved that: -

i) The Departmental Committee on Energy undertakes an inquiry into the operations of Kenya Power in relation to agreements entered into with IPPs, factors affecting the cost of electricity, including over-reliance on IPPs against available renewable and other energy sources, and measures to reduce it and submits a report to the House within one hundred and twenty (120) days;

ii) In the meantime, the Ministry and Kenya Power should not enter into new contracts with any IPPs until the House makes a resolution on the matter;

iii) Informed by the reports of previous task forces on the matter, the Ministry engages in negotiations with power producers with a view to reducing the cost of power; and

iv) The Ministry and Kenya Power develop suitable strategies for engagements with the IPPs, to provide relief for electricity consumers and ensure the long-term viability and sustainability of the energy sector.

While referring the matter to the Committee and pursuant to Standing Order 218(2), the Hon. Speaker directed that the Departmental Committee on Energy to conduct an inquiry within one hundred and twenty (120) days on the reduction of electricity costs in the country.

The Committee considered the matter in accordance with its mandate as provided for under S.O. 216 (5) (a) which is to, amongst others, investigate, inquire into, and report on all matters relating to the mandate, management activities, administration, operations and estimates of the assigned Ministries and Departments.

The Committee invited the public and stakeholders to participate in the inquiry and make submissions to provide information necessary to enable it to make conclusive findings and also to ensure compliance with the requirements of Article 118 of the Constitution which requires Parliament to involve the public in its proceedings and those of its committees.

In the course of the proceedings, the Committee held over fifteen (15) meetings with the identified stakeholders in the energy sector, regulatory agencies, and independent power producers, among others to receive both written and oral submissions. The observations and recommendations are based on the submissions received.

This report contains the details of Committee proceedings on the matter of reduction of electricity costs in the country, including the Committee's findings and recommendations.

The Committee noted that the cost of power in the country is one of the highest in Africa and this accounts for the high cost of production which acts as a disincentive to investment, affecting Kenya's competitiveness to attract investment. It is recommended that in order to reduce the cost of power, amongst others, the government should implement the recommendations contained in this report.

The Committee is thankful to the Office of the Speaker, the Office of the Clerk, and the Secretariat for their support to the Committee as it discharges the oversight mandate. The Committee further acknowledges the contributions made by the various stakeholders.

On behalf of the Members of the Departmental Committee on Energy and pursuant to Standing Order 199(6), it is my pleasant duty to submit to this House, the Committee report on the inquiry into the operations of Kenya Power in relation to; agreements entered into with IPPs, factors affecting the cost of electricity including over-reliance on IPPs against available renewable and other energy sources and, measures to be taken to reduce the cost of electricity.

HON. DAVID GIKARIA, CBS, MP
CHAIRPERSON
DEPARTMENTAL COMMITTEE ON ENERGY

EXECUTIVE SUMMARY

This report documents the proceedings of the Departmental Committee on Energy's Inquiry into the matter of Reduction of the Cost of Electricity in the Country following a motion moved by the Member for Laikipia County, Hon. Jane Kagiri, OGW, MP on Wednesday 22nd March 2023 pursuant to the National Assembly Standing Order 47. This was on the backdrop of a continued public outcry from consumers, businesses, and individual Kenyans alike, on the high cost of power in the Country.

At a sitting of the House held on 22nd March 2023, the House resolved pursuant to Standing Order 218(2) of the National Assembly Standing Orders that the Departmental Committee on Energy, undertake an inquiry into the operations of Kenya Power and Lighting Company (KPLC) in relation to agreements entered with Independent Power Producers (IPPs), factors affecting the cost of electricity, including over-reliance on IPPs against available renewable and other energy sources, and measures to reduce it and submits a report to the House within one hundred and twenty (120) days. In carrying out the inquiry the Committee resolved to look into the entire value chain from power generation, transmission to distribution.

In this regard, the Committee analyzed the overall energy sector in Kenya, the evolution of the electricity sector, legal and policy framework, electricity tariff structures, Independent Power Producers, the evolution of PPAs in Kenya, justification for the review of Power Purchase Agreements (PPAs) and existing PPAs in the country. The Committee further analyzed IPPs in other jurisdictions and the measures taken to reduce the cost of electricity. Specifically, the Committee sent delegations to Ghana and South Africa to enable it to understand the two countries' model of PPAs and the management of power generation, transmission, and distribution including the use of alternative sources of power.

The Committee also reviewed recommendations from previous official reports on PPAs to avoid duplication. The Committee established that very few of these recommendations have been acted upon, some not even made public. However, there were some useful and actionable recommendations in these reports, yet most are yet to be implemented.

In carrying out its mandate, the Committee invited the public and different stakeholders to participate in the inquiry and make submissions to provide information necessary to enable it to make conclusive findings and also to ensure compliance with the requirements of Article 118 of the Constitution which requires Parliament to involve the public in its proceedings and those of its committees. In the course of the proceedings, the Committee held over fifteen meetings with the identified stakeholders in the energy sector, regulatory agencies, and independent power producers, among others.

As a result of this inquiry, the Committee will sponsor an amendment to the Energy Act, CAP 314 that seeks to expressly introduce third parties such as electrical workers, electrical technicians, and electrical contractors duly registered by the Energy and Petroleum Regulatory Authority herein referred to as EPRA, in facilitating metering and establishing connectivity to the electrical supply system. This will enable the efficient distribution and management of electricity resources for consumers and stakeholders.

On analyzing the submissions presented to the Committee on the aforementioned issues, the Committee took note of the vital issues along the value chain and observed the following among others:

a) There are currently forty-one (41) EPRA-approved PPAs for the various plants supplying power to the interconnected system;
b) The Business Registration Services (BRS) submitted to the Committee a list of IPP companies, owners, shareholders, and directors. Notably, there is a general opaqueness in the disclosure of beneficial owners of IPPs, with a majority of them listing foreign companies as shareholders;
c) The payment structure for most IPPs is the take-or-pay arrangement model. PPAs by their very nature are long-term contracts averaging from 20 to 30 years;
d) Capacity charge costs for IPPs during the last two years were higher than the cost of the energy purchased, as indicated in Table 4, Page 26;
e) Most IPPs tend to have foreign development financial institutions as lenders as opposed to local investors (banks, pension funds, etc.);
f) Most of the IPPs, including those locally owned, are denominated in foreign currencies, i.e., the Euro and USD, which expose Kenyans to the risk of exchange rate fluctuation and inflation;
g) Some of the lines that are supposed to evacuate power remain incomplete, these include; Sondu-Homabay-Ndhiwa Transmission line which is key in stabilizing power in Western Kenya; Narok-Bomet Transmission line whose completion would reduce dependency of Western Kenya on the Muhoroni gas turbines; Rabai-Kilifi Transmission Line and the Mariakani sub-station which would help evacuate power from Olkaria to the Coast region as well as reducing dependence on the thermal power generators; Turkwel-Ortum-Kitale line to help evacuate cheap hydro power from the Turkwel Hydro Dam; and Ethiopia Kenya interconnector which is key in allowing the country access to cheaper power imports from Ethiopia;
h) There is lack of an approved land value index to specify the amount of compensation for compulsory acquired land in each county has occasioned the delay in construction phase of some projects due to land acquisition and resettlement issues;
i) The Auditor General indicated that KPLC recorded 23.98 percent system losses in 2020/2021. Yet, the approved loss was 19 percent, while in 2021/2022, the system loss was 22.44 percent and in 2022/2023 the efficiency loss was 23 percent (3,056GW) against the approved efficiency loss of 19.5 percent and an industry standard of 16 percent. It was in the Kenya Association of Manufacturers (KAM) submission that if system losses are reduced from the current 22.43% to 14.50%, this will save the customer on average Ksh.6b annually i.e Ksh19.331b to Ksh13.110b;
j) The procurement of IPPs is marred with a lot of irregularities and the process of procuring IPPs is not competitive; the Committee did not establish any credible process applied in onboarding IPPs;
k) South Africa established an IPP office in 2010. It introduced the Independent Power Producers Procurement Programme, which has reduced tariffs through competitive procurement of new electricity generation capacity provided by Independent Power Producers (IPPs).

Based on the foregoing observations, the Committee **recommends** the following among other recommendations:

a) THAT, upon adoption of this report, the House approves the lifting of the moratorium on the signing of new Power Purchase Agreements. The Ministry of Energy and Petroleum, and the relevant SAGAs continuously undertake the implementation of the proposed changes while

reporting back on the status of the same to the National Assembly semi-annually. The conditions precedent to the lifting of the moratorium are:

i. THAT in line with the proposed Auction Policy for Wind and Solar power projects, the Ministry of Energy & Petroleum in conjunction with EPRA to integrate in the Auction Policy, competitive sourcing of BESS capacity in line with the National grid requirements. EPRA to undertake market sounding analysis on the specific tariffs/cost associated with establishing BESS PPA in line with South Africa and USA models and integrate the same in its gazette benchmark tariffs for wind and solar generation technologies.

ii. THAT, all future amendments or variations to Power Purchase Agreements (PPAs) shall be subjected to the Attorney General to advise, interpret, negotiate, draft or perform any other function as may be necessary for the effective discharge of his/her duties pursuant to the Constitution, 2010 and the Office of the Attorney-General Act (Cap. 6A). Upon receipt of any amendments or variations, the Attorney-General shall provide the requisite legal advice within thirty (30) days. Additionally, the Ministry shall submit a consolidated report on all PPA amendments and variations to the National Assembly every six months for oversight, ensuring transparency, accountability, and alignment with the country's energy policy and public interest.

b) THAT, the Ministry prioritizes and fast tracks the completion of priority transmission lines and substations which are key in reducing technical system losses and which will improve reliability in electricity transmission;

c) THAT, the Ministry prioritizes the construction of transmission lines and associated substations for renewable energy projects that are nearing completion under a transparent and competitive Public Private Partnership (PPP) in order to alleviate the pressure on the Exchequer;

d) THAT, pursuant to the provisions of sections 107A and 107B of the Land Act, Cap. 280, the Cabinet Secretary for Lands in consultation with the county governments and with the approval of the National Assembly and the Senate (Parliament), develops the land value index for purposes of compulsory land acquisition;

e) THAT, within thirty-six (36) months upon adoption of this report, KPLC puts in place measures that include conducting load analysis to find technical losses throughout the network, measuring losses correctly by ensuring the generation plants have tamper-proof check meters to address discrepancies between the check meters and the main meters, use of updated study reports and minimizing arithmetical errors in the computation of the system losses, installing high-efficiency low-loss transformers, Advanced Metering Infrastructure (AMI), introduction of smart grid technologies, installation of Capacitor banks and developing the power system to operate under

the N-1 criteria, to lower the system losses from the 23% witnessed in December 2023 to 14.50% would save the consumer approximately Kshs. 6 billion annually which would otherwise be recouped through customer billings;

f) THAT, the register shall contain particulars of every electrical contractor granted a license under the Act, as well as every electrical contractor prequalified by KPLC. The Committee shall initiate amendments to section 105 of the Energy Act, 2019 to effect this recommendation;

g) THAT, the Ministry in collaboration with KPLC enhance the capacity utilization of existing geothermal plants to substitute thermal production, by running the plants as baseload plants (e.g., full capacity 24/7) to reduce the incidences of steam lost through venting as well as incorporating Energy Storage solutions in the power plants;

h) THAT, the Ministry prioritizes and fast tracks the completion of the Kenya Off-grid Solar Access Program (KOSAP) in order to promote off-grid solar systems and mini-grids, which will provide an alternative renewable energy source to the expensive diesel off-grid generators currently in use in the areas not connected to the national electricity grid;

i) THAT, the Ministry and EPRA implement competitive procurement of Energy projects under an auction scheme modeled similarly to South Africa's Independent Power Producer Procurement Programme in order to ensure that Energy is procured competitively and in line with the gazetted indicative tariffs and the Least Cost Power Development Plan to ensure price discovery by selecting only the least expensive power producer that meets the detailed technical and financial evaluation requirements after the bid rounds, failure to which the auction will be deemed unresponsive. Further, the Ministry in conjunction with EPRA to draft and finalize an approved Renewable Energy Auctions Policy that outlines the transition from the Feed-in-Tariff for advanced projects which must also be in line with the gazetted indicative tariffs, and operationalizes the auction system within twelve (12) months after the adoption of the report;

j) THAT, all new power generation plant Power Purchase Agreements (PPAs) to be on boarded to the grid are denominated in Kenyan Shillings, Foreign Currency, Hybrid combination of Kenya Shillings and foreign currency to ensure that local costs, taxes are priced in local currencies and debts/financing facilities costs are priced in their respective currencies;

k) THAT, the Ministry expedites the process of delinking Government development projects, from Kenya Power to REREC leaving the utility company to operate on commercial principles i.e. buying and selling of electricity;

l) THAT, upon adoption of this Report, the Ministry of Energy and Petroleum in conjunction with the National Treasury fast-track the formation and operationalization of an independent IPP Office modeled similar to South Africa's IPPPP Office;

m) THAT, KPLC prioritizes the recommissioning and extension of Power Purchase Agreements (PPAs) for retired power plants through KenGen, with negligible capacity charges and structured under a take-and-pay basis. This recommissioning must follow a thorough assessment of the suitability, technical viability, and cost-effectiveness of these power plants by the Office of the Auditor General. To ensure accuracy and reliability, the Office of the Auditor General may choose to either conduct the assessment directly or outsource the requisite technical expertise in power plant suitability evaluations and PPA cost assessments;

n) THAT, within six (6)months upon adoption of this report, EPRA institutes a review of the time-of-use tariff modalities to cover all night consumption and lock in the rate for each facility, in order to encourage better use of the electricity capacity in the night-time, as well as formulation of a transparent mechanism of setting SEZ tariff prices with a view of introducing nearly uniform preferential tariffs for Special Economic Zones (SEZs) in the next tariff review, in order to attract new investment, with the current cheaper tariff of Kshs. 5 per kWh only applying to the Naivasha Kedong SEZ;

o) THAT, EPRA ensures that Financial Close (FC) and signing of power purchase contracts is achieved within 9-12 months and Commercial Operation Dates (CODs) within 24-30 months of FC, except in exceptional circumstances will the regulator sanction delays in these timelines;

p) THAT, within six (6) months upon the adoption of this report, EPRA formulates and ensures the implementation of Standard Operating Procedures (SOPs) between KPLC, IPPs, and HFO Suppliers, followed by an accountability mechanism to prevent potential loss through overpayment and underpayment for fuels supplied to IPPs due to needless variations which are then passed on to the consumer;

q) THAT, within nine (9) months upon the adoption of this report, KPLC in conjunction with EPRA reviews the minimum stock contractual obligation for HFOs under the Thermal power plants as well as the minimum dispatch allowable for the plants to meet the manufacturers' requirements;

r) THAT, the Ministry fast-tracks the completion of a feasibility study on the Mombasa-Dar es Salaam natural gas pipeline project and subsequent completion of a Liquified Natural Gas (LNG) plant in Dongo Kundu that will pave the way for the switching from HFOs to LNG for thermal IPPs as contained in the power purchase agreements;

s) THAT, within three (3) months upon adoption of this Report, the Auditor-General, DCI, and EACC conduct a forensic audit and investigation in accordance with sections 37 and 39 of the Public Audit Act, 2015, and Sections 42,43,44,45 and 46 of the Anti-Corruption and Economic Crimes Act, (CAP 65) of 2003 to establish fraud, collusion, corruption, or other financial irregularities in granting OrPower 4 Inc. favorable tariff prices during the PPA amendments carried out between OrPower 4 Inc. and KPLC, and the report presented to the National Assembly;

t) THAT, within nine (9) months upon the adoption of this report, and pursuant to the provisions of sections 37 and 39 of the Public Audit Act, 2015 and Article 254(2) of the Constitution Of Kenya,2010, the office of the Auditor General conducts a special audit on the geothermal licenses issued since 2008 and the report submitted to the House to ascertain whether the licensees adhered to the provisions of sections 80,81,82 and 84 of the Energy Act, 2019 and those found to have not complied will have their licenses revoked;

u) THAT, within twelve (12) months following the adoption of this report, and in compliance with sections 37 and 39 of the Public Audit Act, 2015 and Article 254(2) of the Constitution of Kenya, 2010, the Auditor-General carries out a special audit on all thermal power generators, Lake Turkana Wind Power Ltd, Kipeto Ltd, and Orpower, and tables the report to the National Assembly. The report should determine the actual cost of setting up the power plants, the cost of running the power plants, including capacity charges, the amounts paid since inception relative to the initial investment, and the outstanding amounts owed to Independent Power Producers (IPPs). This audit shall form the basis for the renegotiation of tariff charges with IPPs to ensure fair pricing for the remaining period of their PPAs. Failure to comply with the audit within twelve (12) months will lead to termination of the respective Power Purchase Agreements currently in place;

v) THAT, upon adoption of this Report, based on the findings and in accordance with Sections 42,43,44,45 and 46 of the Anti-Corruption and Economic Crimes Act, (CAP 65) of 2003, the EACC and DCI conduct a further investigation on the Ministry of Energy and Kenya Power and Lighting Company Officials at the time which Lake Turkana Wind Power Project was conceptualized to be held accountable for;

   i. not ensuring the competitive process was followed in the identification and implementation of Lake Turkana Wind Power (LTWP) project,
   ii. not conducting an independent legal risk assessment before execution of contracts for a capital project of that scale which led to hurried approvals being granted in disregard to the relevant laws,
   iii. exposure to taxpayers and the utility company to undue financial obligations arising from the Deemed Generated Energy (DGE) payments made based on the assumed capacity factor of 62% which was later revised to 54% during the second agreement variation, despite the absence of a functional metering system to accurately determine the production from the power plant as prescribed in clause 11.1 of the LTWP PPA;

CHAPTER ONE

PART I

1.0 PREFACE

1. The report details the consideration of the Motion on Reduction of Cost of Electricity in the Country by the Departmental Committee on Energy. It is a product of the terms of reference of the inquiry and the Committee's engagements and deliberations with the various stakeholders who were identified during the inquiry.

1.1 Establishment and Mandate of the Committee

2. The Departmental Committee on Energy is one of the fifteen Departmental Committees of the National Assembly established under **Standing Order 216** whose mandates pursuant to the **Standing Order 216 (5)** are as follows:

i. *To investigate, inquire into, and report on all matters relating to the mandate, management, activities, administration, operations and estimates of the assigned ministries and departments;*
ii. *To study the program and policy objectives of ministries and departments and the effectiveness of the implementation;*
iii. *every quarter, monitor and report on the implementation of the national budget in respect of its mandate;*
iv. *To study and review all legislation referred to it;*
v. *To study, assess, and analyze the relative success of the ministries and departments as measured by the results obtained as compared with their stated objectives;*
vi. To investigate and inquire into all matters relating to the assigned ministries and departments as they may deem necessary, and as may be referred to them by the House;
vii. *To vet and report on all appointments where the Constitution or any law requires the National Assembly to approve, except those under Standing Order 204 (Committee on Appointments);*
viii. *To examine treaties, agreements, and conventions;*
ix. *To make reports and recommendations to the House as often as possible, including recommendation of proposed legislation;*
x. *To consider reports of Commissions and Independent Offices submitted to the House pursuant to the provisions of Article 254 of the Constitution; and*
xi. *To examine any questions raised by Members on a matter within its mandate.*

1.2 Subjects under the Committee

3. In accordance with the Second Schedule of the National Assembly Standing Orders, the Committee is mandated to consider, fossil fuel exploration, development, production, maintenance and distribution, nuclear energy, clean energy, and regulation of energy.
4. In executing its mandate, the Committee oversees the following State Departments: The State Department for Energy and The State Department for Petroleum.

1.3 Committee Membership

5. The Departmental Committee on Energy was constituted by the House on 27th October, 2022 and comprises the following Members:

Chairperson
Hon. David Gikaria, CBS, MP
Nakuru Town East Constituency
UDA Party

Vice-Chairperson
Hon. Lemanken Aramat, MP
Narok East Constituency
UDA Party

Members

Hon. Charles Gimose, MP
Hamisi Constituency
ANC Party

Hon. Walter Owino, MP
Awendo Constituency
ODM Party

Hon. Musili Mawathe, MP
Embakasi South Constituency
WDM - K Party

Hon. Elisha Odhiambo, MP
Gem Constituency
ODM Party

Hon. Rai Samuel Gonzi, MP
Kinango Constituency
PAA

Hon. Simon King'ara, MP
Ruiru Constituency
UDA Party

Hon. Tom Mboya Odege, MP
Nyatike Constituency
ODM Party

Hon. George Aladwa Omwera, MP
Makadara Constituency
UDA Party

Hon. Barongo Nolfason Obadiah., MP
Bomachoge Borabu Constituency
ODM Party

Hon. Geoffrey Ekesa Mulanya, MP
Nambale Constituency
Independent

Hon. Cecilia Asinyen Ng'itit, MP
Turkana County
UDA Party

Hon. Victor Koech Kipngetich
Chepalungu Constituency
CCM Party

Hon. Kuno, Amina Udgoon Siyad, MP
Garissa County
Jubilee Party

1.4 Committee Secretariat

6. The Committee is facilitated by the following staff: -

Mr. Fredrick O. Otieno
Clerk Assistant I/Head of Secretariat

Mr. Salim Athuman
Clerk Assistant III

Mr. Brian Njeru
Fiscal Analyst II

Mr. Ambrose Nguti
Media Relations Officer II

Mr. Anthony Wamae
Serjeant-At-Arms

Ms. Brigitta Mati
Senior Legal Counsel

Mr. Robert Langat
Research Officer III

Ms. Lillian Aluga
Public Communications Officer

Mrs. Rehema Koech
Audio Officer III

CHAPTER TWO

PART II

2.0 INTRODUCTION

2.1 Overview of the Motion

7. The Member for Laikipia County, Hon. Jane Kagiri, OGW, MP, moved a motion on the Reduction of the Cost of Electricity in the Country on Wednesday 22nd March, 2023.

8. The motion sought interventions of the Departmental Committee on Energy to undertake an inquiry into the operations of Kenya Power and Lighting Company (KPLC) in relation to agreements entered with Independent Power Producers (IPPs), factors affecting the cost of electricity, including over-reliance on IPPs against available renewable and other energy sources, and measures to reduce it and submit a report to the House within one hundred and twenty (120) days.

9. The motion also sought the Ministry of Energy and Petroleum and KPLC **be stayed from** entering new contracts with any IPPs until the House makes a resolution on the matter.

10. Further informed by the reports of previous task forces on the matter, the motion wanted the Ministry to engage in negotiations with power producers to reduce the cost of power.

11. Finally, the motion sought the Ministry and KPLC to develop suitable strategies for engagements with the IPPs, to provide relief for electricity consumers and ensure the long-term viability and sustainability of the energy sector.

12. The backdrop of this motion was that KPLC has entered into Power Purchase Agreements (PPAs) with both Kenya Electricity Generating Company (KenGen) and IPPs. KPLC procures electricity from them at unregulated rates, with KPLC in the past procuring larger quantities of power from the IPPs at a greater cost, rather than from KenGen, leading to a higher cost of power. There is a widespread perception of rising electricity prices among consumers as well as the financial difficulties experienced by KPLC which are in part due to the high payments to IPPs. KPLC purchases electricity from KenGen at a rate of Ksh3.93 per unit on average while on the other hand—the IPPs, especially the thermal plants, sell a unit of electricity at Ksh58.

13. Furthermore, there has been a public outcry from stakeholders in the industry including: - consumers, businesses, and individual Kenyans alike, on the high cost of electricity in the country, especially when compared to the cost of power in neighbouring countries and peer economies. This mirrors the current situation as the cost of power has actually worsened as seen by the increase of cost by the KPLC in April 2023.

14. Having debated and considered the motion, and pursuant to the provisions of Standing order 218(2), the Hon. Speaker on Wednesday 20th April, 2023 directed that the Departmental Committee on Energy conduct an inquiry on the *reduction of electricity costs in the country* and report its findings and recommendations to the House within one hundred and twenty (120) days.

2.2 Terms of Reference

15. The Committee deliberated and came up with the following terms of reference for the inquiry: -

i. To establish the details of PPAs between KPLC and IPPs, which includes all the current PPAs and those under consideration if any. The list of all IPPs and details of ownership, stakeholders, directors, and their addresses;

ii. To establish the terms of the existing contractual engagements between KPLC/EPRA/GoK and each of the IPPs including but not limited to the contracted capacity, tenure of contracts, monthly capacity charges, fuel and non-fuel costs for each plant;

iii. To establish the installed capacity, and effective capacity over the last five years and projections for the last five years;

iv. To establish the components that make up the consumption charge and how the charge is computed;

v. To establish the basis for variance in the rates charged by KenGen and the rate charged by IPPs to Kenya Power and Lighting Company, including details of unit charge by each IPP;

vi. To establish the amount of money that has been paid to each of the IPPs by KPLC and the Ministry of Energy and Petroleum for the past two years and where possible since the commencement of their respective contracts with the Government of Kenya or KPLC;

vii. To establish the respective specifications of Heavy Fuel Oils (HFOs) procured for use, fuel supply agreements including the pricing structure and application of international benchmarks, and actual specific fuel consumption compared to specific fuel consumption rates used in the HFOs cost recovery in each thermal electricity generating power plant;

viii. To determine how the Value Added Tax (VAT) in electricity pricing is computed, and the effect of the rise of VAT on fuel from 8% to 16% on the cost of electricity;

ix. To establish the implementation status of the Report of the Presidential Taskforce on the review of Power Purchase Agreements of 2021;

x. To establish the measures that each IPP is taking to reduce the cost of electricity to households, businesses, factories, and other consumers with a view to supporting the Government's Bottom-up Economic Transformation Agenda (BETA), and;

xi. To establish the measures that the Ministry of Energy and Petroleum is taking to support the Government's four-point action plan geared at improving efficiencies, reducing costs, and increasing the revenue of KPLC.

2.3 Motion by Hon. Jane Kagiri, MP – Reduction of Costs of Electricity in the Country

16. THAT aware that the cost of electricity has been at an all-time high, affecting the cost of living and doing business; acknowledging that the Kenya Power and Lighting Company PLC (Kenya Power) procures electricity from the Kenya Electricity Generating Company PLC (KenGen), a government-owned company, and from Independent Power Producers (IPPs) with both KenGen and the IPPs and procures power from them at unregulated rates; noting that there is need to regulate all IPPs in the country and publicize their locations, stakeholders, directors, management and their addresses and agreements entered into with Kenya Power; cognizant that, recommendations from past taskforce reports relating to power purchase and rates have not been implemented; deeply concerned that, Kenya Power has in the past procured a larger quantity of power from the IPPs at a greater cost, rather than from KenGen, leading to higher cost of power, cognizant of the fact that, there is need to put in place policies, strategies and regulatory measures for better planning to moderate the cost of electricity and enable access to energy by all particularly in the manufacturing sector to ease the cost of production and doing business; this House therefore resolves that:

i. The Departmental Committee on Energy undertakes an inquiry into the operations of Kenya Power in relation to agreements entered into with IPPs, factors affecting the cost of electricity, including over-reliance of IPPs against available renewable and other energy sources, and measures to reduce it and submits a report to the House within one hundred and twenty (120) days;
ii. In the meantime, the Ministry and Kenya Power should not enter into new contracts with IPPs until my House makes a resolution on the matter.
iii. Informed by the reports of previous task forces on the matter, the Ministry engages in negotiations with power producers with a view to reducing the cost of power; and
iv. The Ministry and Kenya Power develop suitable strategies for engagements with the IPPs, in order to provide relief for electricity consumers and ensure the long-term viability and sustainability of the energy sector.

2.4 Limitations faced during the Inquiry

17. During the conduct of the Inquiry, the Committee faced a number of challenges that included the Limitation of Parliamentary access to information overseas. On the issue of directorship and shareholding information, some of them are companies and entities constituted overseas. The Business Registration Services indicated that the information could only be sought through the Attorney General and that the information provided was restricted to the territory of Kenya.

PART III

2.5 Overall Energy Sector Situation Analysis

2.5.1 Evolution of the Electricity Sector

18. Kenya's electricity sector structure may be traced back to reforms that swept the industry in the mid-1990s. As the country emerged from an aid embargo, one of the state's main objectives was to attract much-needed private-sector investment to complement limited public-sector investment. In a policy paper at the time (Government of Kenya, 1996), the government stated its intention to separate the regulatory and commercial functions of the sector.

19. These reforms included: restructuring the national utility through full horizontal and vertical unbundling; creating an independent regulatory entity; enabling private sector participation; and introducing competition in power generation and distribution. These reforms were intended to improve technical and financial performance, customer orientation, utility efficiency and cost recovery, and eliminate private management abuses and day-to-day political interference.

