UNITED REPUBLIC OF TANZANIA
MINISTRY OF ENERGY
ENERGY AND WATER UTILITIES
REGULATORY AUTHORITY
(EWURA)

ewura
Energy and Water Utilities Regulatory Authority
ISO 9001:2015 Certified

ELECTRICITY SUB-SECTOR REGULATORY PERFORMANCE REPORT FOR THE FINANCIAL YEAR 2023/24

MARCH 2025

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CHAIRMAN STATEMENT

On behalf of the Board of Directors of the Energy and Water Utilities Regulatory Authority (EWURA), I am pleased to present the Electricity Sub-Sector Regulatory Performance Report for the Financial Year 2023/2024 that has been prepared under the legislation governing the Electricity Supply Industry.

One of EWURA's strategic objectives is to ensure improved quality, availability, reliability, and affordability of regulated electricity services. These elements are key to realizing the Tanzania Development Vision 2025 and the Sustainable Development Goals. They are also key to enhancing industrialization and clean cooking, among the country's key strategic priorities.

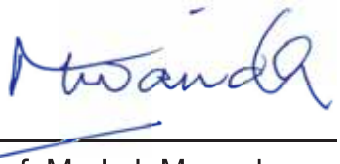
The Electricity Supply Industry registered various achievements during the last financial year. These include improved service delivery to customers, electricity accessibility and connectivity, infrastructure investments, licensees' operational and economic efficiency, and the quality, reliability, and affordability of regulated services.

The Authority commends the government's commitment to invest in the electricity supply industry, such as the 2115MW Julius Nyerere Hydropower Project and rural electrification programmes. Equally, EWURA acknowledges the private sector's contribution to government efforts in the development of the industry. Together, these measures have played a critical role in ensuring the security of electricity supply to marshal Tanzania's much-needed socio-economic development.

I am also greatly humbled by the continued leadership, support, and cooperation of the Ministry of Energy, Ministry of Water, and all stakeholders. I would like to assure them that EWURA is committed to delivering its vision of being a World Class Regulator for Sustainable Energy and Water Services by promoting impartiality, morality, professionalism, accountability, consistency, and transparency in its decision-making processes.

Special appreciation is extended to the President of the United Republic of Tanzania, Her Excellency, Dr. Samia Suluhu Hassan, for her leadership and guidance in the regulated sectors. Much gratitude to the Deputy Prime Minister and Minister for Energy, Hon. Doto M. Biteko (MP) for his tireless support and strategic guidance in developing the energy and water sectors.

Finally, I would like to express my gratitude to EWURA's Board of Directors, Management, and Staff of EWURA for their team spirit.



Prof. Mark J. Mwandosya
BOARD CHAIRMAN

FOREWORD

The Electricity Act, Cap 131, and EWURA Act, Cap. 414 mandates EWURA to undertake technical and economic regulatory functions in the Electricity Supply Industry. Section 30(1) of the Electricity Act, Cap 131 requires the Authority to establish systems and procedures to monitor and measure licensees' performance. In addition, Section 15(4) requires licensees to submit to the Authority, data and information relating to the performance of their functions. Furthermore, Section 30(7) requires EWURA to publish reports on the performance of licensees.

This report presents the performance of regulated activities in the sub-sector from 1st July 2023 to 30th June 2024, as implemented by EWURA to, among others, promote customer service through fostering competition; promote access to, and affordability of electricity services, particularly in rural areas; and promoting least-cost investment and the security of supply for the benefit of the customer. It also includes promoting improvements in the operational and economic efficiency of the electricity supply industry and efficiency in the use of electricity; promoting appropriate standards of quality, reliability, and affordability of electricity supply; and considering the impact of the industry on the environment.