20. The GoK expressed its dissatisfaction with the performance of the sector (Government of Kenya 2003), conceding that electricity in Kenya remained unreliable and expensive despite the reforms of the mid-1990s in its 2003 strategy document on economic recovery. To remedy this, the strategy recommended measures to deepen reforms in the power sector. These were subsequently detailed in the national energy policy of 2004 (Government of Kenya 2004), which included an action plan for the period 2004–07, that set out Government commitment to establish: - ERC, REA, GDC, and partially privatize KenGen.

2.5.2 Legal and Policy Framework

21. Currently (as of 2024), the main laws and regulations governing the Energy sector are the: Constitution of Kenya 2010, the Energy Act, 2019 and its subsidiary legislation, FiT Policy 2012, Energy (Liquefied Petroleum Gas) Regulations 2019, Public Private Partnerships Act 2013 (PPP Act), Public Procurement and Asset Disposal Act 2005 (PPADA) among others. Previously, the sector was guided by the Sessional Paper No. 4 of 2004 on Energy, the Energy Act No. 12 of 2006, the Kenya Nuclear Electricity Board Order 2013, and the Geothermal Resources Act No. 12 of 1982.

22. The National Energy Policy 2018 objective is to ensure an affordable, competitive, sustainable, and reliable supply of energy to meet national and county development needs at the least cost, while protecting and conserving the environment.

23. To increase the electricity supply and to diversify the electricity energy sources, the Government of Kenya introduced a Feed-in-Tariffs (FiT) scheme in 2008. The Policy is an instrument for promoting

the generation of electricity from renewable energy sources and allows power producers to sell renewable energy-generated electricity to an Off-taker at a pre-determined tariff for a given period.

24. The general objectives of the FIT system are both, macroeconomic (income and employment generation) and energy economic (contribution to supply and diversification of electricity generation sources). The Kenyan FIT scheme was revised in 2010.

25. Kenya has the potential for power generation from Renewable Energy (RE): it has abundant solar, hydro, wind, biomass, and geothermal sources which led the Government to seek expansion of RE generation. The GoK has prioritized the development of geothermal and wind as well as solar-fed mini-grids for rural electrification.

26. Access to energy was adopted as the United Nations Sustainable Development Goal (SDG) 7 aimed at ensuring affordability, reliability, sustainability, and accessibility to new power for all by 2030. FITs are the most commonly used and established policy globally for fast-tracking RE deployment and accountability for most of the RE development.

27. FIT is a price-based mechanism, where prices are differentiated by technology. Specifically, FIT electricity generators are paid a fixed amount per kilowatt-hour (kWh) of electricity generated based on regulators' estimated average generation cost of RE technologies. FIT is meant to attract investments in RE from Independent Power Producers (IPPs).

28. FITs have been criticized for several (mostly economic) reasons. This has led to a shift in combining FIT policies with other mechanisms or a complete change from FIT policies to other mechanisms.

29. The Energy Act, 2019 is the main Act of Parliament regulating all energy activities in Kenya through EPRA. The Energy Act consolidates various laws relating to energy. It amended the Energy Act 2006, the Kenya Nuclear Electricity Board Order 2013, and the Geothermal Resources Act 1982. The Energy Act, 2019 regulates the establishment of energy sector entities; the promotion of renewable energy, through the FiT; the production, supply, and use of geothermal energy; midstream and downstream petroleum and coal activities; and other energy sources.

30. Further reform efforts and strategic targets followed. The adoption of Vision 2030 (unveiled in 2008) as well as the promulgation of the Constitution 2010, made it imperative to review both the policy and applicable legislation and regulations to align them with Vision 2030 and the Constitution. The National Policy 2018 was therefore developed which provides for a policy framework, containing policy recommendations for various energy sub-sectors including coal, renewable energy, electricity, energy efficiency and conservation, land environment, health and safety, energy services, energy financing, pricing, and socioeconomic issues.

31. This Act consolidates the laws relating to energy and provides for National and County functions about energy. It further provides for the establishment of energy sector entities and regulates the production,

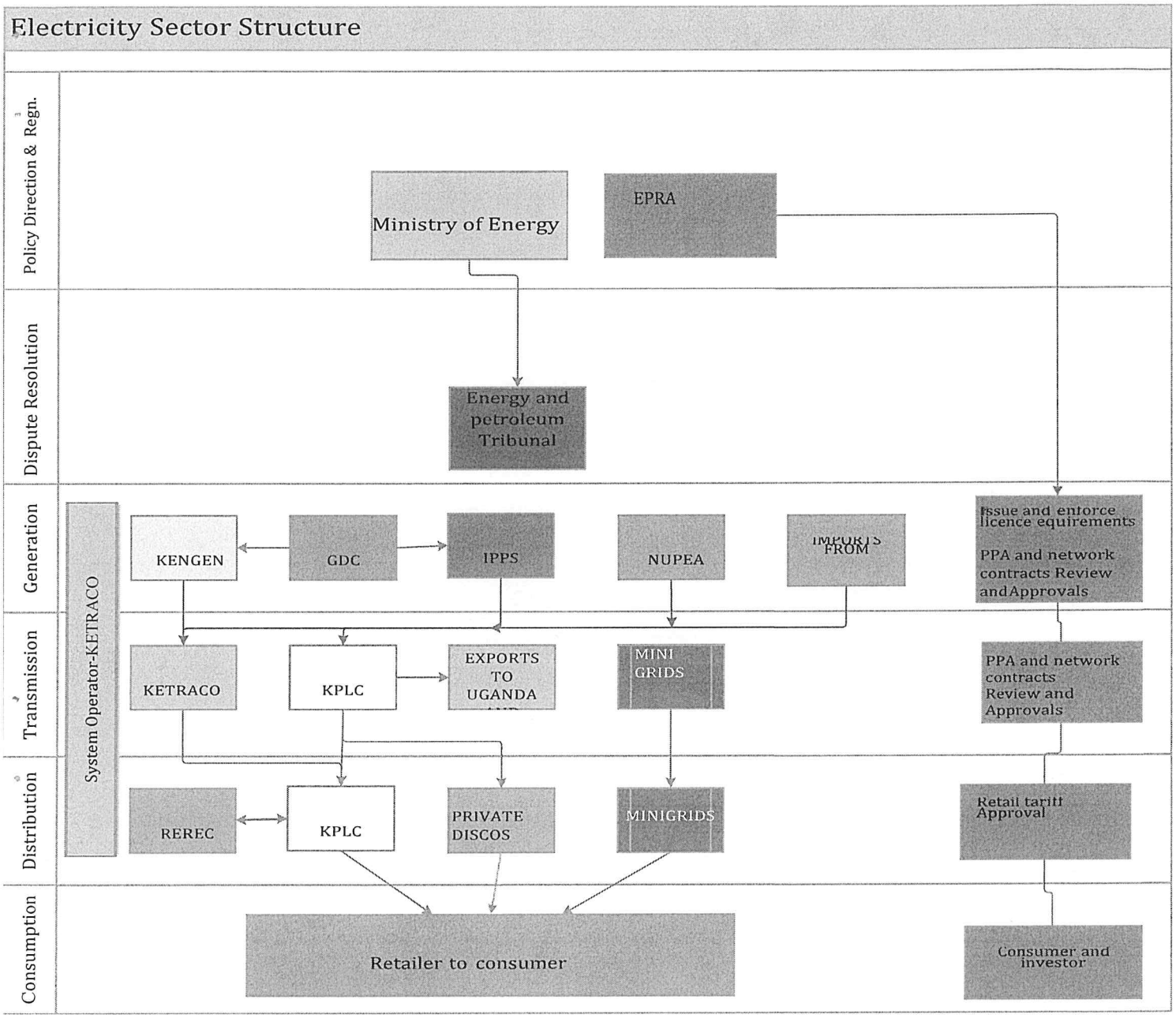
supply, and use of energy. Additionally, it established EPRA as the successor to the Energy Regulatory Commission (ERC).

32. The Ministry of Energy and Petroleum provides policy oversight while the Energy and Petroleum Regulatory Authority (EPRA) oversees regulatory functions including licensing and tariff-setting. The Geothermal Development Company (GDC), established in 2008 as a special-purpose vehicle, develops steam fields. Kenya Electricity and Transmission Company (KETRACO) evacuates high-voltage power from power plants. The Renewable Energy and Rural Electrification Corporation (REREC) is a specialized electrification agency focused on rural and remote areas. Other key players include the Kenya Electricity Generating Company (KenGen) and KPLC.

33. The Least Cost Power Development Plan (LCPDP) 2022-2041 multi-agency planning document intends to guide investment decisions in the power sector. The Ministry of Energy and Petroleum and all its affiliate agencies namely: EPRA, NuPEA, GDC, KenGen, KETRACO, KPLC, and REREC are involved in its formulation. The planning process which takes every two years involves undertaking a demand forecast, identifying the generation plants to meet the projected demand, identifying a target transmission network, and estimating the investment requirements and indicative tariffs from the planned generation and transmission network.

34. The least cost optimization process considers a comparison of the forecasted peak load with the expected available capacity in the existing and committed power plants. This helps to determine when supply gaps are going to occur and how much capacity is needed to fill the gaps. The least cost optimization process also factors in the projects to meet the identified supply gaps, based on the system requirements.

Figure 1: Electricity sector in Kenya



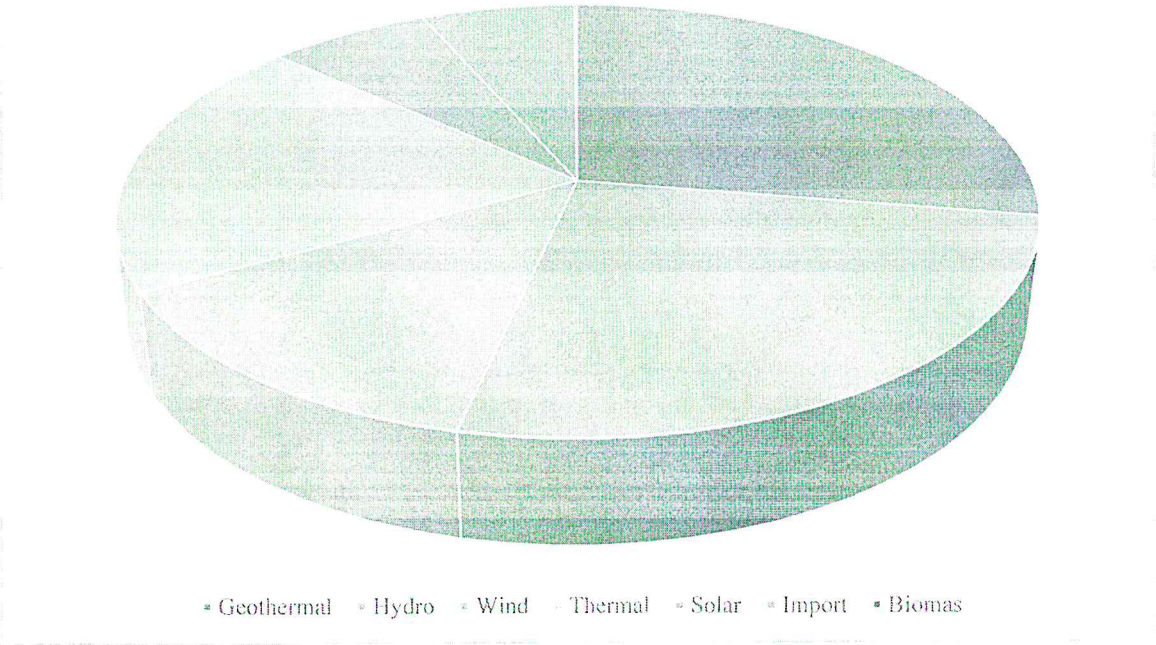
Source: Ministry Energy, LCPD 2022-2041

2.5.3 Demand and Generation Mix

35. According to the KNBS Economic Survey of 2023, Kenya recorded an increase of total installed capacity from 2,989.6 MW in 2021 to 3,321.3 MW in 2022 while total effective capacity rose by 10.8 per cent to 3,166.2 MW.

36. The geothermal energy proportion slightly reduced in May 2023 to 27.7% from 28% in 2019. Hydro consists of 25.8%, wind 13.5%, thermal 19.8%, solar 6.7%, import 6.4% while biomass contributes a paltry 0.1% of the total effective capacity.

Figure 2: Effective Energy Capacity as at May 2023



Source: EPRA

37. The installed generation capacity has increased significantly over the past five years, going from 2,741 MW in 2019 to 3,357 MW as at June 2023, inclusive of off-grid capacity, which is comparable to a 22.5% growth over that time. Over the same period, Peak demand rose from 1,882 MW to a high of 2,149 MW recorded in December 2022, an average increase of 14.2%.

38. As at 30th June 2023, KenGen, the biggest power producer in the nation, contributes 1,775MW, or 56% of the effective/contracted generation capacity. 1,117MW (35%) of the total effective capacity is made up by Independent Power Producers (IPPs), imports from Ethiopia accounted for 6%,2% is from the REREC Garissa Solar Power plant, while 1% of the effective capacity is generated off-grid as part of the government's Rural Electrification Programme (REP) that is under REREC but carried out by KPLC.

39. The nation has made great strides in the upstream category over the years to boost its capacity for power generation, but more investment is still required. This is because best practice in the electricity sub-sector requires that the effective capacity should be able to cover the country's peak demand, which is the highest load demand for electricity for a specific period, and also provide a reserve margin of 13% against the peak demand according the LCPDP 2020-2040 which translates to around 279 MW. If the difference between the effective capacity and peak demand is continuously below this threshold, this will lead to load shedding, which refers to a situation where the delivery of electricity

is temporarily interrupted for a group of consumers to relieve stress on the electricity grid, with the trend in installed vs effective capacity over the last five years as indicated below:

Table 1: Installed vs Effective capacity over the last five years

Company	Capacity (MW) 30th June 2019		Capacity (MW) 30th June 2020		Capacity (MW) 30th June 2021		Capacity (MW) 30th June 2022		Capacity (MW) 30th June 2023	
	Installed	**Effective/ Contracted**	**Installed**	**Effective/ Contracted**	**Installed**	**Effective/ Contracted**	**Installed**	**Effective/ Contracted**	**Installed**	**Effective/ Contracted**
KenGen	1,639	1,558	1,818	1,708	1,818	1,708	1,904	1,774	1,905	1,775
IPP	1,020	999	937	926	1,081	1,070	1,088	1,077	1,163	1,117
Imports	35	23	35	23	34	23	0	0	0	0
Off grid	0	0	0	0	50	50	38	25	38.4	25.0
EPP	50	50	50	50	50	50	0	0	0	0
REREC	0	0	0	0	0	0	50	50	50	50
Imports							0	0	200	200
	2,741	**2,630**	**2,840**	**2,708**	**2,984**	**2,852**	**3,081**	**2,926**	**3,357**	**3,167**

Source: Kenya Power

40. Over the medium term, the installed capacity is projected to grow from 3,233MW by the end of 2023 to 4,153MW by the end of 2027, an increase of 28.5%. This will be crucial to cover the yearly rise in peak demand caused by organic economic development, higher investments, and intentional efforts to increase access to energy through projects such as the last mile project with the projections indicated below:

Table 2: Medium-term Capacity Projections

Year	Installed capacity (MW)	Firm capacity (MW)	Peak Demand (MW)
End of 2023	3,233	2,540	2,220
End of 2024	3,212	2,513	2,327
End of 2025	3,526	2,818	2,444
End of 2026	3,796	2,973	2,567
End of 2027	4,153	3,185	2,696

Source: Kenya Power

2.5.4 Electricity Tariffs Structures

41. The Energy and Petroleum Regulatory Authority (EPRA) is tasked with the determination of electricity prices under section 11(c) of the Energy Act, 2019. In determining the prices, EPRA takes into consideration the following variables as contained in the Schedule of Tariffs, 2023:

i. **Consumption Charge** – This is a consumer's electricity consumption during a billing period. One unit is equivalent to one kilowatt hour. KPLC uses the money to buy electricity in bulk from electricity producers (KenGen and IPPs), pay for transmission and distribution costs, and

pay for its operational costs. The tariff charged is determined by EPRA based on revenue requirements and yield and is reviewed every 3 years.

ii. **Fuel Cost Charge (FCC)** – This is a surcharge to a consumer and relates to fluctuations in world fuel prices as well as fluctuations in the quantity of oil consumed for electricity generation. KPLC transfers the money to thermal electricity producers and enables recovery of the cost of fuel used in electricity generation. The rate charged is computed at respective contracted specific fuel consumption (SFC) rate for the plants monthly by EPRA and published in the Kenya Gazette.

iii. **Foreign Exchange Rate Fluctuation Adjustment (FERFA)** – This is a surcharge to a consumer and relates to the fluctuation of foreign currencies against the Kenya Shilling for expenditure related to the power sector e.g., project loan repayments by government agencies in the electricity sub-sector (KPLC, KETRACO and GDC) and power purchasing agreements between KPLC and electricity producers that are denominated in foreign currencies. The rate charged which is determined monthly by EPRA enables the management of currency risks in electricity tariffs and is published in the Kenya Gazette.

iv. **Inflation Adjustment (IA)** – This is a surcharge to a consumer and related to the changes in the consumer price index because of the effect of domestic and international inflation on the supply of electricity. The rate charged is determined every 6 months by EPRA and published in the Kenya Gazette.

v. **Value Added Tax (VAT)** – This is a tax charged at 16% on the demand charge, fuel energy cost and non-fuel energy cost components of the electricity bill. Government uses the monies collected for general budgetary support.

vi. **Rural Electrification Programme (REP) Levy** – This is a levy charged at 5% of the Consumption Charge of the electricity bill. Government allocates the monies collected to REREC for implementation of Rural Electrification Projects.

vii. **Energy and Petroleum Regulatory Authority (EPRA) Levy** – This is a levy charged at 8 cents per kWh. Government allocates the monies collected to EPRA to cover its operational costs.

viii. **Water Resources Management Authority (WARMA) Levy** – This is a levy charged at 1 cent per kWh. It is determined from the amount of energy supplied by hydroelectric producers that generate more than 1MW in the previous month. Government allocates the monies collected to WARMA to cover its operational costs.

42. EPRA has organized consumers into 15 categories based on the quantity of power consumed. Therefore, each category has a differentiated electricity price based on the most recent tariff review which took effect on 1st April 2023 (details for each category is presented in Annexure 6).

2.6 Power Purchase Agreements and Independent Power Producers

2.6.1 A Power Purchase Agreement (Background and Rationale of Power Purchase Agreements)

43. A Power Purchase Agreement ("PPA") is generally an agreement that governs the sale and purchase of power. It is a contract between two parties, one who produces or generates power for sale (the seller/producer/project company) and one who seeks to purchase power (the buyer/off-taker) (World Bank 2022. It is a contractual agreement to purchase an amount of power at an agreed price for a certain agreed period in advance of producing the power.

44. A PPA may require the IPP to make available to the purchaser an agreed level of capacity at the power plant and deliver the energy generated in accordance with its provisions. The pricing regime in the PPA typically has two components:

i. An availability or capacity charge, which is payable by the off-taker in consideration of the power plant operator making generation capacity available to the off-taker, whether or not the off-taker takes electricity from the power plant. This component is typically designed to provide a revenue flow for the project and is the primary channel through which each project proponent recovers its fixed costs; and
ii. An output charge usually refers to the volume of electricity delivered and is intended to cover the project company's variable costs.

45. The PPAs are usually signed for a long-term period between 10-30 years to guarantee investment recovery and generate return on equity. A PPA can cover an existing asset previously under a feed-in-tariff or government subsidy and it can also replace an expired contract.

2.6.2 The Contractual Terms Governing PPAs in Kenya

46. The key elements of a PPA include the contracted capacity, pricing structure, contract duration, delivery terms, performance guarantees, and provisions for addressing potential disputes or changes in circumstances. Overall, PPAs facilitate the development of renewable energy projects by ensuring a steady revenue stream for generators and enabling buyers to meet their energy needs with sustainable sources.

47. In Kenya, where the power sector has been largely liberalized, the contractual terms of a PPA typically include the following:

A. Capacity and Energy

48. The agreement specifies the expected capacity of the power project (in megawatts) and the annual energy output (in kilowatt-hours) that will be supplied to the off-taker.

B. Project Development

49. The PPA outlines the timeline for project development, including milestones for obtaining permits, conducting environmental assessments, securing financing, and commencing commercial operations.

C. Contract Term

50. The agreement specifies the duration of the PPA, typically ranging from 10 to 25 years. The term should enable the power generator to recoup their investment and ensure a reasonable return on investment.

D. Off-take Obligations

51. The off-taker commits to purchasing all, or a specified portion, of the electricity generated by the power project. The agreement may also include provisions for the off-taker to take a minimum amount of electricity to ensure the economic viability of the project.

E. Tariff and Payment Terms

52. The PPA outlines the agreed-upon tariff structure, which determines the price at which the off-taker will purchase the electricity. It specifies how the tariff is calculated, any adjustments for inflation or fluctuations in fuel costs, and the payment schedule (e.g., monthly, or quarterly).

Below is an outline of how this clause is typically structured:

i. Feed-in Tariffs (FiTs): Under this structure, the government sets a fixed tariff rate for different types of renewable energy sources. These rates are often designed to provide a reasonable return on investment for project developers and are guaranteed for a certain number of years.

ii. Power Purchase Agreement (PPA) Term: PPAs generally have terms that range from 20 to 25 years. This longer duration helps project developers secure financing and provides revenue predictability over the project's lifecycle.

iii. Escalation Clauses: Many PPAs include escalation clauses, which allow the tariff to increase annually by a predetermined percentage or be adjusted based on an inflation index. This is done to account for inflation and changes in the cost of living.

iv. Take-or-Pay Arrangements: Some PPAs include take-or-pay clauses, where the off-taker (often the national utility company) commits to purchasing a certain amount of electricity, even if they did not consume it. This provides revenue certainty for the project developer.

F. Termination and Default

53. A termination clause is a critical component that outlines the conditions and procedures under which the agreement between a power producer (often a renewable energy project developer) and a power purchaser (typically an electricity buyer such as a utility company) can be ended before the agreed-upon term expires. The termination clause is designed to provide both parties with a clear understanding of their rights, responsibilities, and potential consequences if the agreement is terminated prematurely.

Features of a termination clause-

i. Termination Events: This section defines the events or circumstances that can trigger the termination of the PPA. Common termination events might include breaches of contract, force majeure events (such as natural disasters), insolvency of one of the parties, failure to secure

necessary permits or approvals, or changes in law that make it impractical or illegal to continue the project.

ii. Notice Period: The termination clause typically outlines the notice period that must be provided by the party seeking to terminate the agreement. This allows the other party to take necessary actions or negotiate a resolution before the termination takes effect.

iii. Termination Procedures: The clause details the steps that both parties need to follow in the event of termination. This could include submitting written notices, engaging in good-faith negotiations, and complying with any specific contractual obligations related to the termination process.

iv. Compensation or Damages: One of the most crucial aspects of the termination clause is determining the financial consequences of termination. This includes addressing compensation for costs incurred by the power producer in developing the project up to the termination point. It might also include provisions for the reimbursement of any prepaid fees, penalties, or damages that the terminating party might need to pay to the other party.

v. Dispute Resolution: If there is a disagreement about the validity of the termination or the compensation owed, the termination clause may specify how disputes are to be resolved, such as through negotiation, mediation, or arbitration.

vi. Transition Period: In the case of termination, there might be a transition period during which the power producer continues to provide electricity or services while the power purchaser arranges for alternative sources of energy or takes over the operations.

vii. Survival Clauses: Certain provisions of the PPA, such as confidentiality clauses, indemnification provisions, and obligations that continue after termination, might be explicitly stated to survive the termination of the agreement.

viii. Force Majeure: The termination clause may address how force majeure events impact the termination process. In some cases, a force majeure event might extend the term of the agreement, delay termination, or trigger a renegotiation of the terms.

The specifics of a termination clause can vary widely based on the nature of the project, the preferences of the parties involved, and the regulatory environment in which the PPA operates.

G. Grid Connection and Ancillary Services

54. The PPA defines the responsibilities of both parties regarding grid connection, including who will be responsible for any necessary upgrades or reinforcements. It may also detail the requirements for ancillary services, such as voltage support, frequency control, or reactive power supply.

H. Performance Guarantees

55. The power generator is often required to provide performance guarantees, such as a performance bond or letter of credit, to ensure they meet their contractual obligations. This provides assurance to the off-taker that the generator will deliver the agreed-upon output with specified reliability.

I. Dispute Resolution

56. The PPA includes mechanisms for dispute resolution, such as arbitration or mediation, to address any disagreements that may arise between the parties during the contract term.

2.6.3 The Pricing Regime in Power Purchase Agreements

57. IPPs differ in their ownership and financing structures, in technology choices and risk profiles, in how they are procured and contracted, and in risk mitigation mechanisms.

58. The pricing regime in the PPA has two components: - **Capacity charge** and **output charge. Capacity charge** is the component that helps the IPP to recoup its capital investment, fixed labour expenses, operation and maintenance expenses, repayment of debt and return on equity. The price is fixed throughout the term of the power purchase agreement (PPA) and is payable to the firm whether there was production or not. This is, however, on condition that the capacity agreed upon under the PPA is maintained. If the capacity is not maintained, the firm is penalized heavily by having a portion of payments withheld. The firm is therefore forced to retain a high degree of serviceability of its plant and to maintain insurance against unforeseen and prolonged breakdowns. Capacity charge to a large extent reduces the business risk but since the price is developed long before production commences and is valid throughout the entire PPA period, for instance running for 20 years, it has to be carefully and correctly developed. If not properly done, there would be no chance to correct it after the PPA has been signed. For this reason, both the investors and the financiers in the sector tend to require very high returns on equity and on debt.

59. **Output charge** is a price for the volume of electricity actually delivered, that covers the company's variable costs.

60. A country may have different goals to meet when choosing to integrate IPPs into the energy sector. However, the following are four essential goals: -

i. Attract private investment to meet rapidly growing electricity needs in a situation where the Government's budgetary resources are inadequate to meet the infrastructural investment necessary for power development.
ii. Reduce electricity costs though competitive procurement of power projects.
iii. Assign risks to the parties who are best placed to manage them; and
iv. Bring into play off balance sheet financing.

61. In Kenya, IPPs have invested in diverse technologies and accelerated the rate of power generation. The single buyer model is the one which exists in Kenya, and typically has the following features:

i. A single off-taker who buys all the power generated by the various generators.
ii. The single buyer has monopoly over distribution network and over sales to customers.
iii. Generation is subject to competitive bidding and is sold to the single buyer under a long-term contract.
iv. Customers remain captive and an independent regulatory authority is important for purposes of balancing the investor and the consumer interests.
v. The risk allocation criteria are critical, and regulators are required to ensure that the same are properly allocated among the parties.
vi. The model relies on the financial viability of the underlying PPAs; and

vii. The credit worthiness of the off taker is key, with different forms of credit enhancements being used as support.

2.6.4 Advantages and disadvantages of IPPs

62. In introducing the IPPs into the country's power generation system, there are advantages and challenges faced which include: -

A. Advantages

i. Facilitate resource mobilization especially from private investors;
ii. Expected to bring efficiency in order to maximize returns;
iii. Access to latest technology may be faster than by public institutions;
iv. Allows for diversification of power generation using various technologies thus ensuring security of supply;
v. Capacity and expertise building of locals in the generation technologies; and
vi. Some generation technologies are able to be deployed within a short period especially when the country is experiencing power shortages for instance thermals.

B. Disadvantages

i. The high costs associated with IPPs results in increased tariffs to the end-users;
ii. The payments to IPPs is in foreign currency, a forex risk that disadvantages the GoK and the off-taker;
iii. The IPPs require guarantees and Government support measure such as Letters of Support that increases the government indebtedness; and
iv. Some of the IPPs are incorporated and domiciled in foreign jurisdictions that provide taxation havens and direct scrutiny of the regulator.

2.6.5 The evolution of PPAs in Kenya

63. Traditionally, the energy sector relied on concessionary funding from multilateral and bilateral agencies for financing new power investments. The 1990s global shift in donor trend towards private sector participation in infrastructure financing saw the energy sector stagnate.

64. Through the collaboration of the International Monetary Fund (IMF) and the World Bank in 1996, the GoK developed the Economic Reforms Policy Framework for 1996-1998 which turned around the economy. The energy sector had stagnated due to a lack of financing and, with the shift in donor trends towards private participation in infrastructure financing, injection of new investment from the private sector became a necessity. As a result, the Government prepared a rolling five-year least-cost investment programme to attract urgent investments in power generation, transmission, and distribution as well as investments in other energy sector areas

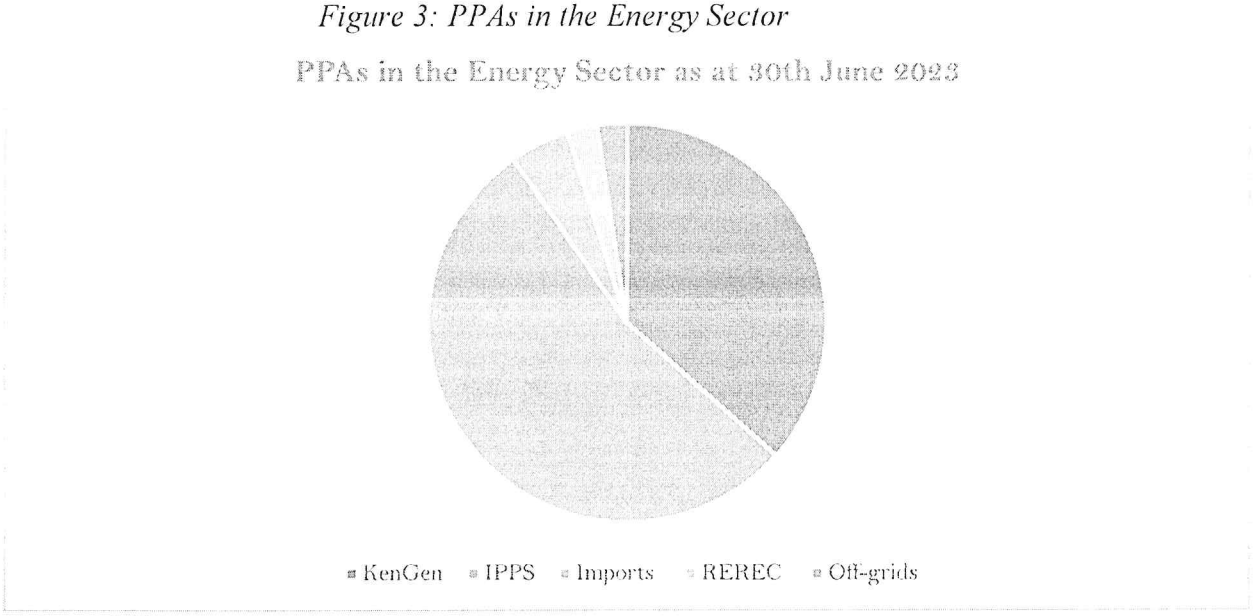
65. In July 1996, the government of Kenya floated an international tender for a contract to Build, Own and Operate (BOO) a geothermal power facility using geothermal resources. This geothermal plant,

Olkaria III, was an addition to two other geothermal facilities Olkaria I and Olkaria I1 which are owned and operated by KenGen. In November 1998, Kenya Power and Lightening (KPLC) signed the first IPP with Orpower 4 Inc. for an 8MW geothermal plant.

66. Since then, IPPs have increased their investments in various technologies ranging from thermal, solar, wind, co-generation, hydro among others.

67. As at June 2023, EPRA had approved forty-eight (48) PPAs for the various plants supplying power to the interconnected system:
   i. KenGen 15 PPAS: 1905MW (57% of the Market)
   ii. IPPS 22 PPAs: 1,163 MW (35% of the Market)
   iii. Imports 2 PPA: 200MW (6% of the Market)
   iv. REREC 1 PPA: 50MW (1% of the Market)
   v. Off-Grids 1 PPA 38MW (1% of the Market) as indicated below.

Figure 3: PPAs in the Energy Sector



Source: EPRA

68. An analysis of the PPAs indicates that the PPAs related to KenGen except for the wellheads are denominated in the local currency with the breakdown of the PPAs by technology, capacity, commercial operation date (CoD) and expiry dates as well as the currency being indicated in Annexure 7.

2.6.6 Justification for the review of PPAs in the Energy Sector in Kenya

69. The realization of the need to review PPAs and electricity generation has been distilled over time. The country is still experiencing a high cost of electricity despite the increasing number of IPPs and the

uptake of renewable energy such as geothermal. Further, retail tariffs remain high due to capacity payment obligations that are being paid yet the supply outlook is indicating that there is excess capacity in the system to the extent that there are payments for deemed energy. At the same time, global prices for wind and solar power are declining drastically, driven mainly by technology, innovations, and economies of scale.

70. Over the last two years, the capacity charge cost for independent power producers (IPPs) was more than the cost of the energy purchased, indicating that the IPPs were operating below their contracted capacity resulting in payment for idle/unutilized capacity as indicated in table 3.

Table 3: Capacity Charge Costs

	2020/21	2021/22
Total Capacity Charges	47,495,000,000	49,237,107,566
Total Payments	56,345,000,000	56,274,009,000
Percentage of Capacity Payments Vs Total Payments	**84%**	**87%**

Source: Office of the Auditor General

71. The Report of the Auditor General of KPLC for the FY 2020/2021 and FY 2021/2022 shows a major disparity between the cost of power purchased from KenGen and that purchased from IPPs. These inconsistencies end up burdening ordinary Kenyans with the high cost of electricity. This disparity has further been analyzed over the last two years as indicated in table 4.

Table 4: Analysis of the Cost of Power

Power Producer Analysis	**2020/21**	**2021/22**
Total Power Purchased (GWh)	**12,121**	**12,653**
Power Purchased from KenGen (GWh)	8,433	7,911
% of power purchased from KenGen	**70%**	**63%**
Power Purchased from IPPs (GWh)	3,688	4,742
% of power purchased from IPPs	**30%**	**37%**
Total Cost of Power Purchased (Kshs)	**101,502,259,000**	**95,176,487,000**
Cost of Power Purchased from KenGen (Kshs)	44,805,090,000	38,902,478,000
% of Costs of Power purchased from KenGen	**44%**	**41%**
Cost of Power Purchased from IPPs (Kshs)	56,345,169,000	56,274,009,000
% of Costs of Power purchased from IPPs	**56%**	**59%**

Source: Office of the Auditor General

72. An analysis of the submissions by the Thermal Power Plants also indicates glaring disparities with the IPPs capacity charges per MW in Kenya Shillings (Kes) millions being highest in IberAfrica, Triumph, Kipevu II (Tsavo), Rabai Power and Gulf Power, with the lowest IPPs capacity charge per MW in Kes millions being witnessed in the KenGen run thermal power plants as indicated in table 5.

Table 5: Capacity Charges Comparison for thermal power plants

Power Plant	Capacity(MW)	Commissioning Date	Expected Contract Expiry	PPA Term(Years)	Total Capacity Charge (KES Million)	Capacity Charge/ MW(Million KES)	Capacity Charge/ Kw/Yr.(USD)	Energy Charge/ Kwh(KES)@85% despatch factor	Standardized for Elevation/kWh
Rabai Power	88.60	May-10	May-30	20	2,267	25.59	231.56	3.72	3.72
Gulf Power	80.32	Dec-14	Dec-34	20	1,904	23.71	214.53	3.35	2.95
Thika Power	87.00	Feb-14	Feb-34	20	1,999	22.98	207.94	3.34	2.94
Triumph	83.00	Jul-15	Jul-35	20	2,651	31.94	289.05	4.36	3.84
Kipevu I (KenGen)	60.00	Jul-09	Jul-23	24	1,120	18.67	168.93	2.42	2.42
Kipevu II(Tsavo)	74.00	Sep-01	Sep-21	20	2,156	29.14	263.67	4.85	4.85
Kipevu III(KenGen))	115.00	May-10	May-31	21	2,354	20.47	185.24	2.82	2.82
IberAfrica	52.50	Oct-09	Oct-34	25	1,685	32.10	290.45	4.36	3.84

Source: Kenya Power

73. A further analysis of a sample of IPPs i.e., Gulf Power, Thika Power and IberAfrica on the amount of money paid to them over the last ten years indicate that the capacity charges amount to the lion's share of the total payments and are denominated in Foreign currencies i.e., dollar and the euro, closely followed by the Fuel Cost charges as energy charge amounts to the least percentage of the funds as indicated in the tables 6,7 and 8.

Table 6: Summary of Payments to Gulf Energy

Year	Fuel Charge (USD)	Energy Charge (EURO)	Capacity (EURO)	Excess Starts (EURO)
2014	5,366,471	204,400	1,051,984	-
2015	6,791,632	260,561	16,295,275	236,521
2016	1,419,865	83,386	16,297,817	
2017	13,186,204	788,258	16,343,581	639,951
2018	5,642,330	308,932	16,400,690	556,117
2019	2,844,071	136,779	16,456,196	255,819
2020	2,759,154	172,807	16,489,589	305,911

Year	Fuel Charge (USD)	Energy Charge (EURO)	Capacity (EURO)	Excess Starts (EURO)
2021	8,316,884	289,709	16,546,377	403,691
2022	53,787,088	1,448,781	16,802,162	1,089,176
Total	**100,113,699**	**3,693,613**	**132,683,671**	**3,487,186**

Source: Gulf Power

Table 7: Summary of Payments to Thika Power

Year	Net Energy Generated kWh	Total Energy and excess start(Euro)	Capacity payment Euro	Fuel charge (USD)
2013	152,298,600	1,204,994	4,669,687	28,138,965
2014	455,712,400	3,804,954	16,542,620	76,145,384
2015	138,334,300	1,313,783	17,102,192	24,093,056
2016	33,719,600	374,413	17,105,715	3,327,431
2017	275,995,900	2,698,766	17,156,014	26,693,612
2018	116,224,100	1,221,782	17,218,778	13,055,071
2019	117,887,000	1,307,885	17,279,784	14,825,168
2020	51,344,500	648,617	17,316,488	5,212,498
2021	127,298,000	1,475,024	17,378,902	15,008,271
2022	186,853,300	2,044,391	17,661,129	27,417,463
2023 (upto May)	143,625,700	1,599,347	7,469,382	16,704,060
Total	**1,799,293,400**	**17,693,954**	**166,900,690**	**250,620,979**

Source: Thika Power

Table 8: Summary of Payments to IberAfrica

Years	Capacity	Energy	Total
2014	15,608,624	2,725,986	18,334,610
2015	15,376,844	1,196,660	16,573,504
2016	15,408,475	1,678,213	17,086,688
2017	15,479,005	2,464,283	17,943,288
2018	15,564,018	814,327	16,378,345
2019	15,630,618	741,710	16,372,328
2020	15,682,966	613,166	16,296,132
2021	15,806,747	598,411	16,405,158
2022	16,110,495	1,404,925	17,515,420
Total	**140,667,792**	**12,237,681**	**152,905,473**

Source: IberAfrica

***Fuel Costs for IberAfrica have not been included as it's a pass-through cost to KPLC.**

2.6.7 Previous Government Initiatives to address the matter of Cost of Electricity in the Country

74. In a bid to lower the cost of electricity, there have been four task forces, three parliamentary inquiries, and a moratorium on issuing new PPAs in the past six years. All of these inquiries have centered on IPPs and the cost of electricity, with the concept initially being brought up in 2016 after it was apparent that the country was still experiencing high energy costs despite an increase in the use of renewable energy sources like geothermal.

75. With the publication of Gazette Notice No. 862 of 2017 on January 3, 2017, the Cabinet Secretary for Energy and Petroleum established a taskforce to examine Power Purchase Agreements (PPAs) for Independent Power Producers (IPPs). Its task was to examine the PPAs made between the IPPs and KPLC and make recommendations for standardizing PPAs and ways to conduct tariff reviews in order to lessen the impact on retail tariffs.

76. The goal was to give the government the ability to get value for money on all PPAs in effect as of January 31, 2017. This was done in accordance with the guidelines of the Energy Act of 2006. Although the taskforce presented its final report to the Cabinet Secretary for Energy on May 31, 2018, the report's conclusions and findings were not made public.

77. Furthermore, the Cabinet Secretary for Energy formed an inter-agency Committee on Independent Power Producers' PPAs on April 9, 2020. According to its terms of reference, the inter-agency committee was tasked with reviewing and updating the taskforce's recommendations for the report dated 31st May,2018, which were then to be aligned with the provisions of the Energy Act, 2019 since the 2017 taskforce was mandated under the now repealed Energy Act of 2006. The Cabinet Secretary received the report on January 26, 2021, containing the findings and recommendations.

78. An analysis to the extent of implementation of the previous two taskforce recommendations noted their status of implementation as follows: -

a) Implemented Recommendations

i. The Least Cost Power Development Plan (LCPDP) is matched with the commercial operation dates (COD) of all renewable energy projects.
ii. To undertake a study and make recommendations for grid energy storage systems, including pumped storage hydro, battery storage, and hybrid systems for grid stability measures;
iii. The Iber-Africa I plant and Tsavo Power Plant with a capacity of 56 MW and 74 MW respectively be retired.
iv. Ministry of Energy and EPRA to fast-track the development of a policy on transmission charges and open access/wheeling regulations as provided in the Act.
v. Retirement of the Kipevu 1 60 MW thermal plant in 2023 after commissioning of the Isinya-Mariakani- Rabai Line.

vi. EPRA analyses which institution is better placed to be designated as a system operator and implements the designated system operator as provided in the Energy Act, 2019.

b) Partially Implemented Recommendations

i. When applicable, the transmission projects should be carried out within a PPP framework that is open and competitive. Ministry of Energy and KETRACO should only select and develop PPP on transmission lines based on the optimized transmission expansion plan.
ii. That all PPA negotiations be in line with the updated LCPDP 2020–2040 due to various repercussions, including the Covid pandemic and delayed investments that were to fulfill the expected demands;
iii. The government should implement legal and policy changes to lower the risks associated with projects and enable competitive bidding through an auction mechanism to encourage Kenya's generation tariff to be competitive.
iv. Launch the Renewable Energy Auction in accordance with the LCPDP.
v. Transition from the current Feed-in Tariff policy to the planned Renewable Energy Auctions policy, including reworking the 2012 FiT Policy to allow small hydro, biomass, biogas, solar, and wind projects to be subject to an Auction Policy. The creation and implementation of the Renewable Energy Auction Framework.

c) Recommendations not yet Implemented

i. Retirement of two 30 MW Gas Turbines in Muhoroni and Embakasi. However, the Narok-Bomet and the Olkaria- Lessos –Kisumu Transmission Lines whose construction had been delayed were to stabilize voltage in Western Kenya region.
ii. All projects with EoIs that were granted more than three years ago and have not complied with the Implementation Guidelines should have their EoIs revoked.
iii. Announcement of a deadline for the signing of PPAs for solar and wind projects with authorized feasibility studies by the Cabinet Secretary for Energy. The suggested time frame was six months from the announcement date, additionally mandating that all solar and wind projects that complete PPAs within the 6-month window do so with a 12-month financial close.
iv. KPLC should reevaluate the requirements imposed by onerous conditions, such as the payments for deemed generated energy, and find a way to design clauses that are balanced in terms of risk transfer, especially on PPAs with windows for reopening.
v. Standardization of the PPAs clauses.

79. In 2021, following concerns about the high cost of electricity for individuals and KPLC's financial woes, the President constituted a task force vide Gazette Notice No. 3076 of 29th March 2021 with the core mandate to "undertake a comprehensive review and analysis of the terms of all PPAs entered into by the Kenya Power and Lighting Company Limited (KPLC)... and develop a suitable strategy for engagement with the IPPs and lenders, in order to achieve relief for electricity consumers and ensure the long-term viability and sustainability of the energy sector". The subsequent report was submitted to the President on 29th September 2021.

80. The task force report's primary recommendations aimed to **lower the price of power by more than 33%**. The decrease was to be carried out in two stages, with the first 15% reduction stage focusing on system losses and the second stage involving contract renegotiations with Independent Power Producers (IPPs).

81. In January 2022, when EPRA released a revised tariff that would relieve small business and residential consumers as well as major commercial and industrial consumers, some progress towards implementing the first phase was observed. To cover this drop, taxes, levies, and the consumption fee were each reduced by 20%, and all monthly increases to surcharges were stopped. This indicates that it was not directly connected to policies addressing system losses, as had been the task force's suggestion.

82. Although the subsidy provided short-term relief to consumers between January and September 2022, its implementation had a significantly negative impact on KPLC's liquidity position, leading to a Kshs. 26.3 billion annual revenue shortfall and an increase in its outstanding subsidy-related bills to Kshs. 5.3 billion as of March 31, 2023, as well as a liquidity gap of Kshs.64 billion as of FY2021/22.

83. For the second phase's implementation, several recommendations had been made. However, none of these recommendations was effectively implemented. The recommendations included:

i. **Review and renegotiations** with IPPs to secure an immediate reduction in PPA tariffs within existing contractual arrangements;

ii. **Cancellation with immediate effect** of all unconcluded negotiations of PPAs and ensure future PPAs are aligned to the Least Cost Power Development Plan (LCPDP);

iii. **Fast-track and deepen the ongoing reforms at KPLC** to restructure it into a commercial entity that is both profitable and also capable of delivering efficient and cost-effective electricity supply to all consumers;

iv. **KPLC to take the lead** in the formulation and related PPA procurement of the LCPDP;

v. KPLC to institute **Due Diligence and Contract Management** frameworks for PPA procurement and monitoring along the lines of the drafts provided by the Taskforce on legal provisions such as the termination clause, default clause, dispute resolution clauses, force majeure clause, etc.;

vi. KPLC to institute **one and five-year rolling demand and generation forecasts** and associated models;

vii. KPLC to **adopt standard PPAs and proposed Government Letters of Support (LOS)** along the lines of the drafts provided by the Taskforce;

viii. **KPLC to undertake a forensic audit** on the **procurement and system losses** arising from the use of **Heavy Fuel Oils (HFOs)**; and

ix. In line with the **constitutional imperative for transparency in the public sector**, KPLC's annual reports should **include the names and beneficial ownership of all IPPs** with which it has contractual arrangements.

84. Other notable recommendations arising from the 2021 taskforce report and previous taskforces include the following: -

i) KPLC should explore the use of pay when taking provisions for expired PPAs in the event there is a need for thermal power capacity in the short term.
ii) EPRA to implement the recommendations of the power market study and operation and dispatch guidelines and designate a system operator. EPRA should also procure consultants and ensure implementation of the findings and recommendations arising from studies on ancillary services, storage, and grid stability.
iii) EPRA should unbundle the transmission and distribution tariff for transparency in the supply of electricity and ensure cost recovery in line with the principle of prudently incurred costs, as well as consider implementing PPP in transmission infrastructure development.
iv) Proper coordination of the energy sector to eliminate overlaps and EPRA to be more effective in its role as a regulator, including REREC focusing on its core mandate of rural electrification especially in areas not considered commercially viable for KPLC as well as aligning the roles of GDC and KenGen to obtain synergy in the areas of geothermal resources.

2.7 Analysis of Independent Power Producers in Other Jurisdictions

85. Independent power producers (IPPs) are now making an important contribution to meeting overall power needs in developing countries, including in Africa. More than 280 of these projects have reached financial closing since 1990, representing 20+ GW of installed capacity in over 30 countries. Most of these projects (87%) built since 2008 have been renewable-energy-based (including large hydro) (Alao and Kruger, 2020). Among the case study countries are: -

A. Ethiopia

86. The current Energy Law (Proclamation 810/2013), which took effect in 2014, establishes the legislative framework governing the Ethiopian energy sector. Independent power producers (IPPs) were permitted to generate electricity independently, and long-term power supply contracts (Power Purchase agreements) were also possible. In the Ethiopian context, the operating term of a PPA is typically 20 – 30 years, with the Ethiopian Energy Authority (EEA) granting generation licenses covering 25 years for hydroelectric and geothermal power, and 20 years in the case of wind power, solar, biomass and waste-to-energy.

87. The IPPs are required to sign a PPA and Implementation Agreement (IA) with Ethiopian Electric Power (EEP) and the Ministry of Finance. PPAs are take or pay and dollar-denominated but payments to the IPPs are typically made in the local currency (Ethiopian Birr). IAs offer IPPs guarantees such as tax breaks, exemptions from customs (import) tariffs, and generating payment guarantees by the government if EEP is in default.

88. Tariff structures contain energy and capacity charges depending on delivered net electricity output and plant availability, respectively.PPA provisions, including payment terms and tariff structures, are subject to negotiation between the IPP and EEP. Prices for renewable energy are negotiated between

IPPs and EEA on a case-by-case basis based on the size, location, and particular technology used in the project. The feed-in tariff now ranges from USD 0.05 to 0.06 per kWh for solar and wind energy plants.

89. Tariffs are outlined in the PPA and are decided upon either through a competitive bidding process or through direct negotiations between the IPP and EEP. Tariff agreements that have been reached between the parties are not prohibited by the Energy Proclamation and regulation. The tariff clause will also be examined by the EEA as it examines the PPA. The PPA may have provisions for cost reductions, financial safeguards, relief events, confidentiality, transfer, and assignment in addition to liquidity support mechanisms and termination and default clauses.

90. The PPA and IA may include clauses that address the deemed generated energy payment mode, including the computation, and whether they do so before or after the commercial operation date. The PPA may include clauses relating to dispute resolution procedures, the renunciation of sovereign immunity, and the applicable laws. The PPA may have clauses that allow for tariff modifications in response to political developments, alterations in the law, or adjustments to tax rates. In the event of delays or a failure to fulfill operating thresholds, the PPA may contain provisions for liquidated damages.

B. South Africa

91. Arising from the concern that the National Energy Regulator of South Africa (NERSA) Feed in Tariffs (FITs) was still too high, the legal opinion that found that the feed-in tariffs amounted to noncompetitive procurement and were thus forbidden by the government's public finance and procurement legislation was commissioned by the Department of Energy and National Treasury. The National Treasury and Department of Energy then took the initiative to re-evaluate the government's strategy.

92. The Renewable Energy Independent Power Procurement Programme, a competitive bidding procedure for renewable energy, was introduced by the Department of Energy (DOE) in August 2011 with the management being through the Independent Power Producers Office (IPPO). NERSA then formally ended the Renewable Energy Feed in Tariffs policy (REFITs). The Renewable Energy IPP Procurement Programme (REIPPPP) in South Africa makes use of (a) a standard PPA, (b) an Implementation Agreement with the Department of Energy covering sovereign guarantees as well as penalties and rewards around economic development commitments, and (c) Direct Agreements covering step-in rights for lenders, all of which are non-negotiable and public. The off-taker, Eskom, and the IPP both sign the PPA. PPAs stipulate that all transactions must be conducted in South African Rand and that contracts have 20 years from the Commercial Operation Date (COD). PPAs with Eskom are also based on a 'take or pay' agreement.

93. A simultaneous auction is organized for various technologies. Any interested party may submit a proposal for more than one project and/or technology. The largest allocations are for wind and photovoltaics, with smaller amounts going to concentrated solar, biomass, biogas, landfill gas, and

hydropower. Projects must be larger than 1 MW, and an upper limit is established on bids for different technologies. Prices for each technology are likewise subject to limits. A financial close must occur within six months after the announcement of the preferred bidders, and bids must be submitted within three months of the RFP's publication.

94. The procurement process is designed to increase the likelihood that successful bidders will be able to complete the projects. Bid evaluation involves a rigorous two-step process; First, bidders must meet minimum threshold requirements in six categories—environment, land, commercial and legal, economic development, financial, and technical—before moving on to the second step, where bid prices account for 70% of the final score and the remaining 30% is made up of a composite score that takes into account job creation, local content, ownership, management control, preferential procurement, enterprise development, and socioeconomic factors.

C. Australia

95. As a nation's power sector transitions from a centralized model to a deregulated market-oriented approach (like the one in Australia), synthetic PPAs may become more important for the financing of generation projects.

96. In a synthetic PPA, the project company would physically sell the electricity it generates into the spot market at a floating price while simultaneously entering into a derivative contract (typically structured as a swap) with an "off taker" who agrees to "purchase" from the power plant a notional quantity of electricity at a fixed price over the course of the PPA. The "off taker" is compensated with the floating price that such electricity would fetch on the spot market.

97. The synthetic PPA performs an economic role that is mostly comparable to that of traditional long-term PPAs in that it gives the project a certain amount of guaranteed revenue by protecting it against changes in the price of energy on the spot market. Physical offtake can be handled separately by placing a bid on the spot market and is frequently less problematic in power markets with good liquidity.

98. Synthetic PPAs are incredibly adaptable tools that can be used for a variety of tasks. In the Australian market, they are frequently designed as the main long-term offtake arrangement that underwrites the financing of large-scale wind farm projects. They are often documented in a confirmation under a master agreement used for OTC derivative transactions (such as the ISDA Master Agreement).

99. Guidelines and sample documents for the documentation of synthetic PPAs on the Australian market are published by the Australian Financial Market Association. The use of synthetic PPAs also raises new compliance and licensing issues in accordance with existing financial legislation, as the PPA may be seen as a financial product.

2.8 Measures other countries have taken to Reduce the Cost of Electricity

100. The following countries have taken the following measures to address the soaring cost of electricity:

a) Netherlands

Overview

101. As of 2021, the top five energy sources in the Netherlands were as follows; natural gas (47%), wind (15%), coal (14%), solar (10%), and biomass (8%). Other sources include nuclear, petroleum products and hydropower. The country has one nuclear power plant and one LNG terminal. In terms of the energy mix, fossil energy accounts for 74.69 million MWh, renewable energy (39.11 million MWh) while nuclear and others accounted for 4.13 million MWh in 2021.

Measures taken to reduce cost of electricity

102. The Netherlands is among the countries with the high cost of power. To cushion its citizens from the rising energy prices, some of the measures that have been undertaken include:

i. Reduction of the rate of VAT on energy (natural gas, electricity, and district heating) from 21% to 9% which will help down energy bills for households with average consumption by around euros 140 over the period.
ii. Increase in one-off energy allowance for people on low incomes from 200 Euros per household to 800 euros to help mitigate the impact of higher energy costs on people on incomes around the level of social assistance benefit.
iii. Allocating money for households to take energy-saving measures.

b) Ghana

103. Ghana's energy mix consists of a combination of hydroelectric, thermal (predominantly fueled by natural gas, heavy fuel oil, light crude oil and diesel fuel oil) and renewable energy sources with thermal and hydroelectric sources representing approximately 99% of the generation capacity. Thermal power in Ghana is generated from a combination of private and public sector outputs operated by state owned and a variety of Independent Power Producers ("IPPs"). Ghana's installed power generation capacity was 5,481MW as of the end of 2021, with a dependable capacity of 4,975 MW and a peak demand of 3,246 MW. This demand constitutes an increase of approximately 5% as compared to 2020.

Measures taken to reduce the cost of electricity.

i. **Developing and improvement transmission infrastructure to reduce system transmission losses** which stood at 5% (1,076GWh) of the electricity transmitted in 2021, above the 4.1% target benchmark set by the Public Utilities Regulatory Commission (PURC).
ii. **Implementation of the energy sector reform programme (ESRP)-** which was started in 2019 which is to be implemented in three phases over the course of five years. The various phases of the programme are as follows:

- **First phase** - included setting up Energy Sector Recovery Task Force, tasked with reducing shortfalls in energy sector revenue caused by inefficient management.
- **Second phase** - which is currently in progress, aims to resolve the difficulties posed by the take-or-pay generation capacity arrangements and the oversupply of gas by matching supply and demand, renegotiating terms with IPPs, completing gas infrastructure, and tackling pricing and policy actions to reduce gas tariffs in the power sector.
- **Third phase** – which is to be undertaken before 2023 and is to be developed by the Energy Sector Recovery Task Force for review and approval by the Cabinet.

iii. **Imposing a moratorium on the signing of new power purchase agreements ("PPAs")** and gas supply arrangements and suspension of all ongoing negotiations on such agreements until further notice or unless properly exempted by the Government on a case-by-case basis.

iv. **Successfully renegotiated terms with six IPPs** (Karpower, Cenpower, Early Power, Twin City Energy, AKSA Energy and Cenit). The renegotiated agreements are expected to produce savings estimated at USD13.2 billion over the life of the PPAs. This is to be achieved through a combination of reduced capacity and energy charges. The Ghanaian Ministry of Finance asserts that due to take or pay agreements that have left the state responsible for unutilized generation capacity while accruing significant debts, the country spends more than USD 500 million annually on power that is neither used nor necessary. As a result, the government made another attempt to renegotiate the contracts to a take-and-pay arrangement in March 2023, with considerable success being witnessed in April 2023 when Ghana and Aksa Energy Company Ghana Limited, a Turkish energy company, signed the first take-and-pay power purchase agreement for the development of a 205 MW combined cycle gas turbine plant in Anwomaso, in the Ashanti Region.

v. **Just like Kenya, the Public Utilities Regulatory Commission (PURC) which is responsible for setting utility tariffs in Ghana, reviewed tariffs upward** by 27.15% on average. However, small and medium-scale businesses pay lower tariffs than the residential consumer class.

vi. **Reduced the cost of Generation;** The Ghanaian government said that a portion of the money raised from the sale of 2020 Eurobonds will be used to refinance loans obtained by IPPs through the Ghana Infrastructure Investment Fund (GIIF). It is anticipated that GIIF will refinance the loans at a reduced interest rate, which will cut the cost of production for the IPPs and, ultimately, tariffs after these take outs are completed.

vii. **Implementation of Special Forex Auction Mechanism** which is a multiple-price forward foreign exchange auction intended to minimize the uncertainty of the future availability of foreign exchange and aid price discovery, especially for the general pricing window within the downstream petroleum sector.

c) Namibia

104. Even though Namibia's domestic generation capacity is quite low, and mainly depends on imported power. However, its adoption of the **"Modified Single Buyer Framework,"** which allows independent power producers (IPPs) to directly sell electricity to large power users locally and internationally across the national transmission grid is a very progressive step. The evolution from a centralized model dominated by one large utility, NamPower, to a hybrid decentralized model with

multiple actors generating and supplying electricity is significant shift in the generation mix. Transmission customers are now able to buy up to 30 percent of their energy requirements directly from a private power generator.