Achievements made during the period under review include, among others, an increase in installed capacity by 26.15%, customer connection by 14.52%; power demand by 11.88%; energy generation and imports by 12.20%. Others are increased transmission line by 9.84%, grid substation by 0.98%, distribution line length by 14.98%, customer connection by 12.65% and public awareness on the use of electricity for clean cooking. Also, the System Average Interruption Frequency Index (SAIFI) improved by 47.7%, the System Average Interruption Duration Index (SAIDI) by 63.9%, and energy losses by 0.04%. Furthermore, there are achievements in public projects, including a 2,235.5MW electricity generation infrastructure, a 27-transmission line (5,033km), 39 substations (3,801MVA), and 39 private sector-developed electricity generation projects (179.59MW). Such achievements could not be attained without continued support from the Government through the Ministry of Energy, TANESCO as a public regulated entity, private regulated entities, development partners, and other stakeholders. I hope this report will provide the required information to all stakeholders in the Electricity Supply Industry.

Dr. James A. Mwainyekule
DIRECTOR GENERAL

ABBREVIATIONS AND ACRONYMS

AHEPO	:	Andoya Hydro Electric Power Limited
CAIDI	:	Customer Average Interruption Duration Index
Cap.	:	Chapter
COD	:	Commercial Operation Date
EMC	:	Electromagnetic Compatibility
ESI	:	Electricity Supply Industry
ESIRSR	:	Electricity Supply Industry Reform Strategy and Roadmap
EWURA	:	Energy and Water Utilities Regulatory Authority
GN	:	Government Notice
GO	:	Gas Oil
GW	:	Giga Watt
GWh	:	Gigawatt-hour
HFO	:	Heavy Fuel Oil
HSE	:	Health, Safety and Environment
IDO	:	Industrial Diesel Oil
IMO	:	Independent Market Operator
IPP	:	Independent Power Producer
ISO	:	Independent System Operator
km	:	Kilometre
kV	:	Kilo Volt
LV	:	Low Voltage
MoE	:	Ministry of Energy
MV	:	Medium Voltage
MVA	:	Mega Volt Ampere
MW	:	Mega Watt
MWh	:	Megawatt-hour
PPA	:	Power Purchase Agreement
REA	:	Rural Energy Agency
SAIDI	:	System Average Interruption Duration Index
SAIFI	:	System Average Interruption Frequency Index
SAIFI-CP	:	System Average Interruption Frequency Index at Connection Point
SPP	:	Small Power Producer
SPPA	:	Standardized Power Purchase Agreement
SPPT	:	Standardized Small Power Projects Tariff
SGR	:	Standard Gauge Railway
TANESCO	:	Tanzania Electric Supply Company Limited
TANWAT	:	Tanganyika Wattle Company Limited
TBS	:	Tanzania Bureau of Standards
TGP	:	Tegeta Gas Power Plant
TPC	:	Tanganyika Planting Company
UGP1	:	Ubungo Gas Power Plant 1
UGP2	:	Ubungo Gas Power Plant 2
VSPP	:	Very Small Power Producer
ZECO	:	Zanzibar Electricity Corporation Limited

EXECUTIVE SUMMARY

This report presents the regulatory performance of the Electricity Supply Industry from 1st July 2023 to 30th June 2024. It is made under Section 30(7) of the Electricity Act, Cap. 131, which requires EWURA to publish reports on the performance of licensees including, but not limited to, quality, reliability, and security of supply, the progress of electrification, investment, efficiency of operations, and other standards of customer services.

Apart from EWURA, the institutional structure of the Electricity Supply Industry comprises the Ministry of Energy (MoE), the Rural Energy Agency (REA), Tanzania Electric Supply Company (TANESCO), and private entities.

Two regulatory Rules were developed in FY 2023/24 to monitor the performance of the Electricity Supply Industry efficiently; the Electricity (Generation Transmission and Distribution Activities) Rules, 2023, and the Electricity (Supply Services) (Amendments) Rules, 2023. During the period under review, 9,059 licenses existed, while 1,572 new permits were issued. At the time, 30 entities had licenses for generating electricity above one (1) megawatt. Apart from holding a distribution license, TANESCO, being a public entity, is the only entity licensed for electricity transmission activities. At the same time, Mwenga Power Services Limited had only a license for electricity distribution activities as of June 2024.

During the period under review, 13 entities had registered to generate electricity below one (1) megawatt, and four (4) projects that account for 736MW, had approval for the Initiation of Procurement of New Electricity Supply Installations to develop power plants in partnership with TANESCO.