105. In addition, the new framework provides for the deployment of new generation technologies such as battery storage and has the potential to attract significant national and foreign direct investments.

CHAPTER THREE

PART IV

3.0 PUBLIC PARTICIPATION (ARTICLE 118 OF THE CONSTITUTION)

106. Article 118(1) (b) of the Constitution of Kenya 2010 requires Parliament to facilitate public participation and involvement in the legislative and other business of Parliament and its Committees. In compliance with the foregoing, the Committee, through the placement of adverts in the print media on 4th May 2023, invited the public and interested stakeholders to submit memoranda on the matter of Reduction of Cost of Electricity in the Country.

107. Through the placement of adverts in the print media on 4th May 2023, the Committee invited the public and other interested stakeholders to submit memoranda in the matter of Inquiry on the Reduction of Electricity Costs in the Country. Further vide a letter Ref: NA/DDC/ENERGY/CORR/2023/022 dated 15th June 2023, the Committee also invited key stakeholders to provide written submissions and appear before it on the Inquiry.

108. The Committee identified the following stakeholders who were invited to provide submissions to the Committee: -

1) The Ministry of Energy and Petroleum
2) Kenya Power & Lighting Company
3) Kenya Electricity Generating Company
4) Energy and Petroleum Regulatory Authority
5) The National Treasury
6) The Attorney General
7) Auditor General
8) Business Registration Service (BRS)
9) Water Resource Management Authority
10) The Independent Power Producers: -

i. Iberafrica;
ii. Kipeto;
iii. Lake Turkana Wind Power;
iv. Orpower 4;
v. Tsavo Power;
vi. Rabai Power;
vii. Thika Power;
xii. Gulf Power;
xiii. Kleen Energy Ltd;
xiv. Sossian Menegai Ltd;
xv. Alten Solar Farm;
xvi. Malindi Solar;
xvii. Selenkei;

xviii. Cedate;
xix. Genpro Teremi Falls;
xx. Chania Green;
xxi. Kwale Sugar Co.Ltd;
xxii. Kopere Solar Park;
xxiii. Power Technologies;
xxiv. Kenergy Renewables Ltd (Rumuruti);
xxv. Hannan Arya Energy Ltd;
xxvi. Aperture Green;
xxvii. Rimuruti Solar Generation Ltd;
xxviii. Africa Geothermal International Kenya Ltd;
xxix. Thika Way Investment Ltd;
xxx. Makindu Solar;
xxxi. Bahari Winds and Green Millenia Energy Ltd (Isiolo)
xxxii. ICON Solar Limited;
xxxiii. REGen – Terem SHPP Ltd;
xxxiv. Isiolo Project Ltd;
xxxv. Legacy Energy Ltd;

11) Kenya Medical Association;
12) Federation of Kenya Employees (FKE); Central Organization of Trade Unions (COTU);
13) Central Organization of Trade Unions (COTU);
14) Kenya Union of Post Primary Education Teachers (KUPPET);
15) Law Society of Kenya (LSK);
16) Kenya Association of Manufacturers (KAM);
17) Kenya Private Sector Alliance (KEPSA);
18) Union of Kenya Civil Servants (UKCS);
19) Academic/Sector Experts;
20) University of Nairobi;
21) Civil societies/Religious groups/Organizations) Electricity Sector Society;
22) Electricity Sector Association of Kenya;
23) Electricity Consumers Society of Kenya;
24) East Africa Association for Radiation Protection;
25) Kenya Power Pension Fund & Hon. Suleiman Shahbal;
26) Gulf Power Ltd
27) Institution of Engineers of Kenya
28) United Energy and Petroleum Association (UNEPA)
29) Inter-Religious Council of Kenya;
30) Mr. Samuel Barongo Nyamari;
31) Patrick Mwaura Nyoike;
32) Eng. Joseph Njoroge; and
33) Mr. Mugo Kibati

109. The Committee received both oral and written submissions on various dates from the stakeholders. The Committee received a total number of 30 submissions. The memoranda received and how they were considered are summarized below: -

3.1 Ministry of Energy and Petroleum

Mr. Davis Chirchir, the Cabinet Secretary Ministry for Energy and Petroleum presented his submissions on the thematic areas, as outlined in the two committee letters dated 16th June, 2023 and 5th July, 2023 as follows: -

110. The Cabinet Secretary pointed out some of the components that make up the consumption charge and how that charge is computed below:

- The consumption charge covers the base Revenue Requirement, which represents the total revenue that must be realized through annual revenue collections to cover the costs associated with supply of electricity service to the end-user consumers.
- Retail Electricity Tariffs Review Policy of 2005 provides the framework that guides the use of Revenue Requirement model.
- The 2005 policy was developed based on the outcome of two studies; (i) National Economic Research Associates (NERA) of Los Angeles in association with GIBB Africa, and (ii) Power planning Associates of London.
- The objective of these studies was to establish the prudence of the operational and capital expenditure in the electricity supply industry, with specific focus on power producers – both public and private – and the transmission and distribution entity.

111. **The Consumption charge comprise of the following base costs incurred in supply of electricity and the Regulator fixes them for a defined Tariff Control Period.**

- Power Purchase Costs (KenGen & IPPs)
- Regulated Asset Base
- Rate of Return or Weighted Average Cost of Capital (WACC)
- Operation and Maintenance Expenses (KPLC, KETRACO, REREC)
- Depreciation Expenses
- Corporate Tax

112. They mentioned that all units billed to each post-paid or purchased by each pre-paid consumer every month, shall be liable to Foreign Exchange Rate Fluctuation Adjustment, and which is calculated in a defined formula.

113. The Cabinet Secretary further pointed out VAT in electricity pricing is computed based on the total sum of Demand Charge, Fuel Energy Cost and Non-Fuel Energy Cost (consumption charge), in a defined formula.

114. He further added that the effect of VAT on fuel from 8% to 16% on the cost of electricity is expected to be minimal given that only the Muhoroni Gas Turbine (56MW) power plant that uses Dual purpose kerosene will be affected. The energy that has been generated by Muhoroni GT for the period July 2022 to May 2023 is 0.27% of the total generation from all power plants.

115. The other Thermal Power Plants use Heavy Fuel Oil and the applicable VAT has been 16% even before the recent adjustment through the Finance Act, 2023.

116. He further brought out two initiatives geared and aimed at improving the efficiencies, reducing costs and increasing revenue of KPLC, as follows:

- The internal to KPLC, which focuses on reduction of losses as part of the turnaround strategy, which is anchored in KPLC strategy for planning horizon 2023/24 to 2027/28.
- The external initiatives around the transfer of transmission assets, payment of RES deficits and settlement of the transferred transmission assets. He said that this is ongoing, under the strategic leadership of Ministry of Energy with support from the National Treasury and other relevant Government departments.

3.2 Electricity Consumers Society of Kenya (ECSK)

Eng. Isaac Ndereva, the Executive Director, Electricity Consumers Society of Kenya (ECSK), appeared before the Committee on 27th June, 2023 and made submissions as follows: -

117. That their mission is to make electricity available to all consumers at a reasonable price, increase the transparency and efficiency of performance and consumption, increase public participation in the decision-making processes at all levels and launching a nation-wide constructive dialog between all stakeholders.

118. That their goal is to ensure access to affordable, reliable, sustainable and modern energy for all, promote peaceful and inclusive societies for sustainable development, provide access to justice and build effective, accountable and inclusive institutions of all levels, strengthen the means of implementation and revitalize the global partnership for sustainable development.

119. They pointed out that some of the reasons for high energy costs for pre-paid and post-paid purchases include; high fuel costs, foreign exchange fluctuation adjustment, security support facility, liability to water levy used by hydro power plants, high taxes and levies.

120. The consumer is not reasonably able to protect his or her interests because of disability, ignorance, illiteracy, inability to understand the language of an agreement, or similar factors.

121. The consumer transaction, when purchasing pre-paid tokens via Playbill, is excessively one-sided in favour of someone other than the consumer. Consumers lose over 300 million per month on these transactions.

122. They noted that consumers pay taxes, levies, or duties imposed from time to time by the government. At present, Vat at 16% charged to demand charge foreign exchange fluctuation adjustment, inflation adjustment, fuel energy cost, and non-fuel energy cost; Rural Electrification Programme (REP) levy at 5% of revenue from unit sales; Energy Regulatory Commission (ERC) Levy at 3 Kenya cents / kWh.

123. They noted that Kenya is ranked position 34 globally in the cost of electricity and number 2 in Africa's electricity cost ranking, at Ksh/kWh 33.53.

3.3 Eastern Africa Association for Radiation Protection (EAARP)

Ms. Queenter Osoro, the Chairperson, Eastern Africa Association for Radiation Protection, accompanied by other EAARP officials, appeared before the Committee on 27th June, 2023 and made submissions as follows: -

124. **Proposed possible measures to reduce the cost of electricity in Kenya:**

i. **Diversify the Energy Mix**: The country should diversify its sources of energy. The energy mix can be diversified to increase shares of other sources/technologies for generation like solar, and nuclear.

ii. Parliament passed the Nuclear Regulatory Act No. 19 of 2019 which establishes the Kenya Nuclear Regulatory (KNRA) as the nuclear regulatory body and provides for a comprehensive framework for the regulation of safe, secure, and peaceful utilization of atomic energy and nuclear technology. Parliament should therefore to support and allow for the introduction of Nuclear Power as a source of energy to diversify the energy mix.

iii. **Parliament to encourage Regulatory reforms**: Continuously review and update and update electricity sector regulations to encourage investment, completion, and cost efficiency. Transparent and predictable regulatory frameworks can attract private sector participation and foster a conducive business environment. Regulations to introduce smart meters such that when a household uses other source of energy e.g solar, they are compensated.

iv. **Improve Energy Efficiency**: Promote energy-efficient practices in industries, businesses, and households by advocacy through awareness campaigns, offering incentives for energy – efficient appliances, and implementing energy- efficient solutions. This is about the behavioral change; switch off the lights, use natural lights, conduct energy audits, switch of the appliances when not in use, upgrade lightening appliances like have photo sensors for street lights and even public spaces like hotels and even homes.

v. **Enhance Transmission and Distribution Infrastructure**: The country should upgrade the transmission and distribution infrastructure to minimize transmission losses and improve system efficiency this will ensure that the electricity generated reaches the consumers without significant losses, reducing overall costs.

vi. **Strengthen Grid Connectivity**: Improve the connectivity of remote areas to the national grid. This will help reduce reliance on expensive off-grid solutions like mini-grids and standalone

solar systems. This can provide affordable electricity access to rural communities that are currently underserved.

vii. **Make the market liberal to reduce monopoly**: This can introduce competition, drive down costs, and encourage innovation in the industry.

viii. **Minimize the commercial losses**: This increases the cost since the consumers bear the cost of the losses. All the illegal connections and tampering with meters, particularly in industries make KPLC pass the cost to the consumers. Implementing these measures using a multi-stakeholder approach involving government institutions, regulatory bodies, private sector participation, and public awareness campaigns.

3.4 Gulf Power

Mr. Norman Wanderi, the Chief Executive Officer, Gulf Power Ltd made appeared before the Committee on 29th June, 2023 and made submissions for Gulf Power Ltd as follows: -

125. Gulf Power entered into a contract with KPLC in 2009 for financing construction, operations and construction of three power plants in Nairobi.

126. Terms of engagement were to have a capacity of 80.32 Mega Watts and Gulf was to guarantee an availability of 80%.

127. Gulf Power signed a PPA and were to have a payment security. They agreed to use fuel to run the power plant, which had certain performance indicators where they could not consume above a certain capacity. KPLC provided land.

128. **Basis of variance between GULF and KenGen**. Gulf Power based the argument on the capacity charged. The Cost of power depends on technology and would be misleading to compare the two (KenGen and Gulf). The altitude of the power plant also contributes to the units used to produce power. Cost of financing and the Project development period was also a factor. Most IPPs take between 5-10 years to develop a project Plant in Kenya.

129. Gulf Power pointed out that KenGen would take a shorter time and may undertake projects without having certain requirements e.g. licenses etc.

Measures taken to reduce the Cost of Power

130. Standardizing fuel specifications because each Plant is tasked with getting their own fuel to operate.

131. Renegotiating the contracts with KPLC, looking into a win-win situation for both entities.

From the submissions and meetings with Gulf Power Plant, the Committee observed the following:

i. That, Gulf Power Limited achieved commercial operation in December 8, 2014;

ii. That, the pricing is denominated in both Euros and US Dollars;

iii. That, the Capacity Charge Rate comprises of a fixed component of 164.36Kw/year and an Escalable component of 35.00/Kw/year;

iv. That, the Energy Charge Rate comprises of a Base Energy Charge Rate of 0.0063 Euro/kWh while the specific fuel consumption is 0.215g/kWh;

v. That, payments received from KPLC from 2014 to 2022 in capacity charges amount to 132,683,581 Euros which is more than the fuel charge amount of 100,113,700 US Dollars and the Energy Charge amount of 3,693,612 Euros received in a similar period; and

vi. That, the fuel charge (on a USc / KWh) basis of Gulf was nearly double the comparable power plants in the Nairobi area in FY2019. The fuel charge for Gulf Power was almost double compared to similar plants within the same locality in FY2018.

3.5 Iber Africa (EA) Power Limited

Mr. Henry K. Muthanji, the Chief Executive Officer, Iberafrica Power EA Ltd appeared before the Committee on 29th June, 2023 made submissions as follows: -

132. It was the first IPP in the country. The company was incepted in 1996 and started off with a Power Plant that had a capacity of 44.436 Mega-watts. This was done under a controlled / selective bidding process supervised by the World Bank.

133. In the year 2000, the Ministry of Energy through KPLC requested Iber Africa to enhance its capacity and therefore brought in 2 generators of 6 megawatts each bringing the total capacity of the Plant to 56.563 megawatts.

134. In 2007 the Ministry of Energy again, through KPLC requested Iber Africa to enhance its capacity once more. They gave an option to the Ministry, KPLC and negotiated for the current Plant which is rated at 52.5 Mega-watts. The initial one, the 56.56, had a PPA expiring in 2004, this was extended to 2019. The plan has since been recommissioned and sold as scrap.

135. One Plant is out of the system in 2019. The land it was sitting on, was leased and surrendered to KPLC. At inception, Iber Africa (EA) Co. Ltd was owned by a public company based in Spain. They sold their stake in 2000. Epri Muller Capital is now the current owner of the Power Plant.

136. Iber Africa submitted their CR12 showing the ownership of the Company and they promised to provide more details of the individual owners of the company.

Comparing cost of generation with KenGen

137. Iber Africa indicated that with the tariffs in place currently, solar generators are charging 12 USD cents per kilowatt hour. Once you invest in solar, there is no fuel cost. Wind is at 11 USD Cent per kilowatt hour on average. Geothermal on average 8 – 8.5 USD Cent per kilowatt hour. Hydro 4 USD Cent per kilowatt hour.

138. Iber Africa stated that if you remove the fuel component in the Thermal Plant, including KenGen, what is paid to them is 5 USD Cent per kilowatt hour of installed capacity. That gives you an indication of the spread of the power or energy cost.

139. Iber Africa further mentioned that if they were to lower the cost of power, they must talk to every stakeholder involved. Iber Africa also indicated that they are open to a conversation that will help lower the cost of power. They added that after shutting off of the Kipevu II, the government has now been importing 200 of megawatts Hydro Power from Ethiopia.

Measures to reduce the cost of power in the country

i. They pointed out the possibilities of converting the Plant from Thermal to Thermal- Liquified Natural Gas (LNG);
ii. Standardization of Heavy Fuel Oils (HFO);
iii. Having a G2G agreement with some institutions, where the GoK could make arrangements of covering the Heavy Fuel Oils (HFO) for generations and
iv. They mentioned that they are paying the least capacity charge, but could also consider bringing it lower.

From the submissions and meetings with Iber Africa (EA) Power Limited, the Committee observed the following:

i. That, IberAfrica was among the first IPPs in the country;
ii. That, the pricing is denominated in US Dollars;
iii. That, Payments received from KPLC from 2014 to 2022 in capacity charges amount to 140,667,792 US Dollars which is more than ten(10) times the Energy Charge amount of 12,237,681 US Dollars received in a similar period; and
iv. That, IberAfrica was cited in the Presidential taskforce report on Power Purchase Agreements as among the Nairobi area thermal HFO IPPs with an aggregate 303 MW of capacity which reported an average dispatch of 7% during the same period and a maximum of 39%. Only 4 days in the six-month period (June-December 2020) was 80MW exceeded.

3.6 Thika Power Limited

Mr. George Njenga, the Managing Director, Thika Power EA Ltd, appeared before the Committee on 29th June, 2023 and made submissions for as follows: -

140. Thika Power entered into a 20-year BOO-type PPA with KPLC. Since inception to date 2023, about 1.7billion kilowatt/hours has been sold to KPLC. During the period, the Plant has been paid a total of Ksh184 Million Euros in both capacity and Energy charges.
141. Their energy and fuel charges are both calculated based on the Net Electrical Output (NEO) of the plant and are therefore co-dependent as they both depend on the dispatch instructions of the customer KPLC and on their energy needs during a certain month.

142. They pointed out that for their Plant, their energy charge rate is 0.0074 Euro/kWh. They mentioned that the total energy excess tax means that every start and stop of the Power Plant has a degradation impact that affects maintenance. Therefore, there is a compensation for that.

Measures taken to reduce the Cost of Power

i. Importation of fuel and the supply chain. If done jointly, they can enjoy some economies of scale.
ii. Comparting the Power Plants from HA4 to gas.
iii. If the demand of electricity is stimulated, then the cost will come down so as to enjoy the full benefits of these plants.
iv. Part of the cost of electricity is because of high losses in terms of system, commercial and technical loses in the areas of distribution and transmission.
v. Fuel and operational taxes paid to government

From the submissions and meetings with Thika Power EA Power Limited, the Committee observed the following:

i. That, the pricing is denominated in both Euros and US Dollars;
ii. That, Thika Power was cited in the Presidential taskforce report on Power Purchase Agreements as among the Nairobi area thermal HFO IPPs with an aggregate 303 MW of capacity which reported an average dispatch of 7% during the same period and a maximum of 39%. Only 4 days in the six-month period (June-December 2020) was 80MW exceeded; and
iii. That, Payments received from KPLC from 2013 to 2023(up to May) in capacity charges amount to 166,900,690 Euros, the fuel charge amounted to 250,620,979 US Dollars while the Energy Charge and Excess starts amounted to 17,693,954 Euros in a similar period.

3.7 Triumph Power Generating Company Limited

Mr. Siva Kota, General Manager, Triumph Power Generating Company Ltd, appeared before the Committee on 29th June, 2023 and made submissions as follows

143. The power plant of 83MW capacity with ten Diesel Engines and one Steam Turbine unit is located in Athi River area and the power is generated by the gensets (4 stroke Medium Speed Diesel Engines coupled with Alternators) using Heavy Fuel Oil.

144. The electricity thus generated is evacuated through KPLC sub-station located next to the power plant.

145. As per the PPA with KPLC, the energy charge rate is US$ 0.00899 / kWh and remains unchanged till the end of the PPA period.

From the submissions and meetings with Triumph Power Generating Company Ltd, the Committee observed the following;

i. That, the plant has a capacity of 83 MW and the direct capex for the plant was 106.5 million USD;
ii. That, Triumph was cited in the Presidential taskforce report on Power Purchase Agreements as among the Nairobi area thermal HFO IPPs with an aggregate 303 MW of capacity which reported an average dispatch of 7% during the same period and a maximum of 39%. Only 4 days in the six-month period (June-December 2020) was 80MW exceeded;
iii. That, Triumph was cited in the Presidential Task Force report on Power Purchase Agreements as having high prices as compared to Gulf Power and Thika Power though they use nearly similar technology, and all the plants are located within the Nairobi metropolitan area; and
iv. That, the fuel charge (on a USc / KWh) basis of Triumph was nearly double the comparable power plants in the Nairobi area in FY2019.

3.8 Tsavo Power Company Ltd

Eng. Julius Riungu, the Chief Executive Officer, Tsavo Power Company Ltd, appeared before the Committee on 6th July, 2023 accompanied by officials from the company, and made submissions as follows: -

146. That KenGen has a lot of technologies, it being a parastatal is here to stay and their loans were repaid years ago whereas TPC has confirmed life f twenty years during which it must repay the borrowed capital, operate and maintain the plant at a defined availability factor and get their return on investment.

147. They implied that the cost of electricity is determined by the capital invested and its repayment period, the cost of fuel, the operations and maintenance of the plant and return of investment.

148. They proposed for the reduction of the electricity charges will include, renewing the PPAs after the 20year expiry, build up a portfolio of low-capacity charge peaking plants, the government to promote a 24hour economy, carry out electricity supply chain audit, strict adherence to the Least Cost Power Development Plan (LCPDP).

From the submissions and meetings with Tsavo Power Company Limited, the Committee observed the following:

i. That, Tsavo Power Company started commercial operation on 4th September 2001;
ii. That, the capacity payments consisted of both fixed and variable charges. The fixed charges were negotiated at USD 214.16 per kW per year and the base variable charges were negotiated at USD 36.228 per kW per year adjusted in accordance with the Consumer Price Index; and
iii. That, the investor was willing to transfer the plant after the expiry of the PPA in 2021 to KenGen at no cost.

3.9 Rabai Power

Mr. Zablon Obuku, General Manager, Rabai Power Limited, accompanied by Mr. Alex Otochi, and Mr. Tom Ojwang appeared before the Committee on 6th July, 2023 and made the following submissions:

149. The site for the Plant is adjacent to Rabai 220/132/33/11 kV substation off Mazeras-Kaloleni road, Rabai Sub-county, Kilifi County, and has an output of approximately 88.6MW on the Full Commercial Operation Date.

150. Pursuant to a Request for Proposals **("RFP")** dated **5th June 2006** and issued by KPLC, BWSC, and Aldwych submitted an offer that was accepted by KPLC following the due process of the RFP. BWSC and Aldwych established the Rabai Power Ltd to undertake the obligations set out in the RFP and as detailed in this PPA.

151. BWSC and Aldwych are parties to this Agreement to provide support to Rabai Power ltd as provided in the PPA. BWSC and Aldwych international ltd, in accordance with Clause 2.4 of the PPA, undertake their respective obligations pursuant to the Turnkey Construction Agreement and the Operation & Maintenance Agreements.

152. The Parties executed the PPA dated **27th February 2007**(the "Original PPA") and subsequently entered into Addendum No.1 dated **29th October 2007** ("Addendum 1 ") modifying the terms of the Original PPA. The Parties further amended and restated. The Original PPA (together with the amendments agreed pursuant to Addendum 1) in the terms set out in the final PPA which was executed on 4th September 2008.

153. Rabai Power came up with the following measures to reduce the cost of electricity as envisaged in Kenya Vision 2030 and Bottom-up Economic Transformation Agenda (BETA):

- Strengthen the grid and eliminate transmission bottlenecks
- Stabilize the investment environment
- Explore options for lowering the cost of fuel for thermal plants
- Address operational efficiency across generation, transmission, and distribution
- Relook at taxes and levies on electricity bill

From the submissions and meetings with Rabai Power Company Limited, the Committee observed the following:

i. The pricing is denominated in both Euros and US Dollars; and
ii. Rabai was cited in the Presidential Task Force report on Power Purchase Agreements as among the Mombasa area HFO thermal IPPs that have operated at comparatively higher Load Factors, due to the need to provide voltage support to the local grid, given its distance from the main power generation areas of the Seven Forks dams, the Rift Valley and Northern Kenya.

3.10 Energy & Petroleum Regulatory Authority (EPRA)

Mr. Daniel Kiptoo, the Director General, Energy & Petroleum Regulatory Authority (EPRA), appeared before the Committee on 11th July, 2023 and made the following submissions:

154. EPRA is a state corporation established under Section 9(1) of the Energy Act to undertake Technical and Economic Regulation for electricity, renewable energy, downstream coal, coal bed methane gas and petroleum sectors.

155. They stated that KPLC has been leading the renegotiation exercise of the Power Purchase Agreements which will eventually come before the Authority for review and approval as espoused in Section 11 (h) of the Energy Act, 2019. They added that there is need for mutual understanding between parties to better align the interests of consumers, the government while ensuring a conducive environment for IPPs to continue contributing to the energy sector's development.

156. They observed that there are some taxes and levies that impact the overall cost of power and the approach/mechanism and that the same can be managed to offer relief to consumers. Such taxes include: Vat at 16%, EPRA at Ksh0.08/kWh, WRMA at 0.0146/kWh and REP levy at 5%. The various taxes levied on electricity are anchored on various statutes which are passed by Parliament. Once the taxes are approved, they have to be recovered from the end user consumers. As such, managing and offering relief to consumers from the impact of these taxes and levies on the cost of power can be achieved through strategies such as subsidies and tax exemptions.

157. They further mentioned that the Authority is mandated to prescribe standards related to reliability and quality of supply. The Authority approved benchmarks that KPLC should achieve over the Tariff term 2022/23 – 2025/26 in order to ensure accountability and proper use of the resources available to them.

3.11 Kenya Power & Lighting Co. Ltd (KPLC)

Eng. Peter Waweru Njenga, the General Manager, Regional Coordination at Kenya Power and Lighting Company, accompanied by Mr. John Ihuthia appeared before the Committee on 11th July 2023 and made submissions on behalf of the Kenya Power & Lighting Co. Ltd Managing Director & CEO as follows: -

158. That the initiative of renegotiation of the PPAs was a recommendation of the Presidential taskforce on review of Power Purchase Agreements which was appointed in March 2021. PPA renegotiation is currently an ongoing process under the leadership of the Ministry of Energy and in line with the National Assembly's directives on the same.

159. That the role of the National Treasury in the Power Purchase Agreements is significant and includes: Approval by the Public Private Partnership Committee (PPP). This is a condition precedent to the PPA becoming effective. Provision of the government of Kenya Letter of Support to shield the IPPs on political risks. Provision of partial risk guarantees to cushion the IPPs on short-term liquidity risks. Granting IPPs exemption of Import Duty, value-added tax, import declaration fees, and railway development levy on materials and equipment required for the development of power plant projects.

160. Regarding the capacity charge on power purchase agreements, the KPLC management engaged the regulator on the alignment of the CODs of some of the oncoming PPAs with the Company's medium-term power demand. A government of Kenya standing committee on PPA renegotiations was set up and this item was confirmed as resolved as of 30th June 2022.

161. One key mandate of the KPLC is to procure adequate capacity to ensure supply security for the country. They mentioned that the dispatch from the power plants varies depending on variation in demand during the day from peak demand period to low demand periods; availability of hydro-generation which depend on hydrology; availability of generation capacity to meet demand that is affected by planned and unplanned power plant maintenance and variability of wind and solar generation.

162. To manage power purchase costs, KPLC intends to renegotiate existing PPAs within the terms and conditions of the agreements.; support migration to energy auction model for future energy supply; promote interventions that would support demand growth hence increase energy use; work with other sector players to ensure supply-demand balance to avoid oversupply and hence manage the requisite capacity charges.

3.12 Lake Turkana Wind Power

The submissions from Lake Turkana Wind Power were as follows: -

163. The wind farm site is located in Loiyangalani Sub-County, Marsabit County, and has an installed total production capacity of 310.25MW of electricity which is approximately 14-17% of Kenya's installed electricity capacity (and supplies upwards of 20% of the Country's off-peak demand). The addition of this clean energy into the national grid is reducing the cost of power through reduced usage of heavy fuel-oil-fired power generators in the national energy grid and reducing Kenya's carbon footprint.

164. They further submitted that LTWP saves the Kenyan economy upwards of EUR 120M annually in fuel imports thereby having a significant positive macro-economic impact on the economy. Since being operational in September 2018, LTWP has assisted in saving KES 45.7 billion from what would otherwise have been incurred as higher fuel-cost charges to electricity consumers. The positive impact of LTWP therefore cannot be understated. The total investment of EUR 625m (KES 91b) not only makes LTWP the largest wind power project to be constructed in Africa but also places it amongst the single largest private sector investments in the history of Kenya.

165. LTWP trusts that the National Assembly's Energy Committee will be able to review the ESAK Memo and appreciate that it is simply not feasible to compare KenGen's bulk power tariff with that of individual IPP's given the vast differences between KenGen's business structure with that of privately owned and project financed IPPs who negotiate their PPA's with KPLC on a case by case basis and specifically noting that out of the 1,862MW of KenGen's installed capacity, only 962.64MW has been developed by KenGen since the liberalization of the energy sector in 1998 when the Government of Kenya completed the unbundling of the energy sector (to achieve efficient usage of resources

earmarked for the generation, transmission, and distribution of electricity) and pursuant to which, KenGen was established.

166. The rest of the power plants – almost all hydro-electric plants, have an average age of 57 years, an example of the Bujagali Hydroelectric power station in Uganda, the 250MW hydropower plant had an initial tariff over USD 0.13/kWh at inception in 2012. Therefore, comparing KenGen Hydropower or the bulk power tariffs with other IPPs would be overly simplistic and distort the true tariff on a market-comparable basis.

167. To contextualize the main aspects of the difference between KenGen's wind power project, it is important to note that out of the 962.64MW that KenGen has added to the grid since it was set-up, only 25.5MW comprises wind power. Secondly, the difference between KenGen's wind tariff and LTWP's tariff is not vastly different. This is despite KenGen's wind power project being developed through grant funding (Initial phase); a state-to-state zero-interest credit agreement with the Government of Belgium; a €6.4 million concessional credit agreement with the KBC Bank of Belgium for Ngong Phase I in 2012; and a 1.50% Spanish loan for expansion by 13.6MW (EUR 14,162,145.37) for Ngong Phase II.

168. They added that in comparison, LTWP is a purely commercial project financed with a total project cost of EUR 625 million (approx. KES 80 billion) which took 7 years to develop before it could even reach financial close and commence construction in 2014. LTWP's annual debt service is approx. EUR 65 million (KES 9 billion) paid semi-annually (and increasing due to interest rate increases). LTWP's tariff is undisputedly amongst the lowest of the IPPs and its contribution to lowering consumer tariffs has been enormous.

169. When asked about the measures that as a company they are taking to reduce the cost of electricity to households, businesses, factories, and other consumers to support the Government's socio-economic transformation as envisaged in the Kenya Vision 2030 and the Bottom-up Economic Transformation Agenda (BETA), they referred the Committee to a sector paper from The Electricity Sector Association of Kenya (ESAK) dated 19th May, 2023 (ESAK National Assembly Memo) to the National Assembly Energy Committee **(provided in Appendix 4)** in response to an invitation for public participation and submission of memoranda in the matter of inquiry by the National Assembly on the reduction of electricity costs in the Country, issued on 04th May, 2023, which addresses this point raised by the DC.

170. On being asked to shed light on Mr. Mugo Kibati's involvement and participation in the lease award to the Lake Turkana Wind Power Corporation, they provided a chronological summary of the key dates on the timing of the land lease, PPA and vision 2030 and his on-boarding by LTWP as Chairperson. He provided that the company was incorporated in 2006 and the land title was issued in 2009, prior to his becoming of Director General Vision 2030 Delivery Secretariat (VDS) in June 2009.

171. He further submitted that the LTWP project had achieved significant milestones before it was endorsed as Vision 2030 flagship project in October 2012. He further provided that the Vision 2030 Delivery Secretariat had no role or involvement in the development of the LTWP project.

From the submissions and meetings with LTWP, the Committee observed the following:

i. The tariff charged by LTWP consists of a fixed component of EUR0.065 and an escalable component of EUR0.0125;

ii. There were serious irregularities, questionable transactions in the lead-up to the project's conceptualization, and ultimately grave illegalities in the project's land allocation, according to the findings of a special audit of the project conducted by the Auditor-General, which was detailed in their special report of April 2021 that was presented before the National Assembly on August 5, 2021;

iii. The irregularities include the private investor(LTWP) exclusive rights to survey the project area before the lease agreement and further invite tenders on behalf of KPLC which was in contravention of section 2(b) of the repealed Public Procurement and Disposal Act, 2005 (PPDA) in promoting fair treatment of competition as no competitive bidding was conducted in order to identify LTWP as the private investor, the Power Purchase Agreement between KPLC and LTWP was granted approval by EPRA on 11th November 2009 which was within 2 days after KPLC wrote to EPRA through a letter Ref No: KPLC1/2/3/3 dated 9th November 2009 for approval to enter into a PPA with LTWP, the Power Purchase Agreement between KPLC and LTWP was executed on 29th January 2010, which was almost a year before LTWP Ltd had obtained a license to generate electric power on 16th December 2010 while the lawsuit i.e. **Mohamed Kochale & 5 others v. Lake Turkana Wind Power Ltd & 5 others [Meru ELC No.163 of 2014],** which was filed by the local community, was the result of the anomalies and illegalities in the project land acquisition;

iv. The Presidential Task Force on Power Purchase Agreements citing the daily output report of Lake Turkana Wind Power during the year ended 2020, indicated that; (i)The project did not achieve the nameplate 300MW capacity for a sustainable period on any day;(ii) The minimum average daily output was 4MW and the maximum 262MW, during only five (5) days of the year was output in excess of 250MW; (iii) During sixty-seven (67)days,(18% of the year)daily output was less than100MW; and the bulk of the year (225days or 62%) experienced production of between 100MW and 200 MW and hence an average daily output for the year of 150 MW; and

v. Based on the findings, and in accordance with Sections 42,43,44,45 and 46 of the Anti-Corruption and Economic Crimes Act, (CAP 65) of 2003, there is need for further investigation on the Ministry of Energy and Kenya Power and Lighting Company Officials at the time to be held accountable for not ensuring that the competitive process was followed in the identification and implementation of Lake Turkana Wind Power (LTWP) project, not conducting an independent legal risk assessment before execution of contracts for a capital project of that scale which led to hurried approvals being granted in disregard to the relevant

laws and exposed taxpayers and the utility company to undue financial obligations arising from the Deemed Generated Energy Payments.

3.13 Kipeto Wind Power

The submissions from Kipeto Wind Power were as follows: -

172. Kipeto Energy PLC has been in operation since 2021 and has been operating a 100MW wind power plant in Kajiado County.

173. Kipeto Energy PLC is a company incorporated in Kenya, which was registered on 4 June 2010 as CPU/2018/220494.

174. Kipeto Energy was granted an Electricity Power generation License on 16th September 2015 as License Ref No.GI05.15 to generate 100MW.

175. The 100 MW wind farm's original estimated cost, which was subject to change throughout project implementation, was €182,159,000.

176. The energy charge by Kipeto is USD 0.120 per kWh, as per the Feed in Tariff Policy.

From the submissions and meetings with Kipeto Wind Power Ltd, the Committee observed the following:

i. That, pricing of the plant is in USD;
ii. That the nature of the PPA is a take-or-pay agreement; and
iii. That, the Kipeto power plant which is located in the same vicinity as KenGen's Ngong power plant has a tariff which is 40% higher.

3.14 Kenya Association of Manufacturers (KAM)

Dr. Job Wanjohi, Policy and Research Manager, Kenya Association of Manufacturers (KAM), accompanied by Mr. Innocent Onserio and Mr. Slyvester Makaka, appeared before the Committee on 18th July, 2023 and made the following submissions: -

177. That all upcoming plants are from renewable sources including Ethiopia Imports. There shall be no additional thermal plants to warrant increase in cost. Energy sales expected to grow year on year depending on economic growth and demand. It is expected that with more sales, average cost of energy to Kenya Power should come down.

178. That tariff price volatility causes uncertainty in the business environment. Kenya's competitive positioning as an investment destination is being eroded by developments in other economies investing in hydropower generation but Kenya is investing in geothermal, wind, and solar power.

179. That if system losses are reduced from the current 22.43% to 14.50%, this will save the customer on average Ksh.6B annually i.e Ksh19.331B to Ksh13.110B. Industries can be billed at the generation tariff but pay for the transmission cost to KETRACO.

180. Kenya Association of Manufacturers recommended that enhance capacity utilization of existing geothermal plants i.e. KenGen: 62% to 97%, IPPs 82% to 97% to substitute thermal production, the thermal production should run at a minimum threshold to achieve power stabilization.

181. They also recommended that Off-grid thermal producers may continue running before medium-term to long-term sustainable, competitive solutions have been put in place. Production substitution of a 3% reduction from 13% to 10% in thermal generation will save consumer costs.

182. They pointed out that we have approx. 1900GWh stranded in the Geothermal due to infrastructure & low consumption during night hours. Incentivizing off-peak energy consumption could see enhanced utilization of the system capacity and tariff of below US 9 cents is achievable if we incentivize Kenya power to reduce losses and internal inefficiencies.

183. They requested that KPLC to improve on the reliability and quality, KPLC should be incentivized to reduce on commercial and technical losses from 22.43% to 14.5%, Industries can be billed at the generation tariff but pay for the transmission cost to KETRACO, to make production substitution to reduce thermal production by 3% of total energy mix from 13% to 10% , implement time of use as tariff should be restructured to get more industrial customers into the bracket and help improve on capacity utilization during off-peak period.

184. They concluded that there is need to introduce a legal provision to put margin or mark-up over and above aggregated generation tariff with the sole objective of driving operational and administrative efficiencies and by implementing the 5 Industrial Asks and the legal provision, the customer burden will reduce by approx. Ksh.31B translating to a reduction of Ksh.3.00 per unit or more.

3.15 Kenya Private Sector Alliance (KEPSA)

Mr. George Aluru, Chairperson of the Kenya Private Sector Alliance Sector Board, appeared before the Committee on 18th July, 2023, accompanied by Mr. Peter Thairu, KEPSA secretariat, and made submissions as follows: -

185. That lowering the current cost of power, they propose: Strengthening the grid and eliminating transmission bottlenecks, Operational efficiency at KPLC with continued reduction of system losses by KPLC related to theft and technical deficiencies, relooking at taxes and levies on electricity bill for instance like removal or reduction of taxes on HFO used in power generation, encouraging a 24hr economy through improvement of the time-of-use tariff modalities to increase KPLC revenue.

186. That Kenya Private Sector Alliance (KEPSA)imposed medium and long term measures like Stabilizing investment environment by re-establishing investor trust and reducing the perceived

investment risks and harmonizing policy environment related to investments, Strict Adherence to the Least Cost Power Development Plan (LCPDP), Exploring the extension of IPP-PPA tenures to spread debt over longer period in condition that the respective IPPs to give a lower generation prices which is later transferred to the consumers, Use of IPP plants to the full extent of their economically useful life, Competitive tendering for acquisition of new power capacity, Completing the regulatory work to open the Kenyan market to further competition and business models, Build up a portfolio of low capacity charge peaking plants, Encouraging local equity and debt participation in power projects and Further market reforms to ensure more competition and integration within the East African Power Pool.

187. In conclusion they proposed that carrying out of an electricity supply chain audit to establish where the losses and inefficiencies emanate from, which are in turn passed over as costs to the consumer. The audit should be carried by an independent and experienced consultancy agreed on by all majority of the stakeholders in power sector. While the audit is ongoing the procurement of power based on the Least Cost Power Development Plan (LCPDP) should continue.

3.16 The Institution of Engineers of Kenya (IEK)

Eng. David Mwaniki, the Chairman of Energy Sub-Committee of the Institution of Engineers of Kenya (IEK) appeared before the Committee on 18th July 2023 and made submissions as follows: -

188. The Institution of Engineers of Kenya submitted a letter dated 18th May 2023 addressed to the Committee Chair (Annexure 5) and appeared on 18th July 2023. The Institution of Engineers of Kenya (IEK) is the learned society of the engineering profession and co-operates with national and other international institutions in developing and applying engineering to the benefit of humanity. The IEK has over 10,000 members drawn from engineers working in various institutions.

189. They stated that on generation, KenGen is the public sector player that can access low interest funding options as compared to other private entrants who borrow at commercial rates. The private sector players have opted for generation options that use fossil fuels affected by the volatile global oil prices. The cost of electricity has multiple causes from generation source, system efficiency besides external factors that affect supply quality like vandalism.

190. They indicated that climate change has affected power generation from Hydro sources as a back up to stabilize the grid due to the intermittency of green sources. The decline has called for increased thermal generation as the preferred source that can be called on short notice. The scenario coupled with high crude oil prices globally has attracted concerns from customers due to the impact on the energy costs leading to high costs of consumer goods and services.

191. KPLC annual report shows a decline from 82.49% in 2015 to 76.05% in 2022 mainly due to Network expansion that connected an additional 741,185 customers under the Last Mile initiative by the government improving the access rate to above 70%.

192. They stated that solutions to this might include to reduce the VAT rate, levy by WARMA besides the effort to reduce thermal generation by retiring units with expired PPAs, invest in emerging technologies like green hydrogen and battery storage, improved quality of supply is important to customers as lower quality will require customers to deploy other costly options like diesel generators.

3.17 Central Organization of Trade Unions (COTU) Kenya

Dr. Francis Atwoli, NOM(DZA), EBS, MBS, the Secretary General, Central Organization of Trade Unions (COTU) Kenya, appeared before the Committee on 27th July, 2023 and made the following submissions: -

193. COTU was founded in 1965 upon the dissolution of the Kenya Federation of Labour and the African Workers' Congress. It is registered and operates within the provisions of the Labour Relations Act of 2007 and the constitution of Kenya 2010.

194. They pointed out that high electricity cost has a cascading effect of industries and businesses, hindering their competitiveness on both domestic and international fronts.

195. By advocating for affordable electricity, COTU aims to create a conducive business environment that promotes industrial growth, stimulates job creation and enhances job security for workers. This will also help enhance Kenya's investment climate, fostering sustainable economic growth that benefits workers and the nation alike.

196. They added that access to affordable electricity is a matter of social justice. Electricity should not be a privilege reserved for a few. Affordable electricity will not only improve workers' livelihoods but also boost industrial competitiveness, foster job creation and attract investments.

COTU's Strategic Proposals:

197. Taming independent power producers who have negatively affected the cost of power in Kenya by making power more expensive. They noted that most PPAs Kenya power enters into require payments in foreign currencies exposing the country to exchange rate risks. Again, they pointed out that most IPPs have tough and long-term contractual obligations that make it hard for any changes to be made once PPAs are signed even if market conditions or energy demand change.

198. They strongly recommended: -

i. Revoking of all PPAs that have been signed.
ii. Relying of KenGen generation capacity instead of IPPs
iii. Having full control over the energy mix
iv. Stabilizing leadership at Kenya Power which will lead to consistency and long-term planning, it will maintain institutional knowledge and expertise, and keep investor confidence high.

199. They suggested that it is prudent to have a COTU representative on the EPRA board. This will ensure that the concerns of workers are considered in regulatory decisions that affect energy pricing. They

added that the have experts in the energy sector who can contribute valuable expertise to the EPRA Board. Their knowledge on labour issues as well, can enrich discussions and lead to more informed decisions.

200. COTU pointed out that the cost of electricity generation in Kenya heavily depends on the type of fossil fuel used in power plants. Fluctuations is fuel prices, particularly in thermal power plants, normally impact the overall cost of electricity. During periods of high fuel prices, electricity tariffs rise to cover the increased generation costs. Further, the cost of transmitting electricity from power generation plants to distribution points influences electricity prices.

201. Building and maintaining transmission infrastructure, such as high-voltage power lines and substations, require significant investment. These costs are then passed on to consumers through electricity tariffs.

202. To reduce the cost of electricity, KPLC has to forthwith stop outsourcing in regards to line maintenance and construction of power lines considering this is an avenue for corruption through inflated bills and untimely expensive due to regular maintenance that has to be done.

203. KPLC has to provide more meter connections to curb illegal connections which untimely leads to commercial losses by Kenya Power.

204. KPLC to streamline their procurement process in order to hasten procurement of critical materials and remove a lot of vested interest in procurement. The government must keep off procurement at Kenya Power and encourage Kenya Power to manage the process by gong for competitiveness.

3.18 Kenya Medical Association (KMA)

Dr. Cynthia Chemonges, a Medical Practitioner and the General Secretary, Executive Committee of the East African Division of the International Academy of Pathology (EADIAP), appeared before the Committee on 27th July, 2023 and made presentations on behalf of the CEO, Kenya Medical Association (KMA), as follows: -

205. KMA noted an increase in operation expenses of hospitals, e.g in lighting, heating and cooling systems. This stains hospital budges greatly. Increase healthcare service fees in order to meet the increasing cost of electricity in hospitals. Breakdown and malfunction of medical equipment due to unstable electricity supply as a result of the high costs, especially advanced and diagnostic and treatment devices which are sensitive to fluctuations in electricity supply and voltage. Poor storage and preservation of medicines, vaccines and blood products that require refrigeration to maintain their efficacy and safety. Patients are sometimes unable to maintain their medication in the right temperatures e.g diabetics and hence leading to significant morbidity and mortality.

206. They recommended that the government should provide subsidies or incentives for medical facilities to reduce their electricity costs. This can be in form of reduced tariffs for medical institutions or grants for implementing energy-efficient upgrades.

207. They advocated for relevant authorities to ensure that electricity tariffs are reasonable and fair for both consumers and the electricity provider.

208. KMA encouraged the development and implementation of smart grids to optimize electricity distribution, reduce losses and improve overall energy efficiency.

209. They urged the government and private sectors to invest in renewable energy sources like solar, wind and geothermal power.

210. KMA advised educating medical professionals and the public on the importance of energy conservation and how small changes in behavior can reduce electricity consumption.

3.19 Kenya Union of Post–Primary Education Teachers (KUPPET)

Mr. Akello Misori, the Secretary-General, of the Kenya Union of Post – Primary Education Teachers (KUPPET), accompanied by Hon. Ronald Kiprotich Tonui, the assistant National Treasurer and Member of Parliament, Bomet Central Constituency, and other officials at KUPPET, appeared before the Committee on 27th July, 2023 and made the following submissions: -

211. KUPPET agrees on recommendations by the Kenya Association of Manufacturers, the Kenya Private Sector Alliance and Engineers Association of Kenya; on reducing national grid system losses, reducing the ratio of power generated through thermal sources, investing in more clean energy and removing punitive fuel taxes. The business and professional have the correct understanding of the link between electricity prices, economic growth, and national prosperity.

212. The rising cost of fuel is a major livelihood issue for workers in Kenya. Petroleum and electricity prices directly determine the cost of living since energy is a key component of the consumer cost of goods and services.

According to KUPPET, the energy costs impact workers in the following ways: -

i. **Increased financial burden**
   High energy costs put a strain on workers' budgets. When a substantial portion of income goes toward paying for electricity, workers will have less money to spend on other basic items like food, clothing, and housing. The quality of life of the workers and their families will be greatly affected.

ii. **Reduced disposable Income**
   High energy costs limit workers' disposable income, which is the money available for spending on non-essential items and activities. Workers are left little or no savings for emergency cases and their personal growth will be limited.

iii. **Decreased job satisfaction.**

Workers who face high energy costs dissatisfied with their jobs if their income is not sufficient to cover their basic needs and energy expenses. Just over the past year, some households have seen their energy bills double due to increases in electricity and gas costs. This leads to stress, frustration, and decreased motivation at work. Ultimately, it may affect their job performance, productivity, and overall engagement in the workplace.

iv. **Limited Job Mobility.**
High energy costs restrict workers' ability to pursue better job opportunities or relocate for work. If energy costs are a significant expense, workers may hesitate to accept job offers in different areas due to increased cost burden and this limits professional growth and the ability to seek better job opportunities.

v. **Impact on industries (Job Insecurity).**
Certain industries, such as manufacturing, agriculture, and transportation, heavily rely on energy to operate machinery, vehicles, and equipment. When energy costs rise, businesses in these sectors may face financial challenges and may have to cut costs by reducing wages, laying off workers, or limiting hiring. This can result in job losses, reduced working hours, or stagnant wage growth for workers in these industries.

vi. **Disproportionate impact on low-income workers.**
High energy costs often have a more significant impact on low-income workers who have limited financial resources. These workers may already be struggling to make ends meet and higher energy expenses can exacerbate their financial difficulties. The burden of high energy costs can contribute to income inequality and perpetuate socioeconomic disparities among workers.

3.20 Inter-Religious Council of Kenya

Dr. Francis Kuria Kagema, the Secretary General, Inter-Religious Council of Kenya, appeared before the Committee alongside the officials from religious organizations 27th July, 2023 and made the following submissions: -

213. They noted that electricity price has been on gradual rise e.g. from March 2023, EPRA raised the fuel cost charge to Ksh8.3 per kwh up from Ksh6.59 per unit. Since April 2023, household that spent more than 100 units have had the cost of their tokens increased from Ksh27.92 to Ksh31.75 per unit, being a 14% increase.

214. They recommended reduction of levies and taxes. EPRA to consider adjusting the fuel prices quarterly or bi-annually and not monthly. KPLC to also consider reducing the percentage monthly income loss it passes on to consumers, from 19% to 10%. Parliament, through the Committee to consider ending the KPLC monopoly for power supply. The Energy Committee should also engage REREC on the need to expedite policy formulation toward renewable energy in Kenya.

215. They proposed that the government providing an enabling environment for crowding-in affordable private sector investments in electricity sector, apply cost reflective tariffs and provide incentives and mechanisms to increase the share of renewable energy in the power systems and consider reducing by half all the levies and taxes on electricity.

216. The concluded that Fuel and taxes remain the two primary components that drive the cost of electricity high in Kenya, Reduction of levies and taxes should be seriously considered, EPRA should reconsider the monthly adjustments of prices of fuel, KPLC should consider reducing the percentage monthly income loss it passes on to consumers from 19% to 10%. The National Assembly's Energy Committee should consider engaging the Independent Power Producers, The Energy Committee should engage the Rural Electrification and Renewable Energy Corporation (REREC) on the need to expedite policy formulation and Parliament should consider ending KPLC's monopoly for power supply.

3.21 Union of Kenya Civil Servants

Mr. Titi Mbwana, the Deputy National Organizing Secretary (UKCS) appeared before the Committee on 27th July, 2023 and made the following submissions: -

217. In order to attain a sustainable and affordable energy future for Kenya, the Union of Kenya Civil Servants highlighted the following: -

i. Negotiations and Concessions
ii. Mandate public disclosure of IPPs information and agreements
iii. Competition in energy distribution
iv. Investment in renewable energy sources
v. Modernize and optimize the power grid and consider investments in smart grid technology
vi. Promote decentralized energy solutions
vii. Awareness and information on alternative sources of energy to allow for participation by local communities and/or implementing demand-side management programs.
viii. Empowering consumers and community-based energy projects.
ix. Education and training to help business and households.
x. Facilitating peer-to-peer energy trading.
xi. Enhancing cross-border electricity trade.
xii. An independent regulatory body.
xiii. Implementation of competitive bidding for power projects.
xiv. Conduct a comprehensive audit of Kenya Power.

3.22 Law Society of Kenya (LSK)

Mr. Collins Odhiambo, the Deputy CEO of the Law Society of Kenya (LSK), accompanied by LSK secretariat, appeared before the Committee on 27th July, 2023 and made the following submissions:-

218. That the various factors that contribute to the escalating cost of power include generation costs, transmission and distribution losses, limited renewable energy integration, infrastructure investment challenges, and policy and regulatory issues, the monopoly of the Kenya Power and Lighting

Company (KPLC) in the electricity sector as the sole distributor and retailer of electricity, high generation costs driven by the cost of fuel, fluctuating global fuel prices directly impact the cost of electricity generation, Inefficient transmission and distribution systems result in significant losses of electricity like theft and illegal connections, limited integration of renewable energy sources in the energy mix hampers the diversification of the power sector, aging power plants and outdated transmission and distribution networks, uncertainty surrounding government interventions such as subsidies and tariff adjustments.

219. That it has become increasingly burdensome for household consumers, businesses particularly small and medium-sized enterprises (SMEs), manufacturing, agriculture, and services. These discourages foreign direct investment, hinder export-oriented industries, and impede the development of energy-intensive sectors.

220. Proposed prices can be reduced by Promoting Renewable Energy Integration prioritizing investments in renewable energy projects, Improve Energy Efficiency by implementing energy efficiency programs, appliances and building designs, Strengthen Transmission and Distribution Systems, Encourage Private Sector Participation by enabling environment for Independent Power Producers (IPPs) to invest in renewable energy, Improve Policy and Regulatory Frameworks by prioritizing the development and implementation of comprehensive energy policies, Promote Regional Energy Integration by Collaborating with neighbouring countries for cross-border energy trade, sharing surplus electricity, and developing interconnectivity infrastructure, Enhance Consumer Awareness and Engagement, Introduce Market Liberalization and Competition can be achieved by allowing multiple companies to enter the market and compete with Kenya Power and Lighting Company (KPLC), Implement Unbundling of Functions by separating the generation, transmission, and distribution activities of the electricity sector into different entities, Strengthen Regulatory Oversight by making independent regulatory bodies established or empowered, Promote Consumer Choice and Empowerment by allowing consumers to choose their electricity supplier, Develop Public-Private Partnerships (PPPs), Enhance Transparency and Accountability by making the government establish mechanisms for transparency in tariff setting, procurement processes, and financial reporting.

221. In conclusion, he submitted that the escalating cost of electricity in Kenya present a complex set of challenges for various stakeholders, the implications extend to the government, requiring a reevaluation of energy policies and the pursuit of sustainable alternatives. The environment is also impacted; as higher electricity costs may discourage investments in renewable energy sources.

3.23 Orpower IV

Ms. Dita Bronicki, the Chief Executive Officer, Orpower IV, appeared before the Committee alongside other officials on 27th July, 2023 and made the following submissions: -

222. OrPower IV electricity tariff rates have remained lower than those of various other IPPs in Kenya. The high cost to the Kenyan consumer is largely due to costs passed through to the consumer other than and much beyond the OrPower 4 rate, the huge capital investments required to create and maintain the

OrPower 4 facility is fully obligated to maintain the geothermal field and wells to maintain a steady source of heat and output.

223. All of the Olkaria III facility is funded by foreign currency imported into the country for the benefit of the local market and to fuel local growth, the Company's foreign loans carry interest rates which are much higher than lending rates that are available to Ken Gen and under payment schedules and other terms which are more challenging and costly, it is beneficially owned by a publicly held corporation and such large equity injection is only possible if the power purchase contract return is sufficiently competitive and viable compared to other potential investments.

224. In comparison, Ken Gen enjoys grants and concessional funding, lower interest rates and better terms, and its largest shareholder, the government, operates according to principles which are different than those of non-governmental enterprises, enjoys other economic benefits due to its status as a parastatal under national ownership, some of the initial power producing assets of Ken Gen used for electricity production were obtained for free (transferred by the government to Ken Gen without cost), lowering its equity costs and reducing even further the cost basis Ken Gen can charge to cover its abundantly lower costs.

225. They further stated that Orpower has been actively investing further into its Plants in order to maintain the output of its Plants at the existing rate to supply KPLC and the Kenyan consumer with clean energy 24/7; much of this additional investment may be because of the frequent curtailment practices now imposed on the plants by the local offtakes.

226. They suggested to Revise Curtailment Policy vis-a-vis Geothermal Plants, have Economic Stability as KPLC is the Company's sole customer holding a monopoly on power purchases from OrPower 4 under the PPA and have extension of the PPA term and future reduction in tariff.

From the submissions and meetings with OrPower Company Limited, the Committee observed the following;

i. Orpower 4 was among the first independent power producers established in Kenya, with KPLC signing the first PPA with Orpower 4 Inc for an 8MW geothermal plant in November 1998. The company has been operating at Olkaria since 23rd July 2000, however, the prices charged are still significantly higher than KenGen Plants which are in the same vicinity. KPLC and OrPower 4 subsequently entered into a series of agreements which amended and replaced the original power purchase agreement of 5th November 1998;
ii. Pricing is in USD;
iii. The unit charge by Orpower is USD 0.11 per kWh;
iv. The capacity of their plants is 150MW owing to plant expansions over the years; and
v. KPLC has been curtailing output from the plants during nights and weekends rather than letting the plants run as baseload plants.

3.24 Power Technology Solutions Limited

Mr. Francis Maina, the Managing Director, Power Technology Solutions Limited appeared before the Committee on 3rd August, 2023 and made submissions as follows that: -

227. They entered into a Take and Pay Twenty Year Power Purchase agreement for the development of the Gikira Hydro Power Project under a Feed tariff of 10 US cents per unit with KPLC. It was commissioned in May 2014, and they have generated 1.2899028 GWh of Green Energy to date.

228. They stated that all their accrued revenue has gone to payment of bank loans and interest while they have struggled to meet operation and maintenance costs. They added that they expect to be out of debt in the next two years.

229. They added that Plants have a life cycle of over a year and therefore requested that the PPA be extended as an incentive to them. Being a small hydro-independent power producer, they expect to be supported with a license to be able to develop a Solar/Wind Stored Energy Power Plant to mitigate cash flow problems due to poor hydrology occasioned by climate change.

230. They added that IPP developers must be actively involved in afforestation and reforestation programs to increase forest cover and thereby providing carbon sink. They suggested that the meteorology departments and water resource management authority to restart collecting and establishing data banks using schools and other resources for solar irradiation, wind speeds rainfall. Water flows etc.

231. The government should also formulate a policy to assist the IPP on renewable energy to get carbon credits. They observed that Kenya has made a quantum leap on population access to electricity from 15% to 753% as per world reports of 2019, with no commensurate generation growth.

232. They affirmed their commitment to develop additional 30MW of affordable hydro power energy and associated 5MW Solar/Wind Hybrid Energy for mitigating hydrology associated with climate change by 2027 in line with the government's objective with provision of affordable, clean and stable electricity supply.

3.25 Rumuruti Solar Generation (RSG) Limited

Ms. Khilna Dodhia Rumuruti, the Chief Executive Officer at Solar Generation (RSG) Limited appeared before the Committee on 3rd August, 2023 and made submissions as follows: -

233. Rumuruti is the County Capital of Laikipia County, and currently connected vis the distribution grid from an approximately 80km long 33kV line. The area suffers from considerable electricity supply failure and undervoltage which has hampered socio-economic growth in the area to date. Once connected to the transmission grid in 2024, Rumuruti will be located approximately 280km from the closest generation point in Kiamburu, which leads to large network losses for KPLC.

234. The RSG project can support the government of Kenya in reducing the cost of power through the considerable benefits of transmission loss savings. A detailed grid study by a highly reputable engineering consultancy has shown that the operation of the RSG Project has the capacity to unlock transmission loss savings for KPLC of approximately 7.875GWh per annum worth over Ksh 600 million across 8.5 years.

235. Being in the advanced stages of development, upon the issuance of a bankable Letter of Support, the RSG project can proceed to construction and commercial operation and begin contributing to lowering the cost of power for Kenya.

236. The RSG project was negotiated at a tariff of 12USDc/kWh in 2015. In 2016, the RSG Project proactively proposed a reduced tariff of 0.085USDc/kWh considering the drop-in equipment costs.

237. The development cost of the RSG Project is significantly higher than initially foreseen due to the lengthy delays of several years in securing a bankable Letter of Support and the delayed competition of the KETRACO Nanyuki-Rumuruti 132Kv transmission line. These delays have had the perverse impact of rendering any further decreases of tariffs unviable due to the extremely high cost of development in Kenya.

238. Debt financing cost are the highest they have been over the last decade resulting in substantially increased project cost.

239. Due to COVID disruptions in the supply chain, EPC costs have increased considerably by 25-30% between 2020 and 2022 and are not anticipated to decrease in the near future, further eroding investor returns.

240. KenGens's cost of capital is significantly lower than that of IPPs. KenGen is a government entity which is meant to secure financing of much cheaper rates than private sector companies through bilateral agreements. KenGen has successfully secured debt at less than 1% interest rate in bilateral agreements. The current cost of debt from development finance institutes for independent power producers is above 9% of US dollar denominated debt. This is a significant difference when looking at large amounts of debt as required in infrastructure projects.

241. Increase renewable energy power generation from solar, wind and geothermal in order to reduce the usage of fossil fuels and the thermal power plants during the day time hours and keep usage to peaking power supply during the hours of 6pm and 10pm and for the provision of ancillary services for grid stabilization. For example, the RSG Project would assist to offset the power generated from thermal power plants during the day time hours.

242. Reduce transmission losses by improving the high voltage transmission line networks across the country and bringing electricity generation closer to load centers.

243. Reduced commercial losses faced by Kenya Power for which the savings can be passed onto consumers directly.

244. Encourage overnight consumption of electricity such as for the charging of electric vehicles to reduce surplus of night time electricity generation and improve Kenya Power sales.

245. Improve the investment environment for Independent Power Producers in order to reduce the risk and therefore the cost of capital.

246. Extend standard PPA terms from 20 years to 25 years. They finally stated that a stable and reliable power supply is crucial for economic growth, hence imperative for governments and policy makers to recognize the importance of priotizing investments in energy infrastructure. They added that it is important for RSG Project, in which considerable foreign direct investment has been made, is fast tracked for the issuance of a government Letter of Support, as the Project is beneficial to Kenya's electricity mix to lower the cost of electricity.

3.26 Office of the Auditor-General

CPA Fredrick Odhiambo, the Deputy Auditor General appeared before the Committee and made submissions on behalf of the Auditor General, in a stakeholder engagement forum on 4th August, 2023 as follows: -

247. That the Power Distribution Company has no control over the pass-through costs as the amounts are paid to other entities who operate and maintain the electricity network. These charges are approved by EPRA and directly charged to consumers by KPLC.

248. In addition, he stated that EPRA, The National Treasury and Ministry of Energy would be involved in coming up with tariff subsidies to the consumers from time to time.

249. He further stated that Levies have contributed greatly in pricing of electricity and have been structured and charged based on the quantity of electricity used.

i. EPRA levy is at 3 cents per kilowatt hour.
ii. Water Resources Management Authority charges 0.05 cents per kilowatt hour of hydropower generated above 1 megawatt.
iii. Rural electrification project levy that has been set at 5% of the cost of units consumed.
iv. Value Added Tax at 16% on units of power consumed
v. Fuel cost adjustment and foreign exchange adjustment.

3.27 Water Resources Management Authority (WARMA)

Mr. Mohamed Shurie, the Chief Executive Officer, of the Water Resources Authority (WRA), appeared before the Committee alongside officers of the institution in a stakeholder engagement forum on 4th August, 2023 and made the following submissions: -

250. The Water Resources Management Authority stated that Kenya Power and Lighting Company (KPLC) procures electricity from the Kenya Electricity Generating Company PLC (KenGen) and other Independent Power Producers (IPP's) on Power Purchase Agreements (PPA's) at unregulated rates. They noted the need to regulate all IPP's and publicizes their locations, stakeholders, directors, management and their addresses and agreements entered into with KPLC. They stated that recommendations from past taskforce that related to power purchase rates have not been implemented.

251. They implied that KPLC has in the past procured a larger quantity of power from the IPP's at a greater cost than they would have if they purchased directly from KenGen. The fees collected for water use are wholly utilized for the regulation of the use and management of water resources in the country including hydro-power generation, are viable and sustainable to spur economic growth. WRA only charges for the use of water resources as an input in the process of hydropower generation which should be paid for.

252. They stated that even though all consumers of electricity in Kenya have a component described as "WRMA Levy" in their electricity bills, not all electricity is generated from the use of water (hydropower), therefore only consumers who benefit from supply of electricity generated through use of water resources should be required to pay this charge.

253. They implied that assessing the costs of regulation to the regulated industry is logical because it internalizes regulatory costs to the regulated sector. They stated that the government should regulate all uses of water, simply another cost component of production in a regulated sector of the economy. The water use charges should therefore not be considered as levies, fees and charges but as an input cost in hydropower generation.

254. They concluded that as the country moves from fossil fuels to renewable energies, there will be implications on both water resources and services management. By adopting a range of water conservation measures the electricity generation sector can significantly reduce its water footprint.

255. They stated that surface water resources are a primary input in the generation of hydropower and should be treated as such during the computation of the tariff at which KENGEN or any other hydropower producer sells power to the national grid. The WRA charge should be removed from the consumer power bill. The water use charge should therefore be paid directly to WRA by KENGEN as regulatory fee.

256. They stated that Kenya Power and Lighting Company (KPLC) procures electricity from the Kenya Electricity Generating Company PLC (KenGen) and other Independent Power Producers (IPP's) on Power Purchase Agreements (PPA's) at unregulated rates. They noted the need to regulate all IPP's and publicize their locations, stakeholders, directors, management and their addresses and agreements entered into with KPLC. They stated that recommendations from past taskforce that related to power purchase rates have not been implemented.

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3.28 The National Treasury

The National Treasury's submissions to the Committee vide a letter dated 11th September, 2023 were as follows: -

262. **The Role of the National Treasury in Power Purchasing Agreements,** (PPAs) and the general place of IPPs in the overall National Development for the Country including the Bottom-Up Transformation Agenda (BETA)

i. Issuance of Bankability Instruments:

Power Purchase Agreements (PPAs) are a form of Public Private Partnership (PPP). PPPs by their nature involve the allocation of risks between the Public and the Private sector. The key principle is that risks are allocated to the party best placed to manage the risk. The private sector -especially lenders -require performance guarantees to protect them from various risks that may affect the project cash flows, especially those risks that are beyond the control of the private partner. Some of these risks include:

a. Political and regulatory risk;
b. Revenue and demand risks;
c. Foreign-exchange risk; and
d. Payment risk.

In order to protect investors, the National Treasury is often required to issue certain instruments outlined in Section 28 of the PPP Act, 2021. These include Binding Undertakings, Letters of Support, Credit Support and Partial Risk Guarantees. As per the Public Finance Management, Act, 2012, these instruments can only be issued by the Cabinet Secretary of the National Treasury.

263. **Place of IPPs in the overall national development of the country and Bottom-Up Economic Transformation Agenda**

ii. Independent Power Producers (IPPs) are private investors who generate electricity independently from state own utilities and sell the electricity they reduce to KPLC. IPPs play a significant role in the energy sector by supplementing the power produced by state owned utilities, thus contributing to the overall power supply and adding diversity to the energy mix.

iii. IPPs also enable innovation and development of various energy sources, such as renewable energy projects (solar, wind, hydro, etc.), which may not have been feasible or prioritized by state owned utilities. With the right regulatory framework that minimizes development risk and encourages fair competition, IPPs can foster competition the energy market, thus creating efficiency and lowering energy prices for consumers.

264. The Bottom-Up Economic Agenda (BETA) acknowledges that the cost of power continues to escalate despite increased generation capacity from geothermal, solar, wind and water resources. To address this issue, BETA commits to the following measures in o1J er to bring down the cost of electricity:

a. Revamping of the transmission and distribution network;
b. Accelerating the development of geo thermal resources;
c. Development of Liquefied Natural Gas (LNG) storage facility in Mombasa, with a view to phasing OLt heavy fuel oil (HFO) from the power generation portfolio.

265. **The Role of the National Treasury in Power Purchasing Agreements (PPAs)**

i. The National Treasury plays a pivotal role in PPAs within the energy sector of the country. Its primary responsibility is to oversee rp.lr3 manage the financial aspects of these agreements, ensuring that they are fiscally sound and align with the government's economic objectives. It is also responsible for negotiating the terms and conditions of PPAs with independent power producers (IPPs) and other stakeholders including lenders. This includes determining the pricing mechanisms, tariff structures and payment schedules.

ii. Furthermore, the Treasury evaluates the financial implications of these agreements against the national budget and ensures that they are in line with the country's overall fiscal strategy. By managing the financial aspects of PPAs, the Kenya National Treasury plays a crucial role in promoting a stable and sustainable energy sector that can meet the country's growing power needs while safeguarding its economic stability.

iii. Specifically, the National Treasury under the Public Private Partnerships Directorate receives PPAs from the Ministry of Energy subject to the completion of a feasibility study and only upon approval of the Cabinet Secretary of the Ministry of Energy. At the Ministry level, the FiT Policy Committee conducts studies on the technical and other aspects of FiT project feasibility and grid connection studies before presenting the PPAs to the PPP Directorate.

iv. Once submitted to the PPP Directorate, similar studies are conducted and then submitted to the PPP Committee for approval of the fiscal risks and contingent liabilities and for confirmation of the value for money, affordability and risk transfer tests. If the PPP Committee approves the PPA, negotiations with project proponents may be initiated.

v. Upon completion of negotiations on the PPA, the negotiated PPA, together with a Project and Financial Risk Assessment Report, detailing the negotiated terms and highlighting any fiscal commitment or contingent liability requirement are submitted to the PPP Committee for further approval.

266. **The various taxation measures and levies impacting on the overall costs of power and the approach/mechanism that the same can be managed to offer relief to the citizens**

i. The only national tax that is charged on the electricity is VAT at the rate of 16%. There are charges and levies imposed on the electricity by the Ministry of Energy and Agencies responsible for the sector.

ii. The production of energy in Kenya is highly subsidized as most of the inputs used in production of energy are exempt from VAT. For example, Official Aid Funded Projects, undertaken by the Ministry of Energy and the Agencies in the sector are exempt from import duty, VAT, Excise Duty, Import Declaration Fees (IDF) and Railway Development Levy (RDL).

iii. The power produced under the Independent Power Purchase Agreements are further exempt from VAT. These exemptions are provided to reduce the cost of energy. Given that VAT charged on all goods and services, including electricity removing VAT or reducing VAT rate will introduce discrimination in the VAT tax regime. In this respect, the National Treasury recommend that reduction of the high cost of the electricity be on charges and levies imposed on the electricity. These charges and levies include;

a. Water Resource Management Authority- WARMA Levy

The WARMA levy is currently at 0.05 cents per kilowatt hour and is passed to the Water Resource Management Authority (WARMA) for hydro-power generation of 1 Megawatt and above.

b. Energy Regulatory Commission (ERC) ERC Levy

The ERC Levy is currently at 3cents per kilowatt hour and is passed to the Energy Regulatory Commission (ERC) to cover its operational losses.

c. Rural Electrification Program Levy- REP Levy

The REP Levy is currently at 5% of the cost of the units consumed and is passed to the Rural Electrification Authority (REA) for implementation of rural electrification projects.

267. **The process of issuance of letters of support to IPPDs and the role of each shareholder**

i. The process of issuance of Letters of Support is provided for under section 28 of the Public Private Partnerships Act, 2021 as read together with the Government Support Measures Policy of 2018. This Policy Statement declares the Government of Kenya's practice and stance on the conditions under which the Government may make various support measures available to implementers of public projects for such investments to be more secure and bankable.

ii. The specific types of GSMs that may be given are provided for under section 28(1) of the PPP Act, 2021 and include:
   a. A binding undertaking;
   b. A letter of support;
   c. A letter of credit;
   d. A credit guarantee;
   e. Approval for issuance of partial risk guarantees and political risk insurance; or
   f. Any other instrument that Cabinet Secretary responsible for matters relating to finance may on the advice of the Committee determine.

iii. The process of the issuance of a Government Support Measure is guided under the Government Support Measures Policy of 2018. The process is triggered by an application by the entity in need of the GSM. Once triggered, the procedural steps through the sector ministry of host county government and once it is committed to the National Treasury, the application is subjected to a review and recommendation exercise by various departments of the Treasury, prior to approval being granted by the Cabinet Secretary.

iv. The documentary requirements for the application for GSM to be considered are:
   a. Detailed and comprehensive Feasibility Study Report demonstrating viability of the proposed project;
   b. Due Diligence Report on the investors conducted by a contracting and expertise in undertaking projects of a similar nature;
   c. Environmental and Social Impact Assessment Report;
   d. Initialed Project Agreement;
   e. Draft Letter of Support populated with the project-specific information; and
   f. Demonstration by a Contracting Authority of how the proposed project fits into its larger development program, certifying that the application for the GSM applied for meets all the requirements.

v. The primary issuer of GSMs is the Cabinet Secretary of the National Treasury following requests or applications by MDAs or county governments. Once approved, the draft GSM is submitted to the Attorney General for legal clearance.

3.29 Office of the Attorney General

Hon. Justin Muturi, EGH, the Attorney General of Kenya, appeared before the Committee on Tuesday 12th October, 2023, accompanied by senior state counsels, Mr. Nevis Ombasa and Ms. Nelly Lodian, and made presentations on the following aspects in regards to OAG's submission on the inquiry on reduction of electricity costs in the country: -

i. Legal implications of terminating some of the Power Purchase Agreements and the options available to the Government including the possibility of a takeover of some of the power plants to reduce the costs to the consumers.
ii. Possibility of exploring the Mutual Legal Assistance principle in establishing beneficial owners of power registered in other jurisdictions.

268. **Status of Re-negotiation of Power Purchase Agreements**

1) Following the directive by the Departmental Committee on Energy during its sitting held on the 19th April, 2023 that the Ministry of Energy & Petroleum and Kenya Power engages in negotiations with the Independent Power Producers (IPPs) with a view to reducing the cost of power as guided by the reports of previous taskforces on the review and renegotiations of the PPAs, the Ministry of Energy & Petroleum in conjunction with Kenya Power Company Limited constituted a multi-agency technical team to review the PPAs and develop strategies for the renegotiation of the PPAs with the Independent Power Producers (IPPs).
2) The technical committee reviewing and renegotiating the PPAs under the stewardship of the Ministry of Energy & Petroleum and Kenya Power commenced re-negotiation meetings with various IPPs in early August and the sessions are still ongoing on intermittent days. Under the circumstances, therefore, the Attorney General cannot at this stage issue an advisory on the possibility of terminating some of the PPAs until such a time when the technical committee makes recommendations on termination of specific PPAs as being the best way to resolve the matter. In any event, any advisory on termination of PPAs cannot be blanket in nature as the same has to be informed by the terms and conditions contained in specific PPAs in which case this Office would require time to review such PPAs and advise as appropriate.

269. **Mutual Legal Assistance on Beneficial Ownership Information**

1) On the issue of Mutual Legal Assistance, we note that the Mutual Legal Assistance Act No, 36 of 2011 only relates to assistance to be given and received by Kenya in investigations, prosecutions and judicial proceedings in relation to criminal matters. The foregoing therefore means that in order to pursue mutual legal assistance, there must be an active criminal matter in place. While noting that the request for mutual legal assistance in the present case relates to beneficial ownership information of power companies registered in other jurisdictions, the Companies Act Cap 486 makes provision for the issues relating to foreign companies conducting business in Kenya and requirements for disclosure of beneficial ownership of such companies.
2) Section 93A of the Companies Act states that:
    a. Every company shall keep a register of its beneficial owners
    b. A company shall enter in its register of beneficial owners' information relating to its beneficial owners as prescribed in the regulations
    c. A company shall lodge with the Registrar a copy of its register of beneficial owners, within thirty days after completing its preparation.
3) Sub-section (5) states that if a company fails to comply with a requirement of this section (on disclosure of beneficial owners' information), the company and each officer of the company who

is in default, commit an offence and on conviction are each liable to a fine not exceeding five hundred thousand shillings. Sub-section (6) further provides that if, after a company or any of its officers is convicted of an offence under Sub-section (5), the company continues to fail to comply with the relevant requirement, the company, and each officer of the company who is in default, commit a further offence on each day on which the failure continues and on conviction are each liable to a fine not exceeding fifty thousand shillings for each such offence.

4) Section 974 (1) of the Companies Act provides that a foreign company shall not carry on business in Kenya unless it is registered under the Companies Act. Sub-section (3) states that if a foreign company carries on business in Kenya in contravention of Sub-section (1), the company, and each officer of the company who is in default, commits an offence and on conviction are each liable to a fine not exceeding five million shillings. Sub-section (4) further provides that if, after a foreign company or an officer of the company is convicted of an offence under Sub-section (3), the company continues to carry on business in Kenya in contravention of Sub-section (1), the company, and each officer of the company who is in default, commits a further offence on each day on which the contravention continues and on conviction are each liable to a fine not exceeding five hundred thousand shillings for each such offence.
5) Section 975 of the Companies Act provides for application for registration of foreign companies and states that a foreign company that wishes to be registered as a foreign company shall lodge with the Registrar an application for registration. Section 994 further provides that the Registrar shall establish and maintain a register called the Foreign Companies Register and shall enter into such Register the names and prescribed particulars of all registered foreign companies including such other particulars in respect of such foreign companies necessary for the effective enforcement and administration of the Companies Act including details of beneficial owners under Section 93A.
6) Section 994 (4) of the Companies Act states that the Registrar shall keep the Foreign Companies Register at such a place or places as are prescribed in its head office and shall ensure that it is kept for inspection by interested persons during normal business hours of the Registrar.
7) From the foregoing, all companies including foreign companies carrying on business in Kenya are required to register with the Registrar of Companies and the details and particulars of such registration include the beneficial ownership information of such foreign companies. It is noted that failure to register and to disclose the beneficial ownership information of all companies including foreign companies is a criminal offence and the companies and officers of such companies contravening the requirements under the Companies Act are liable upon conviction to payment of fines as prescribed.
8) It is imperative to indicate that a request for disclosure of information relating to beneficial ownership of a foreign company should in the first instance be lodged with the Registrar of Companies before any further action can be taken about such foreign company. If at all such information is not available within the Foreign Companies Register, then the Registrar of Companies shall be guided to take appropriate action as required by the provisions of the Companies Act.

3.30 Business Registration Services

270. The Business Registration Services (BRS) submitted to the Committee the list of owners, shareholders, and directors of the Companies. Notably, there is a general opaqueness in the disclosure of beneficial owners of IPPs with a majority of them listing foreign companies as shareholders. Before 2017 as submitted by BRS, the Company's Act did not require entities registered in other jurisdictions to provide beneficial ownership and the Service is in the process of actualizing the Beneficial Ownership register for all public companies. The following is a list of company details including information regarding beneficial ownership. A further list is provided in **Annexure 8.**

3.31 Scholars from the University of Nairobi

Eng. Prof. James Nyang'aya, Eng. Prof. Ayub Gitau and Dr. Michael Wangai from the University of Nairobi made written submissions to the Committee as follows:

271. That Kenya recorded the most expensive electricity in the continent in 2022 at 0.21 US dollars/kWh. This was the 2nd most expensive after Rwanda in the East Africa region.

272. The Capacity Charges (bank loans, fixed operational costs, and profits) are loaded upfront.

273. That public counterparties are obligated to continue to pay capacity payments even if the; Power plant does not generate electric power or the utility is unable to offtake the power.

274. The cost of electricity from thermal plants is higher and they are primarily owned by IPPs.

275. During the past decade Kenya Power has recorded annual system losses higher that the regulator's acceptable level of 15.6%.

276. **Measure to reduce the electricity cost:**
    i) Renegotiation with IPPs due to changing mitigating factors;
    ii) Need to quantify both technical and non-technical losses and implement appropriate mitigating measures. The following measures can be taken to address non-technical losses; use of prepaid and tamper-proof meters, reduction of initial connection charges, and strengthening law enforcement; and
    iii) Reduction of taxes and levies

3.32 The United Energy and Petroleum Association (UNEPEA)

277. The Chairperson, Ms. Irene N. Kamathi on behalf of UNEPEA submitted a written submission to the Committee, **That** UNEPEA is comprised of professionals, SMEs, MSMEs in the Petroleum Downstream value chain, experts, and stakeholders from various sectors of the energy and petroleum field and that the organization be included in the membership of the EPRA board.

3.33 Regen – Terem SHPP Limited

Mr. Sam Kangau, the Finance Director on behalf of the Company submitted a written submission to the Committee as follows:

278. That Regn-Terem operates a 2X 2.6MW hydropower plant at Elgon, Bungoma County;

279. That, Gen Pro Systems (East Africa) Limited had 60,950 shares at Regen-Terem Limited as of 29th July 2023 while Idea Terem Hydro Power Limited had 91,425 shares during the same period;

280. That, ss of 24th November 2021, James MBuru Ng'snga had 2,000 shares while the Estate of Joseph Simiyu owned 7,000 shares in Gen Pro Power Systems (East Africa) Limited. The other directors were Christopher Simiyu, Catherine Simiyu, Rosemary Simiyu, and Jimmy Nyongesa Sakhasia;

281. That, the unit charge by Regen-Terem Ltd is USD 0.095 per kWh; and

282. The total amount due in USD inclusive of VAT from February 2017 to December 2022 is 13, 625, 937.

3.34 Isiolo Project Limited

The Executive President of Total Renewables, Mr, Beam, the Toyota Tsusho Corporation, Executive Officer, Mr. Tatsuya, and the GreenMillenia Energy Ltd Director, Mr. Bartholomew Simiuu made written submissions to the Committee on behalf of the Company as follows: -

283. That, Total Renewables has been developing with GreenMillenia Energy the Isiolo PV Project, a 40MW solar project located in Isiolo which entered a PPA with KPLC on 26th August 2019;

284. That, as of 2nd August 2023, Total Energies Renewables had one ordinary share in the Isiolo Project Limited;

285. That environmental license was granted in 2021 and land purchase agreements were signed with the approval of the Lands Control Board; and

286. That, an electricity generation license from EPRA was issued in March 2021 for a duration of twenty (20) years.

3.35 Rareh Icon Solar Limited

The Director, Mr. Solomon Njonjo on behalf of Rareh Icon Solar Limited submitted a written submission to the Committee as follows:-

287. That, Rareh Icon Solar Limited is a company in the Republic of Kenya with its registered office at ABC Towers, 4th Floor, Waiyaki Way in Nairobi;

288. That, the Company signed a PPA with KPLC with the consent of EPRA on 13th May 2019 for a 30MW Solar Power Plant at Makindu, Makueni County;

289. That, Serengeti Energy Limited, incorporated in Mauritius owns 75% of the company while Legacy Energy Limited, incorporated in Kenya whose CR12 was not provided owns 25% of the shares;

290. That, the project is not operational and as such has not received any funds from KPLC or the Ministry of Energy and Petroleum; and

291. That, the PPA tariff is USDc 7.5/KWh.

3.36 Mr. Samwel Barongo Nyamari

Mr. Nyamari, a law student at JKUAT submitted a memorandum to the Committee as follows: -

292. That, Potential causes of the rise in electricity costs may include:-
   i) Over-reliance on independent power producers by KPLC;
   ii) Under-utilization of the cheap power generated by KenGen. For instance, the power generated by KenGen retails at Ksh. 5 per Kilowatt while power generated by IPPs retails at Ksh. 25;
   iii) Unsustainable contractual terms between KPLC and IPPs. For instance, most of the power purchase agreements require payments for all the energy generated irrespective of whether the same is consumed or not;
   iv) Possible collusion between KPLC and IPPs;
   v) Low investments in renewable energy; and
   vi) The monopoly enjoyed by KPLC.

293. Mr. Nyamari recommended that:
   i) There should and amendment of the Energy Act 2019 to require that all contractual agreements between KPLC and IPPs be subjected to ratification by Parliament;
   ii) An Enactment of laws and policies incorporating incentives that promote the uptake of clean energy sources such as solar panels; and
   iii) Mandating KPLC to make public all contractual agreements with IPPs.

4.0 SUBMMISSIONS BY OTHER KEY WITNESSES

294. Arising from the submissions by the stakeholders, the Committee noted that there were some witnesses who were adversely mentioned to have been involved directly or indirectly in high cost

of electricity. The Committee identified and invited the following key witnesses who submitted their written submissions:

4.1 Submission by Gulf Power Limited Directors

Vide its letters Ref: NA/DDC/ENERGY/CORR/2024/009, Ref: NA/DDC/ENERGY/CORR/2024/010 dated 27th March 2024 and Ref: NA/DDC/ENERGY/CORR/2024/015 dated 8th April 2024, the Committee invited Hon. Suleiman Said Shahbal who served as a Director Gulf Power from 17th May 2013 to date while also serving as a Director Gulf Energy Limited; Mr. Earnest Nakenya Nadome, who serves as a Director Gulf Power from 29th January 2020 to date while also serving as Kenya Power Pension Fund to shade light on possible conflict of interest between fuel suppliers and IPPs in the case of Gulf Energy. In their joint written submissions to the Committee on 8th April, 2024, they submitted as follows: -

295. That Kenya Power Pension Fund acquired a 10% stake in Gulf Power Limited in 2015, long after the first Fuel tender was floated in January 2014 and a Fuel Supply Agreement was signed with Gulf Energy Limited in June 2014.

296. That the audit report on the procurement and the use of HFOs conducted by Ronalds LLP on behalf of the Office of the Auditor General had not been shared to date.

297. That the allegations that were made in the Report of the Auditor General that there could have been irregularities involving unfairness and subjectivity in the procurement of the fuel supplier were misleading.

298. That Gulf Power Limited is an IPP that owns and operates an 80.32 MW diesel plant in Athi River. The term of the PPA is 20 years from the COD which occurred on December 8th, 2014.

299. They submitted that KPLC issued a request for proposals (RFP) to twenty-two (22) prequalified candidates. They submitted that in keeping with the Public Procurement and Disposal Act, both technical and financial proposals were opened in the presence of the bidder's representatives who chose to attend. A consortium led by Gulf Energy Limited won the tender for one of the projects (Athi River III Power Plant) and subsequently incorporated Gulf Power Limited as the project company to develop, finance, own, and operate the power plant.

Selection of the Fuel Supplier

As contained in the evidence provided to the Committee in their defence, they submitted that;

300. The tender for the supply of Fuel to the Athi River II Power Plant was floated on 20th January 2014 after which nine (9) companies purchased the tender documents. On the tender closing date, three (3) companies submitted complete bids, two (2) submitted regrets while the remaining four (4) companies did not respond.

301. The evaluation criteria were on a pass/fail basis in the three areas of evaluation, namely; technical and finance evaluation, Material Adverse Effect, and Pricing. Bidders who failed either the technical or financial set thresholds were disqualified from the pricing assessment.

302. They further provided the HFO Supply Tender Evaluation Report which indicated that the Tender Process Supervision was done by Lenders and KPLC.

303. The technical and Financial Evaluation consisted of the following individuals: - General Manager - _GPL, Chief Finance Officer – GPL, Projects Engineer – GPL and Project Manager – Operations and Maintenance Solutions Limited.

304. They provided that three (3) companies submitted their bids; Gulf Energy Limited, KenolKobil Limited, and Vivo Energy Kenya Limited.

305. On Technical Evaluation (annual turnover, experience in the HFO business, dedicated storage capacity, proof of availability of supply, valid and adequate transportation contracts, and Health Safety Environmental and Quality Assurance Policies), they indicated that Gulf Energy Limited exceeded all the technical requirements needed while KenolKobil did not have the adequate dedicated storage capacity to guarantee uninterrupted HFO supply to the Gulf Power Athi River plant. They indicated that they only had one tank and in addition, the company failed to demonstrate any proof of availability of 2.0% Sulfur HFO Supply. On the other hand, Vivo Energy met all the technical requirements outlined in the evaluation criteria.

306. On Financial Evaluation, KenolKobil was deemed unsatisfactory due to the negative Current Ratio and recent financial performance while Vivo and Gulf Energy satisfied the financial requirements.

307. On detailed examination of bids, it was indicated that Gulf Energy Limited had a lower bid price than Vivo Energy Limited by USD 10.762.

308. The report recommended Gulf Energy for the award of supply of 2.0% Sulfur HFO to Gulf Power Limited having been rated the best in terms of Capability, Capacity, Experience, and Performance. The report indicated that they had the acceptable lowest evaluated and substantially responsive bid.

309. They indicated that although KenolKobil had the lowest read-out price, its bid failed on the technical evaluation and the fact that there was a material litigation issue that in GPL's opinion, would have affected its performance. On the other hand, Gulf Energy Limited had the lowest responsive evaluated bid.

310. They further submitted that, the outcome of the procurement process was not contested by any of the stakeholders; including KPLC, the other bidders, and the EPRA.

311. Further, at the beginning of an audit by the Office of Auditor General on the procurement and the use of HFOs for thermal IPPs, Gulf Power Limited was made aware that all findings would be shared with Gulf Power Limited in the event additional information or clarifications as would be required. To date this report has not been shared.

From the above submissions, the Committee made the following Observation:

i. Based on the evaluation report provided, the Committee noted that due process was followed in the process of procurement and use of HFOs and that evaluation criteria were on a pass/fail basis in the three areas of evaluation, namely; Technical and Finance Evaluation, Material Adverse Effect, and Pricing. Bidders who failed either the technical or financial set thresholds were disqualified from the pricing assessment;

ii. It was further noted that Gulf Energy Limited exceeded all the technical requirements needed while Kenol-Kobil did not have the adequate dedicated storage capacity to guarantee uninterrupted HFO supply to the Gulf Power Athi River plant. Kenol-Kobil only had one tank and in addition, the company failed to demonstrate any proof of availability of 2.0% Sulfur HFO Supply and was deemed unsatisfactory due to the negative Current Ratio and recent financial performance. On the other hand, Vivo Energy met all the technical requirements outlined in the evaluation criteria but did not qualify because Gulf Energy Limited had a lower bid price than Vivo Energy Limited by USD 10.762;

iii. The Committee noted that the report recommended Gulf Energy for the award of supply of 2.0% Sulfur HFO to Gulf Power Limited having been rated the best in terms of capability, capacity, experience, and performance. The report indicated that they had the acceptable lowest evaluated and substantially responsive bid.

iv. The Committee noted that no stakeholder contested the outcome of the procurement process and therefore observed that there was no sufficient evidence to prove possible conflict of interest in the process of procurement and use of HFOs for thermal IPPs by the Directors of Gulf Power Limited contrary of Section 42,43,44,45 and 46 of the Anti-Corruption and Economic Crimes Act, (CAP 65) of 2003.

4.2 Submissions by Mr. Patrick Mwaura Nyoike

Vide its letters Ref: NA/DDC/ENERGY/CORR/2024/008 dated 27th March 2024, the Committee invited Mr. Patrick Mwaura Nyoike who served as a Permanent Secretary between 2003 and 2013 and later became a Director at Africa Geothermal International Company Limited (AGIL) to shade light on involvement in granting the company geothermal resources license. In his written submission to the Committee, he submitted as follows: -

312. That he was not one of the directors of AGIL as of July 2014. He attached a copy of a list of directors of AGIL (CPR/2010/27888) listed in the 2013 Annual Return as part of his evidence and support. The directors at the time were: Mr. Fassine Fofana, French; Mr. Christopher David Thompson, British; Mr. Mohammed Abdirahman Hassan, Kenyan; Mr. Fred Oliver Ncruba Ojiambo, Kenyan and Mr. Brian Mitchell, British. AFRICA GEOTHERMAL INTERNATIONAL (BVI) LTD of address P.O. BOX 3200 ROAD TOWN, TORTOLA, BRITISH VIRGIN HIGHLANDS and FNB NOMINEES LIMITED of address LA PLAIDERIE HOUSE, LA PLAIDERIE, ST PETER PORT, GUERNSEY GY1 3WF, UK held one share each as of the year 2012.

313. That AGIL applied for a Geothermal Resource License on March 5th, 2009, and was granted a license by the then Minister for Energy on 9th July, 2009. An amendment to the Geothermal Resource License was granted on 31st August, 2012 granting rights for a 30-year term after the date of the license. He also submitted that two other companies; **Walam Limited** and **Marine Power Generation for Akira Prospect** were granted licenses in 2008 and 2009 respectively when he was serving as a Permanent Secretary for Energy.

314. That the PPA between KPLC and AGIL was for a 25-year term at the energy charge rate of US$ 0.0225/kWh escalable based on the USA consumer price index for the duration of the PPA, escalable capacity tariff component of US$269.175 per KW per annum for the first 12 years from COD and a fixed capacity tariff component of US$ 269.175 per KW per annum. Annual plant availability factor of 94%.

4.3 Submissions by Mr. Mugo Kibati

Vide its letters Ref: NA/DDC/ENERGY/CORR/2024/016 dated 8th April 2024, the Committee invited Mr. Mugo Kibati who served as Director General of Kenya Vision 2030 between 2009 and 2013 and also served as the Chairman of the Board and as a Director of the Lake Turkana Wind Power Corporation since 2017 to date to shed light on involvement and participation in the lease award to the Lake Turkana Wind Power Corporation. In his written submission to the Committee, he submitted as follows: -

315. That, to realize Vision 2030, the Government of Kenya established a Vision Delivery Secretariat (VDS) under the overall guidance of the Vision 2030 Delivery Board, which plays a policy-making and advisory role. The VDS provides strategic leadership and direction in the realization of Vision 2030 goals and collaborates with line ministries in developing the five-year medium-term plans (MTPs) that make up Vision 2030.

316. That, neither the Vision 2030 Delivery Board nor the Vision Delivery Secretariat has any role in approving any projects. Designating/endorsing a project to be a part of the Vision 2030 is based purely on the role of Vision 2030 in ensuring that a project that forms a part of any ministry's approved contribution towards the five-year MTPs that come together in achieving Vision 2030 is recognized and highlighted to encourage similar initiatives. The Vision 2030 Delivery Secretariat

does not get involved in any aspect of a project's development and/or implementation except to monitor delivery timelines once launched by the relevant ministry or agency. For this, it relies on all the ministries and relevant processes established in law to ensure that projects are compliant and receive quarterly reports from implementing Ministries, Departments, and Agencies (MDAs).

317. On reasons on how the Vision 2030 Delivery Secretariat pushed for the implementation of the Lake Turkana Wind Power Project (LTWP) ignoring concerns from the World Bank, he submitted that it should be noted that it has always been LTWP's position (and also that of the GoK and the various other stakeholders involved in LTWP) that the World Bank's concern on the issue of consumers paying for excess power from the wind farm was not correctly analyzed and that it was an indisputable fact that LTWP would aid in an overall reduction of electricity tariffs, have positive macro-economic impacts from the displacement of electricity generated from expensive fossil-fuel based plants and that the excess power situation would not arise. To this end, detailed power load system dispatch studies were undertaken and provided to the World Bank (and the GOK) in June 2012 which have not been disputed or responded to by the World Bank.

318. More importantly, LTWP is fully vindicated in regard to this matter, as presently, the converse is the situation whereby, without LTWP's power, there would be a deficit of affordable power in Kenya resulting in load-shedding and an increase in consumer tariffs. The role of LTWP in ensuring energy security, providing grid stability and contributing towards affordable consumer tariffs cannot be ignored or underestimated.

319. On how much money has been received by Lake Turkana Wind Power Project as Deemed Generated Energy (DGE) payments since inception including dates of payment, amount, and balance remaining if any, he submitted as follows: That;

i. LTWP entered into a Power Purchase Agreement (the PPA) with the KPLC dated 13 May 2013 (as amended on 31 July 2019 and 19 September 2017). It also entered into a Letter of Support with the Government of Kenya (represented by the National Treasury and Planning (the National Treasury) and the Ministry of Energy) (the GOK) dated 28 February 2013 (the GOK Support Letter) issued in support of the implementation of the 310 MW wind power project in Marsabit County (the Project).
ii. The GOK Support Letter as well as the PPA (including the subsequent variations thereto) had been reviewed and endorsed by a legal opinion from the Attorney General of the Republic of Kenya confirming that, inter alia, the PPA and the variations thereto, had been entered into in accordance with Kenyan law.
iii. For LTWP to supply power to KPLC under the PPA, a transmission interconnector line (TI Line) was required to be constructed, commissioned and be operational. Under the PPA, it was the responsibility of the GOK (through Kenya Electricity Transmission Company Ltd (KETRACO)) to procure the construction and completion of approximately 428 kilometres, 200/400 kV TI Line and the associated substation at Suswa required to transmit

electrical energy from LTWP's power plant to the sub-station at Suswa and onwards into the Kenya national grid.

iv. The GOK further agreed to bear all the risks occasioned by any delay in the construction and interruption of the operation of the TI Line, that is, if the GOK did not commission the TI Line on time (or if there were any TI Line interruptions in future upon commissioning), GOK would be liable to pay liquidated damages to LTWP to compensate LTWP for lost revenue as a result of being unable to commission the power plant and generate electricity for sale to KPLC under the PPA (such damages are defined under the PPA as "GOK TI Delay Deemed Generated Energy Payments" and are hereinafter referred to as Delay Liquidated Damages).

v. LTWP commissioned the Project and was ready to generate and supply electricity to KPLC on 27 January 2017 had the TI Line been operational. At the time, the GOK had not yet completed construction and commissioning of the TI Line. The TI Line was later commissioned on 24 September 2018 (and according to KETRACO, the date was 10 September 2018).

vi. Following the delay by GOK to commission the TI Line, LTWP invoked its right to compensation under the GOK Support Letter. The GOK, LTWP, KPLC and other stakeholders engaged in discussions to determine the modalities of compensating LTWP for the loss of revenue occasioned by the failure on the part of KETRACO to procure the construction and completion of the TI Line within the timelines stipulated under the PPA. The discussions and negotiations led to the conclusion of a commercial agreement which was documented by the parties under the second variation agreement to the PPA dated 19 September 2017 (the Second Variation Agreement).

vii. The Delay Liquidated Damages due to LTWP under the Second Variation Agreement are summarized as follows:

- For the period between 15 May 2017 to 31 May 2018 (Estimated TI Completion Period), the Delay Liquidated Damages were calculated as a reasonable pre-estimate of the loss over the Estimated TI Completion Period amounting to €127.6 million and was settled as follows:

    - €46 million was paid by GOK through an invoice dated 22 September 2017 issued by LTWP to GOK; and
    - with respect to the balance of €81.6 million, instead of a payment being made by the GOK in the same manner as the payment referred to in 3.1.1 above, GOK, due to fiscal and budgetary constraints and practicalities, requested LTWP to waive its right to receive a payment of liquidated damages in cash form and offered LTWP the option to recoup the same through a tariff increase of €0.00845 per kWh payable by KPLC under the PPA which was to be paid from 24 September 2018 (the date on which the TI was commissioned and operational) and to end on or about 31 May 2024. LTWP therefore waived its right to receive payment of liquidated damages

in the amount of €81.6 million from GOK under the GOK Support Letter, agreeing instead to receive it by way of a tariff increase which is invoiced on a monthly basis (the Substituted Energy Charges). As such, LTWP took full risk that it may never receive these payments if it did not generate and supply electrical energy to KPLC.

- For the period between 1 June 2018 to 24 September 2018 (being the date of actual TI Line operation), the Delay Liquidated Damages were calculated as amounting to €45.2 million and invoiced to GOK. This was dealt with as follows:
  - an amount of €5.5 million was agreed as a write-off as between LTWP and GOK due to a difference of agreed commissioning dates (i.e. 10 September vs. 24 September) of the TI Line between LTWP and KETRACO and LTWP issued a credit note for this amount prior to receipt of the amount; and
  - the balance of €39.7 million is the net amount received by LTWP as Delay Liquidated Damages for this period.
- An amount of €6.2 million was subsequently agreed in October 2019 (in accordance with the calculation methodology in the Second Variation Agreement) as a further refund due to GOK, being the difference between the estimated Delay Liquidated Damages at the time of signing the Second Variation Agreement and the actual Delay Liquidated Damages that was subsequently determined as required under the Second Variation Agreement (the Refund) and this amount was to be deducted and repaid from the aggregate amount stated in 3.1 and 3.2.1 above of €85.7 million. The Refund was paid to GOK and the GOK confirmed receipt vide a letter from the KPLC dated 27 April 2022.
- As of 31 May 2024, there will be no balance outstanding and LTWP will have forfeited approximately €10.5 million of the Substituted Energy Charge amount of €81,577,128 which LTWP was unable to collect due to the expiry of the agreed sunset date of 31 May 2024.

320. On the role played to ensure the Ministry of Energy granted the private investor Lake Turkana Wind Power Project (LTWP) exclusive rights to survey the project area before the lease agreement and further invite tenders on behalf of Kenya Power and Lighting Company (KPLC), he submitted that the project was a private initiated project. All development-related work was undertaken at the sole risk and cost of LTWP and its shareholders. The onus was on LTWP and its shareholders to carry out the relevant supply-side investigations in order to demonstrate to GOK (and other stakeholders) that it was viable to develop a large-scale wind farm facility on the proposed site.

321. On the role played in ensuring that the Power Purchase Agreement between Kenya Power and Lighting Company (KPLC) and Lake Turkana Wind Power Project (LTWP) was granted approval by the Energy and Petroleum Regulatory Authority (EPRA) on 11th November 2009 which was within 2 days after KPLC wrote to EPRA through a letter Ref. No. KPLC1/2/3/3 dated 9th

November 2009 for approval to enter into a PPA with LTWP, he submitted that the approvals obtained in respect of the approvals from KPLC and ERC (now EPRA) are outside LTWP's knowledge and influence. However, as explained above, the LTWP PPA had a tariff that was below the FiT-approved policy and the country was in the midst of an energy crisis with expensive HFO-based thermal plants and emergency power being used to plug the power deficit. The economic cost of both the expensive replacement power and the knock-on effects on the economy were enormous. Furthermore, approval of a PPA is only the first of many steps to develop the project and it was paramount that the project was not unduly delayed.

322. On the role played in ensuring that the Power Purchase Agreement between KPLC and Lake Turkana Wind Power Project (LTWP) was executed on 29th January 2010, which was almost a year before Lake Turkana Wind Power Project (LTWP) had obtained a license to generate electric power on 16th December 2010, he submitted that after the PPA is negotiated and agreed between the IPP and KPLC, it is initialed between the parties and a copy of the initialed (note, not executed) PPA was sent by KPLC to ERC (now EPRA). After EPRA approves the PPA terms, it grants approval to sign (i.e. execute) the PPA. Once that is done – which can take several months since there are a number of other conditions between the parties including internal approvals, legal opinions, and completion of any technical schedules and information, the executed PPA is then sent to the regulator who then issues an IPP License. Therefore, there is nothing irregular or unprocedural about the PPA approval, execution, and IPP License issuance dates. It is the same for all IPPs and PPAs in the Country.

323. On the approach Lake Turkana Wind Power Project (LTWP) using to resolve the land dispute with neighboring communities around the Lake Turkana Wind Power project, outline on the specific concerns raised by the communities regarding land use and the steps Lake Turkana Wind Power Project (LTWP) has taken to address these concerns and engage in dialogue with the communities to reach a mutually agreeable solution on land use rights as well as ensure the project contributes positively to the long-term development of these communities, he submitted that LTWP is a unique project that remains largely misunderstood. Most of the IPPs have been developed close to urban /peri-urban areas. LTWP on the other hand, is remotely located in Loiyangalani, Marsabit County. We welcome members of the Departmental Committee on Energy to visit the project to be able to fully appreciate its challenges and dynamics and to appreciate the crucial role that LTWP plays in the electricity sub-sector as well as in the economy as a whole.

4.4 Submissions by Dr. Eng. Joseph K. Njoroge

In his written submission to the Committee, Dr. Eng. Joseph K. Njoroge stated as follows: -

324. That, he did not play any role in granting any exclusive right to LTWP to survey the project area before the lease agreement. He further stated that the project was processed as a privately initiated proposal by LTWP under the PPP framework. The project was conceptualized in 2008 while he was serving at KPLC as the Managing Director. They were advised by the Ministry of Energy to

initiate discussions with LTWP in a letter Ref. No. ME/CONF/3/2/73A dated 25th May 2009. At that time KPLC had a technical team engaging IPPs.

325. He provided that the wind tariff was 11/12 USD cents per kWh while the proposed tariff by LTWP was 7.52 Euro cents per kWh, much lower than the prevailing tariff for FiT tariff for wind energy.

326. He provided that LTWP approached the Ministry of Energy with a view of undertaking a detailed wind resource assessment at their own cost. At that time, it was the only company that had come forward with a proposal for wind power development in Marsabit. This would culminate, if proven viable, the construction of a power plant. The Ministry of Energy later gave the proposers the right to undertake the surveys and the studies at their own risk while the Council of Marsabit leased land to LTWP.

327. He provided that his role was limited to coordinating the preparation of PPAs between KPLC and LTWP and forwarding them to EPRA for approval and that he did not influence the approval process at EPRA.

328. He provided that a generation license is usually applied once the financial closure is achieved and it being a capital-intensive project, the financial arrangement taking a year was normal.

329. On the concerns raised by the World Bank on the take-or-pay obligations in the PPA exposing KPLC, he provided that the Ministry of Energy was vindicated in that the injection of 300MW into the grid did not have any negative impact on the grid's reliability and stability. The clause is effectively designed to protect the generator.

330. He provided that KPLC's obligation was to offtake the power. In the event the contractor failed to complete the construction in time, the investor placed a security bond which would be liquidated for such delays.

331. The hiring of M/S Linklaters LLP to review the PPA in 2011 was necessitated by the need to give confidence to the lenders and security guarantors of such a big project. He further provided that the AG did not approve PPAs between KPLC and other parties before execution.

332. On the issue of some clauses in the PPA lacking reciprocity; for instance, the DGE penalty, he provided that the PPA provided conditions for DGE to include electrical energy that is not generated and/or delivered at the Delivery Point as a result of Transmission Line Delay and Transmission Line Interruption- when the DGE amount in an operating year exceed Euros 600,000.

333. He did not provide evidence confirming the Board's Resolution that the Management wrote to the Ministry of Energy confirming the KPLC Board's approval of the PPA agreement on 4th November 2009.

334. He further provided that he appeared before the Public Investment Committee to respond to various issues, similar to the ones raised by the Committee, and was also invited by EACC to record a statement on the same. He attached a copy of a letter of invitation by EACC on 1st November 2022.

CHAPTER FOUR
PART V

5.0 ISSUES OF DETERMINATION AS PER TERM OF REFERENCE AND OBSERVATIONS

335. **The Committee reviewed the written and oral submissions against the issues raised in the motion moved by Hon. Jane Kagiri, OGW, MP, as per the terms of reference developed by the Committee, during the conduct of the inquiry and made the following observations and findings relating to the terms of reference: -**

1) To establish the details of PPAs between KPLC and IPPs, which includes all the current PPAs and those under consideration if any, and the list of all IPPs and details of ownership, stakeholders, directors, and their addresses;

The Committee observed that: -

a) There are currently forty-one (41) EPRA-approved PPAs for the various plants supplying power to the interconnected system;
b) The Business Registration Services (BRS) submitted to the Committee the list of owners, shareholders, and directors. Notably, there is a general opaqueness in the disclosure of beneficial owners of IPPs with a majority of them listing foreign companies as shareholders;
c) Before 2017, as submitted by BRS, the Company's Act, Cap.486 did not require entities registered in other jurisdictions to provide beneficial ownership; and
d) BRS finally submitted that they are in the process of actualizing the Beneficial Ownership register for public companies.

2) To establish the terms of the existing contractual engagements between KPLC/EPRA/GoK and each of the IPPs including but not limited to the contracted capacity, tenure of contracts, monthly capacity charges, fuel and non-fuel costs for each plant.

The Committee observed that: -

a) The payment structure for most IPPs is the take or pay arrangement model. PPAs by their very nature are long-term contracts averaging 20 to 30 years;
b) Capacity charge costs for IPPs during the last two years were higher than the cost of the energy purchased as indicated in **Table 3**;
c) Most IPPs tend to have foreign development financial institutions as lenders as opposed to local investors (banks, pension funds, etc.). It further takes an average of ten years in Kenya from the time of project conception to completion of a power plant due to bureaucracies in the ministries thus preventing income sources like pension funds in Kenya from investing in such projects;
d) Most of the IPPs including those locally owned are denominated in foreign currencies i.e. the Euro and USD which expose Kenyans to the risk of exchange rate fluctuation and inflation; and
e) There was a great variation in the cost of fuel supplied to the various thermal plants with their average estimated fuel consumption rate at 0.290kg/unit for off-grid systems as indicated in table 9: -

Table 9: Specific Fuel Consumption (SFC) of Thermal Generators

Plant	**SFC in Kg/Unit Purchased**
Muhoroni Gas Turbine 1	0.315
Muhoroni Gas Turbine 2	0.315
Kipevu Diesel Plant	0.217
Kipevu II Diesel Plant(Tsavo)	0.222
Kipevu III Diesel Plant	0.2095
Iberafrica 56.346MW plant	0.226
Iberafrica 52.5MW plant	0.224
Rabai Diesel Plant with steam turbine or above 33MW	0.200
Rabai Diesel Plant without steam turbine or below 33MW	0.211
Triumph Diesel Plant with steam turbine or above 35MW	0.201
Triumph Diesel Plant with steam turbine or below 35MW	0.210
Gulf Diesel Plant	0.215
Thika Diesel Plant with steam turbine or above 33MW	0.199
Thika Diesel Plant without steam turbine or below 33MW	0.215
Diesel Plants in off-grid system	
Lodwar	0.282
Mandera	0.266
Marsabit	0.290
Wajir	0.260
Moyale	0.277
Habaswein	0.290
Merti	0.290
Elwak	0.290
Mfangano	0.290
Baragoi	0.290
Lokichogio	0.290
Takaba	0.290
Eldas	0.290
Rhamu	0.290
Laisamis	0.290
North Horr	0.290
Lokori	0.290
Dadaab	0.290
Faza Island	0.290
Lokitaung	0.290
Kiunga	0.290
Kakuma	0.290

Source: Kenya Power

3) To establish the installed capacity and effective capacity over the last five years and projections for the last five years.

The installed and effective capacity for the last five years is as tabulated in table 10 and 11:

Table 10: Installed vs Effective capacity over the last five years

Company	Capacity (MW) 30th June 2019		Capacity (MW) 30th June 2020		Capacity (MW) 30th June 2021		Capacity (MW) 30th June 2022		Capacity (MW) 30th June 2023	
	Installed	Effective/ Contracted	Installed	Effective/ Contracted	Installed	Effective/ Contracted	Installed	Effective/ Contracted	Installed	Effective/Contracted
KenGen	1,639	1,558	1,818	1,708	1,818	1,708	1,904	1,774	1,905	1,775
IPP	1,020	999	937	926	1,081	1,070	1,088	1,077	1,163	1,117
Imports	35	23	35	23	34	23	0	0	0	0
Off-grid	0	0	0	0	50	50	38	25	38.4	25.0
EPP	50	50	50	50	50	50	0	0	0	0
REREC	0	0	0	0	0	0	50	50	50	50
Imports							0	0	200	200
	2,741	**2,630**	**2,840**	**2,708**	**2,984**	**2,852**	**3,081**	**2,926**	**3,357**	**3,167**

Source: Kenya Power

Table 11: Projected Medium-term Capacity

Year	Installed capacity (MW)	Firm capacity (MW)	Peak Demand(MW)
End of 2023	3,233	2,540	2,220
End of 2024	3,212	2,513	2,327
End of 2025	3,526	2,818	2,444
End of 2026	3,796	2,973	2,567
End of 2027	4,153	3,185	2,696

Source: Kenya Power

4) To establish the basis for variance in the rates charged by KenGen against the rates charged by IPPs to Kenya Power and Lighting Company, including details of the unit charge by each IPP.

The Committee observed that: -

a) Projects implemented by KenGen, which are of similar technology, scope, and within the same location, are less costly and yield lower tariffs compared to IPP projects. According to the Report of the Auditor General for the year ending June 2023, KenGen supplied a total of 8,027 Gigawatt-Hours or 60 percent of total power purchased while the IPPs supplied the remaining 5,263 Gigawatt-Hours representing 40 percent. However, the cost of the total power purchased from KenGen was Ksh.54.215 billion, which was only 35%, compared to the cost of purchase of power from IPPs at Ksh.98.411 billion equivalent to 65%.

b) From KPLC's submissions, the structure of KenGen and IPPs varies. KenGen normally secures concessionary financing (loans) guaranteed by the Government of Kenya while the

IPPs have to source their funds at commercial rates. This means the cost of capital to KenGen is significantly lower than of the IPPs. In addition, the loan grace period and repayment periods may be longer for the concessionary loans to KenGen in comparison to the IPPs; and

c) KPLC presented that the base load plants, which run 24 hours, are mostly from geothermal, and run-off river hydro plants. The other plants are peaking plants, which are mainly gas-powered plants and diesel plants, where most IPPs are designated. The peaking plants are usually dispatched during periods of high demand (peak hours) and are easier to start up when demand spikes and shut down when demand recedes. The third group of power plants are load-following plants that adjust their power outputs as electricity demand fluctuates during the day, typically hydro plants with storage.

5) To establish the measures that each IPP is taking to reduce the cost of electricity to households, businesses, factories, and other consumers to support the Government's Bottom-up Economic Transformation Agenda (BETA):

The Committee observed that there were no particular measures by IPPs to reduce the high cost of electricity. However, some of the IPPs expressed willingness to negotiate their tariffs, though there has been no status report from the Ministry on such a negotiation process.

Other Observations: -

THAT;

6) Some of the lines that are supposed to evacuate power remain incomplete. These include: Sondu-Homabay-Ndhiwa Transmission line which is key in stabilizing power in Western Kenya; Narok-Bomet Transmission line whose completion would reduce dependency of Western Kenya on the Muhoroni gas turbines; Rabai-Kilifi Transmission Line and the Mariakani sub-station which would help evacuate power from Olkaria to the Coast region as well as reducing dependence on the thermal power generators; Turkwel-Ortum-Kitale line to help evacuate cheap hydropower from the Turkwel Hydro Dam; and Kamburu-Embu-New Thika-Ruaraka line, which will improve supply reliability in the Nairobi Region and de-load the Dandora-Juja Rd 132kV lines.

7) The lack of an approved land value index to specify the amount of compensation for compulsorily acquired land in each county has occasioned delays in the construction phase of some projects due to land acquisition and resettlement issues.

8) The Auditor General indicated that KPLC recorded 23.98 percent system losses in 2020/2021 yet the approved loss was 19 percent, while in 2021/2022, the system loss was 22.44 percent and in 2022/2023 the efficiency loss was 23 percent (3,056GW) against the approved efficiency loss of 19.5 percent and an industry standard of 16 percent. It was in the Kenya Association of Manufacturers (KAM) submission that if system losses are reduced from the current 22.43% to 14.50%, this will save the customer on average Ksh.6 billion annually, i.e., Ksh19.331 billion to Ksh13.110 billion.

9) The current framework for Power Purchase Agreement (PPA) negotiations in Kenya reveals a notable governance gap - the Office of the Attorney General is not structurally integrated into the IPP negotiation and approval process.

10) A lot of irregularities mar the procurement of IPPs, and the process of procuring IPPs is not competitive. The Committee did not establish any credible process applied in onboarding IPPs.

11) KenGen power plants vent out steam, which goes to waste. Such plants could be made more effective in energy conservation by embracing waste heat recovery technologies and energy storage solutions to generate electricity.

12) There are several instances of long delays of projects from inception to finalization due to a myriad of factors, including government bureaucracy and failure to reach financial closure.

13) There are frequent delays by Kenya Power in connecting customers to pre-paid meters despite customers having paid upfront, resulting in increased commercial losses.

14) Thermal plants procure Heavy Fuel Oil (HFO) individually for their specific plants, denying them the benefit of economies of scale.

15) IberAfrica Power Company, Gulf Power, Thika Power, and Triumph Power Ltd serve areas that have already been connected to the grid, yet they continue to accrue more capacity charges.

16) Africa Geothermal International Company has been allocated resource blocks by the Ministry of Energy and Petroleum and whose PPA came into effect in 2015, but has not had any exploration activity in the allocated area.

17) The Presidential Task Force on Power Purchase Agreements, citing the daily output report of Lake Turkana Wind Power during the year ended 2020, indicated that; the project did not achieve the nameplate 300MW capacity for a sustainable period on any day. The minimum average daily output was 4MW and the maximum 262MW, during only 5 days of the year was output in excess of 250MW; During 67days, (18% of the year) daily output was less than100MW; and the bulk of the year (225 days or 62%) experienced production of between 100MW and 200 MW and hence an average daily output for the year of 150 MW.

18) Based on the findings, and in accordance with Sections 42,43,44,45 and 46 of the Anti-Corruption and Economic Crimes Act, CAP 65, there is a need for further investigation on the Ministry of Energy and Kenya Power and Lighting Company Officials at the time which Lake Turkana Wind Power Project was conceptualized to be held accountable for not ensuring the competitive process was followed in the identification and implementation of the project, not conducting an independent legal risk assessment before execution of contracts for a capital project of that scale which led to hurried approvals being granted in disregard to the relevant laws and exposed taxpayers and the utility company to undue financial obligations arising from the Deemed Generated Energy Payments.

19) OrPower 4 was among the first independent power producers established in Kenya, with KPLC signing the first PPA with OrPower 4 Inc for an 8MW geothermal plant in November 1998, and has been operating at Olkaria since 23rd July 2000. However, the prices charged are still significantly higher than KenGen Plants in the same vicinity. KPLC and OrPower 4 subsequently entered into a series of agreements that amended and replaced the original Power Purchase Agreement of 5th November 1998.

20) The Committee during its Study visit to Ghana, made the following observations: -

a) The Energy Sector has two main regulators: - The Energy Commission (EC) and the Public Utilities Regulatory Commission (PURC), others include the Environmental Protection Agency (EPA) and the Nuclear Regulatory Authority (NRA). Similarly, the Petroleum Sector has two regulators. PURC regulates Electricity, Water and Natural Gas utility services;

b) The PURC consists of a 9-member Board: A Chairman, one person nominated by the Trades Union Congress (TUC), one person nominated by the Association of Ghana Industries (AGI), one representative of domestic consumers, the Executive Secretary appointed under Section 33, and four (4) other persons with knowledge in the functions of the Commission. The Commissioners have a five (5) years renewable tenure except for the Executive Secretary;

c) The President appoints Members of the Commission; however, Labour and Industry Members are selected by TUC and AGI to represent them on the Commission with the Domestic Consumers' representative being a person associated with a known Consumer Group or a known consumer advocate. The Executive Secretary is appointed through the Public Services Commission process;

d) PURC is independent and that the tariff structure setting in Ghana is quite consultative with public hearings normally done and the electorates required to buy-in into the process. The tariff review process commences with the receipt of proposals from Utility Service Providers/Stakeholders. PURC then undertakes extensive stakeholder consultations, which allows the utility service providers to explain their proposals to the general public and key interest groups;

e) The National Interconnected Transmission System (NITS) has an Automatic Generation Control (AGC) system that allows adjusting the power output of multiple generators at different power plants, in response to changes in the load. Where the grid has tie interconnections to adjacent control areas, AGC helps maintain the power interchanges over the tie lines at the scheduled levels. It was noted that NITS has an Islanding Scheme that allows for intentional isolation of parts of the power system during external widespread grid disturbance;

f) The last total NITS collapse (National power outage) was experienced in 2021 and the whole NITS system was restored in under 3 hours, thanks to the to the good black start capability at Akosombo Hydro Power Plant (1,020MW). The plant gives Ghana's Grid the much-needed Inertia and Regulating Reserves to improve grid stability, resilience and reliability;

g) The IPPs feed-in-tariff was negotiated between IPPs and the off-taker but PURC gave a 10 USD cents ceiling;

h) As of October 2023, 40% of the PPAs adopted the Take-and-Pay model in the country;

i) The government of Ghana successfully terminated four (4) PPAs;

j) In August 2007, the Ministry of Energy launched the National Compact Fluorescent Exchange Programme (CFLs) at the peak of the nation's power crisis. The programme saved the nation about 140MW of peak electricity supply.

21) Further, the Committee during its Study visit to South Africa made the following observations: -

a) The establishment of the IPP office in 2010 and the subsequent introduction of the Independent Power Producers Procurement Programme has led to a reduction in tariffs through competitive procurement of new electricity generation capacity provided by independent power producers (IPPs). The programme's dual consideration of economic development objectives has also led to the creation of a significant number of jobs, as well as the promotion of foreign direct investment and private sector investment into the South African energy sector.

b) The Regulatory sub-committees of the National Energy Regulator of South Africa are open to the public except where confidential matters are to be considered.

c) Owing to the high variability in flow and the lack of suitable sites for hydroelectricity in South Africa, pumped storage schemes are used as an alternative to conventional hydroelectric power stations to provide the power needed during peak periods, which entails the retaining and reusing of the water in the system Instead of discharging it.

d) The Refinancing Initiative (Refi) launched in 2019 aimed at reducing Bid window 1-4 tariffs to stimulate economic growth by passing any reduction in tariffs back to the consumer and the economy has resulted in 22 Refi applications being approved to date and has contributed to cost savings of R 4.7 billion over the remaining terms of the PPA.

CHAPTER FIVE

PART VI

6.0 COMMITTEE RECOMMENDATIONS

336. **Having considered the written and oral submissions against the questions in the statement submitted by Hon. Jane Kagiri, OGW, MP, the terms of reference, the existing legislation, and the policy availed during the conduct of the inquiry, the Committee makes the following recommendations**: -

1) Recommendations relating to lifting of the moratorium

a) THAT, upon adoption of this report, the House approves the lifting of the moratorium on the signing of new power purchase agreements. The Ministry of Energy and Petroleum, and the relevant SAGAs, continuously undertake the implementation of the proposed changes while reporting back on the status of the same to the National Assembly semi-annually. The conditions precedent to the lifting of the moratorium are:

i. THAT in line with the proposed Auction Policy for Wind and Solar power projects, the Ministry of Energy & Petroleum in conjunction with EPRA to integrate in the Auction Policy, competitive sourcing of BESS capacity in line with the National grid requirements. EPRA to undertake market sounding analysis on the specific tariffs/cost associated with establishing BESS PPA in line with South Africa and USA models and integrate the same in its gazette benchmark tariffs for wind and solar generation technologies.

ii. THAT, all future amendments or variations to Power Purchase Agreements (PPAs) shall be subjected to the Attorney General to advise, interpret, negotiate, draft or perform any other function as may be necessary for the effective discharge of his/her duties pursuant to the Constitution, 2010 and the Office of the Attorney-General Act (Cap. 6A). Upon receipt of any amendments or variations, the Attorney-General shall provide the requisite legal advice within thirty (30) days. Additionally, the Ministry shall submit a consolidated report on all PPA amendments and variations to the National Assembly every six months for oversight, ensuring transparency, accountability, and alignment with the country's energy policy and public interest.

iii. THAT the Authority (EPRA) shall make public indicative tariffs for both FiT/Auction projects for different technologies and the indicative tariff for BESS, and the same be reviewed after every 3 Years.

iv. THAT, all new power generation plant Power Purchase Agreements (PPAs) to be onboarded to the grid are denominated in Kenyan Shillings, Foreign Currency, Hybrid combination of Kenya Shillings and foreign currency to ensure that local costs, taxes are priced in local currencies, and debts/financing facilities costs are priced in their respective currencies.

v. THAT, the Ministry and EPRA implement competitive procurement of Energy projects under an auction scheme modeled similarly to South Africa's Independent Power Producer Procurement Programme in order to ensure that Energy is procured competitively and in line with the gazetted indicative tariffs and the Least Cost Power Development Plan to ensure price discovery by selecting only the least expensive power producer that meets the detailed technical and financial evaluation requirements after the bid rounds, failure to which the auction will be deemed unresponsive. Further, the Ministry in conjunction with EPRA to draft and finalize an approved Renewable Energy Auctions Policy that outlines the transition from the Feed-in-Tariff for advanced projects which must also be in line with the gazetted indicative tariffs, and operationalizes the auction system within twelve (12) months after the adoption of the report.

vi. THAT, within six (6) months upon adoption of this Report, the Business Registration Services (BRS) submits to the National Assembly a report containing a list of the owners, beneficial owners, shareholders, and directors of each entity operating as an independent power producer in Kenya in accordance with section 93A of the Company Act, 2015. Subsequently, all new power purchase agreements will only be entered into with a power generation entity that has fully disclosed and registered full beneficial ownership in compliance with the Act.

2) Recommendations relating to technical and commercial losses

a) THAT, the Ministry prioritizes and fast tracks the completion of priority transmission lines and substations which are key in reducing technical system losses and which will improve reliability in electricity transmission. These priority transmission lines and substations include-;

(i) The Sondu-Homabay-Ndhiwa Transmission line which is key in stabilizing power in Western Kenya;
(ii) The Narok-Bomet Transmission line whose completion would reduce the dependency of Western Kenya on the Muhoroni gas turbines;
(iii) The Rabai-Kilifi Transmission Line and the Mariakani sub-station which will help evacuate power from Olkaria to the Coast region as well as reduce dependence on the thermal power generators;
(iv) The Turkwel-Ortum-Kitale line to help evacuate cheap hydropower from the Turkwel Hydro Dam; and
(v) The Garsen–Hola-Bura–Garissa transmission line, which is key in supplying reliable power to Hola, Bura, and surrounding regions.
(vi) The Nanyuki-Isiolo 132kV Line in order to improve power system reliability and supply voltages in Nanyuki and Kiganjo.
(vii) The Nairobi Ring substations (Isinya, Athi River, Kimuka, Malaa) which are critical in providing an alternative power supply route to the Nairobi Metropolitan region while relieving overloaded substations.
(viii) The 400 kV Lessos Tororo Interconnector project, which will provide an avenue for power trade in the Eastern Africa Power Pool, besides providing grid stability within the region.
(ix) The 220kV Kamburu-Embu-New Thika-Ruaraka line which will improve supply reliability in the Nairobi Region and de-load the Dandora-Juja Rd 132kV lines.

b) THAT, the Ministry prioritizes the construction of transmission lines and associated substations for renewable energy projects that are nearing completion under a transparent and competitive Public Private Partnership (PPP) in order to alleviate the pressure on the Exchequer. This will enable the provision of a timely evacuation of power to the grid once complete and a revamp of the aging transmission network to improve reliability and reduce system losses, in line with the Least Cost Power Development Plan (LCPDP) and to synchronize the development of the Load Centers with the demand, transmission, and generation. The transmission lines and associated substations to be prioritized under the PPP arrangement include;

i. 220kV Kiambere - Maua – Isiolo.
ii. 132kV Kisumu-Bondo-Rangala-Busia-Mnyaga
iii. 220kV Wajir-Mandera
iv. 132kV Kitale – Tongaren – Webuye - Musaga
v. 220kV Kilifi-Mtwapa-Mariakani
vi. 220kV Marsabit-Moyale
vii. 220kV Turkwel – Lodwar – Lokichogio

viii. 132kV Kipevu – Mbaraki line and Mbaraki 132/33kV 2x45MVA substation

ix. 220kV Garissa – Habaswein/Dadaab – Wajir

c) THAT, pursuant to the provisions of sections 107A and 107B of the Land Act, Cap. 280, the Cabinet Secretary for Lands in consultation with the county governments and with the approval of the National Assembly and the Senate (Parliament), develops the land value index for purposes of compulsory land acquisition. Further, within twelve (12) months upon the adoption of the report, the Ministry, the State Department for Lands and Physical Planning, and KETRACO to expedite the development of a framework for a resettlement action plan for energy-related projects, including livelihood restoration in the event that communities are physically displaced, to specify the amount of compensation for compulsory acquired land in each county, to standardize and expedite the compensation process for way leaves and as a way of reducing time-consuming conflict with host communities and individuals.

d) THAT, within 36 months upon adoption of this report, KPLC puts in place measures that include conducting load analyses to find technical losses throughout the network, measuring losses correctly by ensuring the generation plants have tamper-proof check meters to address discrepancies between the check meters and the main meters, use of updated study reports and minimizing arithmetical errors in the computation of the system losses, installing high-efficiency low-loss transformers, Advanced Metering Infrastructure (AMI), introduction of smart grid technologies, installation of Capacitor banks and developing the power system to operate under the N-1 criteria, to lower the system losses from the 23% witnessed in December 2023 to 14.50% would save the consumer approximately Kshs. 6 billion annually which would otherwise be recouped through customer billings.

e) THAT, the register shall contain particulars of every electrical contractor granted a license under the Act, as well as every electrical contractor prequalified by KPLC. The Committee shall initiate amendments to section 105 of the Energy Act, 2019 to effect this recommendation.

3) Recommendations relating to operations of the Ministry of Energy and Petroleum and Kenya Power and Lighting Company (KPLC)

a) THAT, the Ministry in collaboration with KPLC to enhance the capacity utilization of existing geothermal plants to substitute thermal production, by running the plants as baseload plants (e.g., full capacity 24/7) to reduce the incidences of steam lost

through venting as well as incorporating Energy Storage solutions in the power plants.

b) THAT, Geothermal Development Company (GDC) should grant KenGen the first right of refusal for Geothermal exploration fields that GDC has de-risked through drilling and surface facilities constructions, however, this should be informed by a competitive process guided by the Least Cost Development Plan.

c) THAT, the Ministry prioritizes and fast tracks the completion of the Kenya Off-grid Solar Access Program (KOSAP) in order to promote off-grid solar systems and mini-grids, which will provide an alternative renewable energy source to the expensive diesel off-grid generators currently in use in the areas not connected to the national electricity grid, whose specific fuel consumption estimated at 0.290kg/unit is the second highest in the country after the Muhoroni Gas Turbine estimated at 0.315kg/unit. They can then be used only as an emergency measure or as a backup to the intermittent renewable energy sources (solar).

d) THAT, the Ministry and EPRA implement competitive procurement of Energy projects under an auction scheme modeled similar to South Africa's Independent Power Producer Procurement Programme in order to ensure that Energy is procured competitively and in line with the gazetted indicative tariffs and the Least Cost Power Development Plan to ensure price discovery by selecting only the least expensive power producer that meets the detailed technical and financial evaluation requirements after the bid rounds, failure to which the auction will be deemed unresponsive. Further, the Ministry in conjunction with EPRA to draft and finalize an approved Renewable Energy Auctions Policy that outlines the transition from the Feed-in-Tariff for advanced projects which must also be in line with the gazetted indicative tariffs, and operationalizes the auction system within twelve (12) months after the adoption of the report.

e) THAT, all new Power Purchase Agreements (PPAs) for power generation plants, whether involving local or foreign companies, shall adopt a hybrid financing model that incorporates both Kenya Shillings and foreign currency. This approach aims to balance exchange rate risks, enhance financial sustainability, and promote affordability for consumers while ensuring investor confidence.

f) THAT, the Ministry expedites the process of delinking Government development projects, from Kenya Power to REREC leaving the utility company to operate on commercial principles i.e. buying and selling of electricity. Transfer of the Off-grid Electrification schemes, Electrification of the housing schemes, and Street lighting projects to be moved to REREC in the next subsequent budget i.e. FY 2026/2027 while the transfer of the following projects e.g. last-mile connectivity project,

Retrofitting of Mini-Grids, Kenya Off-Grid solar access programme for underserved counties (KOSAP), and Establishment of a Utility Run Super Esco be staggered over 3 years owing to donor commitments in the projects.

g) THAT, Kenya Power fast tracks the adoption of an Automatic Generation Control (AGC) system that allows adjusting the power output of multiple generators at different power plants, in response to changes in the load, an Islanding Scheme that allows for intentional isolation of parts of the power system during external widespread grid disturbance; and black start capability in their system that will give Kenya's Grid the much-needed inertia and regulating reserves to improve grid stability, resilience, and reliability within thirty-six (36) months upon adoption of the report.

4) Recommendations relating to the management of Power Purchase Agreements (PPAs)

a) THAT, within twenty-four (24) months upon adoption of this Report, the Ministry of Energy and Petroleum in conjunction with the National Treasury fast-track the formation and operationalization of an independent IPP Office modeled similar to South Africa's IPPPP Office. This office shall serve as a centralized entity to streamline the review, negotiation, and formalization of Power Purchase Agreements (PPAs), thereby reducing bureaucratic inefficiencies, expediting decision-making, and ensuring transparency in the procurement of power generation capacity. Furthermore, to enhance legal and financial oversight, all future PPAs shall undergo mandatory review by the Attorney General within thirty (30) days before execution to advise, interpret, negotiate, draft or perform any other function as may be necessary for the effective discharge of his/her duties pursuant to the Constitution, 2010 and the Office of the Attorney-General Act (Cap. 6A) and safeguard public interest. Additionally, the Ministry, in conjunction with the IPP office, shall submit a consolidated report on all PPA agreements, including amendments and variations, to Parliament every six months for oversight, ensuring continued transparency, accountability, and alignment with national energy policy objectives.

b) THAT, KPLC prioritizes the recommissioning and extension of Power Purchase Agreements (PPAs) for retired power plants through KenGen, with negligible capacity charges and structured under a take-and-pay basis. This recommissioning must follow a thorough assessment of the suitability, technical viability, and cost-effectiveness of these power plants by the Office of the Auditor General. To ensure accuracy and reliability, the Office of the Auditor General may choose to either

conduct the assessment directly or outsource the requisite technical expertise in power plant suitability evaluations and PPA cost assessments.

c) THAT, within six (6) months upon the adoption of this report, KPLC in conjunction with EPRA charges the lower of the actual output vis-a-vis the predetermined SFC as they have the most direct impact on the fuel cost recovery as well as doing away with the excess starts component in the PPA as it is already factored in the Capacity Charges component of the PPAs.

5) Recommendations relating to the regulatory role of the Energy and Petroleum Regulatory Authority (EPRA)

a) THAT, Energy and Petroleum Regulatory Authority (EPRA) ensures that there is strict adherence to the international benchmarks of supply such as the Customer Average Interruption Duration Index (CAIDI), System Average Interruption Duration Index (SAIDI), and System Average Interruption Frequency Index (SAIFI) as set out in the Tariff Control Period to improve quality of supply to the customer, of which penalties should accrue to the utility company in the event of non-compliance. Further, KPLC is to publish regular reports on key indicators such as service quality, customer satisfaction, financial performance, PPA Renegotiations, and infrastructure upgrades to maintain transparency and accountability which should be tabled in the National Assembly quarterly for oversight within three (3) months upon adoption of this report.

b) THAT, within six (6) months upon adoption of this report, EPRA institutes a review of the time-of-use tariff modalities to cover all night consumption and lock in the rate for each facility, in order to encourage better use of the electricity capacity in the night-time, as well as formulation of a transparent mechanism of setting SEZ tariff prices with a view of introducing nearly uniform preferential tariffs for Special Economic Zones (SEZs) in the next tariff review, in order to attract new investment, with the current cheaper tariff of Kshs. 5 per kWh only applying to the Naivasha Kedong SEZ.

c) THAT, within six (6) months upon adoption of this report, EPRA institutes a review of the pass-through costs to introduce a recovery mechanism for the operating deficits for Rural Electrification Schemes (RES) and that in the next Tariff Control Period, the same be factored in the Base Tariff, and that EPRA review the current RES cost allocation framework to ensure costs are correctly allocated between KPLC and RES.

d) THAT, EPRA ensures that Financial Close (FC) and signing of power purchase contracts is achieved within 9-12 months and Commercial Operation Dates (CODs) within 24-30 months of FC, except in exceptional circumstances, will the regulator sanction delays in these timelines.

6) Recommendations relating to Heavy Fuel Oils (HFOs)

a) THAT, within six (6) months upon the adoption of this report, EPRA formulates and ensures the implementation of Standard Operating Procedures (SOPs) between KPLC, IPPs, and HFO Suppliers, followed by an accountability mechanism to prevent potential loss through overpayment and underpayment for fuels supplied to IPPs due to needless variations, which are then passed on to the consumer.

b) THAT, within nine (9) months upon the adoption of this report, KPLC in conjunction with EPRA reviews the minimum stock contractual obligation for HFOs under the Thermal power plants, as well as the minimum dispatch allowable for the plants to meet the manufacturers' requirements. Arising from this, the benefits in terms of the release of working capital to be passed to consumers by potentially lowering capacity charges, while EPRA regularly monitors stock levels at the IPPs through ensuring the installation of smart tamper-proof fuel consumption meters to monitor utilization on an ongoing basis to mitigate risks arising pertaining to unavailability due to lack of fuel stocks as well as maintain bi-weekly reports on the unavailability of power plants including the reasons.

c) THAT, within twelve (12) months upon the adoption of this report, EPRA institutes the standardization of the standard bidding form for Heavy Fuel Oils (HFO) which should contain a section detailing the eligibility criteria, technical evaluation criteria, financial evaluation criteria, qualifications evaluation criteria and award criteria as well as having independent observers from the Consumer Protection Department of the Competition Authority of Kenya(CAK) and Consumers Federation Of Kenya (COFEK) during evaluation meetings. This will help in mitigating the significant unexplained variances in pricing between thermal plants of between 10% and 60% with HFOs costing KPLC Kshs.28.08 billion for the financial year ended 30th June 2023.

d) THAT, within twelve (12) months upon the adoption of this report, the Ministry constitutes a sub-committee comprising of the Ministry, Supplycor (supplying OMCs), Electricity Sector Association of Kenya (ESAK) representing IPPs, Vessel Scheduling committee, EPRA, KPC and KPLC which will be involved in Bulk purchase of HFOs to realize economies of scale, through a competitive mode of

procurement for HFOs modeled similar to the Open tender system used in the importation of white petroleum products.

e) THAT within twelve (12) months upon the adoption of this report, Energy and Petroleum Regulatory Authority (EPRA) institutes a fuel pricing formula for the HFOs based on international and domestic pricing factors, and the prices published every 14th of the month, in the Kenya Gazette and their website. The Committee shall initiate an amendment to the Energy Act, 2019 to effect this recommendation.

f) THAT, the Ministry fast-tracks the completion of a feasibility study on the Mombasa-Dar es Salaam natural gas pipeline project and subsequent completion of a Liquified Natural Gas (LNG) plant in Dongo Kundu that will pave the way for the switching from HFOs to LNG for thermal IPPs as contained in the power purchase agreements.

7) Recommendation relating to alternative or emerging technology

a) THAT, the Ministry in conjunction with EPRA promotes the uptake of Captive Power Plants which have been on the rise in establishments such as schools, hospitals, hotels, factories, and shopping malls which are installing solar, biomass, and small hydro among other technologies through fast-tracking the implementation of the Energy (Net-Metering) Regulations, 2024 (the Net-Metering Regulations) and ensuring that each captive power plant being onboarded to the grid thereafter is fitted with Energy Storage Solutions, in order to ensure energy security, lower supply costs, better electricity quality and a reduction of the carbon footprint.

b) THAT, the Ministry prioritizes and fast-tracks investment in emerging technologies like green hydrogen that can act as a viable alternative to intermittent renewable energy sources and expensive thermal power plants, especially for peaking purposes. This can help increase the uptake of green energy, serve as a raw material source for industrial, transport, and domestic use to replace fossil fuels as well as provide opportunities to grow export revenues through the export of harnessed green hydrogen knowledge, expertise, and equipment.

8) Recommendations relating to consumer behavior

a) THAT, upon adoption of this report, KPLC in conjunction with the Electricity Consumers Society of Kenya (ELCOS Kenya), immediately embarks on a customer sensitization process to entrench a culture of energy efficiency,

conservation, responsible usage, and deterrence in engaging in activities that promote commercial system losses.

9) Other recommendations: -

a) THAT, within six (6) months upon adoption of this Report, the Business Registration Services (BRS) submits to the National Assembly a report containing a list of the owners, beneficial owners, shareholders, and directors of each entity operating as an independent power producer in Kenya in accordance with section 93A of the Company Act, 2015. Subsequently, all new power purchase agreements will only be entered into with a power generation entity that has fully disclosed and registered full beneficial ownership in compliance with the Act.

b) THAT, within six (6) months upon the adoption of this report, and pursuant to the provisions of sections 37 and 39 of the Public Audit Act, 2015, the Auditor-General conducts a forensic audit to establish fraud, corruption, or other financial improprieties in the Electricity Pricing Formulae including the pass-through charges for both prepaid and postpaid consumers and tables the report to the National Assembly.

c) THAT, within six (6) months following the adoption of this report, and in compliance with sections 37 and 39 of the Public Audit Act, 2015, the Auditor-General carries out a forensic audit on KPLC which should include, but not be limited to the following; procurement and contracting processes, Billing and Revenue Collection Systems, Human Resource and Payroll Management, Debt and Liability Management, and operational performance, and submit a report to the National Assembly.

d) THAT, within nine (9) months upon the adoption of this report, and pursuant to the provisions of sections 37 and 39 of the Public Audit Act, 2015 and Article 254(2) of the Constitution Of Kenya, 2010, the office of the Auditor General conducts a special audit on the geothermal licenses issued since 2008 and the report submitted to the House to ascertain whether the licensees adhered to the provisions of sections 80,81,82 and 84 of the Energy Act, 2019 and those found to have not complied will have their licenses revoked.

e) THAT, within twelve (12) months following the adoption of this report, and in compliance with Sections 37 and 39 of the Public Audit Act, 2015, and Article 254(2) of the Constitution of Kenya, 2010, the Auditor-General carries out a special audit on all thermal power generators, Lake Turkana Wind Power Ltd, Kipeto Ltd, and Orpower, and tables the report to the National Assembly. The report should

determine the actual cost of setting up the power plants, the cost of running the power plants, including capacity charges, the amounts paid since inception relative to the initial investment, and the outstanding amounts owed to Independent Power Producers (IPPs). This audit shall form the basis for the renegotiation of tariff charges with IPPs to ensure fair pricing for the remaining period of their PPAs. Failure to comply with the audit within twelve (12) months will lead to termination of the respective Power Purchase Agreements currently in place.

f) THAT, upon adoption of this Report, based on the findings and in accordance with Sections 42,43,44,45 and 46 of the Anti-Corruption and Economic Crimes Act, (CAP 65) of 2003, the EACC and DCI conduct a further investigation on the Ministry of Energy and Kenya Power and Lighting Company Officials at the time which Lake Turkana Wind Power Project was conceptualized to be held accountable for;

- not ensuring the competitive process was followed in the identification and implementation of the Lake Turkana Wind Power (LTWP) project,
- not conducting an independent legal risk assessment before execution of contracts for a capital project of that scale which led to hurried approvals being granted in disregard of the relevant laws,
- exposure to taxpayers and the utility company to undue financial obligations arising from the Deemed Generated Energy (DGE) payments made based on the assumed capacity factor of 62% which was later revised to 54% during the second agreement variation, despite the absence of a functional metering system to accurately determine the production from the power plant as prescribed in clause 11.1 of the Lake Turkana Wind Power (LTWP) Power Purchase Agreement (PPA).

SIGNED .....**DATE**.....11/11/25.....

THE HON. DAVID GIKARIA, CBS, M.P.
(CHAIRPERSON, DEPARTMENTAL COMMITTEE ON ENERGY

THE NATIONAL ASSEMBLY
PAPERS LAID
DATE: 11 NOV 2025 DAY.
TABLED BY:
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