The Authority had approved 59 Power Purchase Agreements (PPA) as of June 2024, out of which, 27 were approved during FY2023/24 while seven (7) entities had tariff orders to sell electricity to end-user customers. Likewise, the Electricity (Standardized Small Power Projects Tariff) Order, 2019 continues to exist as an indicative tariff for Small Power Producers (SPP) to generate electricity between 100kW to 10MW for selling to the grid.

The installed capacity increased by 499.87 MW (26.2%) from 1,911.46MW in FY2022/23 to 2,411.33MW in FY2023/24 while maximum demand increased by 174.73MW (12.%) from 1,470.50MW in FY 2022/2023, to 1,645.23MW in FY 2023/2024. Further, the energy generation and imports increased by 1,203.63GWh (12.2%) from 9,864.77GWh in 2022/23 to 11,068.40 GWh in FY 2023/2024. Furthermore, the energy generation mix comprised natural gas (67.1%), hydropower (32.4%), liquid fuel (0.5%), and biomass (0.01%) in FY 2023/24.

The transmission line increased by 674km (9.84%) from 6,850km in FY2022/23 to 7,524km in FY2023/2024, while the grid substations increased by 4 (6.4%) from 63 in FY2022/2023 to 67 in 2023/2024. Further, the distribution line length increased by 24,521.67 km (15%) from 163,744.56 km in FY2022/23 to 188,266.23 km in FY2023/24.

Customers connected to the distribution network increased by 559,595 (12.7%) from 4,422,664 in FY2022/23 to 4,982,259 in FY2023/24. The reliability of electricity supply improved, whereby, the System Average Interruption Frequency Index (SAIFI) improved by 12 (48%), from 26 in FY2022/23 to 14 in FY2024. The System Average Interruption Duration Index (SAIDI) improved by 982 minutes (64%) from 1,536 in FY2022/23 to 554 in FY2023/24.

Investment in electricity infrastructure improved, and several projects were under development to ensure the security of the electricity supply. Under the public sector, four (4) power generation infrastructures, accounting for 2,235.5MW, and 27 transmission lines (5,033km) were developed. The public sector also developed 39 grid substations (3,801MVA), while the private sector developed 39 electricity generation projects worth 179.59MW.

The use of electricity for clean cooking was promoted to ensure that 80% of households use clean energy, including electricity for cooking by 2034. It includes strategies that focus on increasing accessibility and connectivity of electricity supply, availability of energy-efficient equipment, as well as policies and regulatory frameworks that incentivize affordability of electricity supply.

Market competition analysis indicates that TANESCO accounts for 91% and 83% of the installed capacity and energy generation in the electricity generation market share respectively. Likewise, it accounts for a 100% market share in electricity transmission activities. Furthermore, it accounts for 99.5% of customers and 99.5% of distribution infrastructures.

TANESCO electricity sales to general Usage Customers (T1), i.e residential, small commercial, and light industrial use, public lighting, and billboards contributed to 50%, while high voltage customers (T3) contributed to 38%. The low voltage supply (T2) customers metered at 400V with an average consumption of not more than 7,500kWh per meter reading period and demand not exceeding 500kVA per meter reading period, contributed 10% and Domestic Low Usage (D1) who on average consume less than 75kWh per month contributed to 2% of the total electricity sales. The consumption pattern of power remained the same as in the previous financial year

In complaint handling, during the period, 146 complaints and disputes between TANESCO and its respective customers were resolved.

During the year under review, the electricity supply industry experienced several challenges, including inadequate rainfall in water catchment areas. The situation affected the performance of hydropower plants at a time when emerging trends such as clean cooking, electric mobility, and standard gauge railways increased the electricity demand and enhanced the need for a robust regulatory framework. To address these challenges, the government in collaboration with stakeholders is working to improve the sustainability of the electricity supply industry

1. INTRODUCTION

Electricity plays a vital role in socio-economic development. Thus, the government has established institutions in the Electricity Supply Industry to ensure the availability and affordability of electricity supply services at acceptable quality standards in line with legislation and national development agendas.

The institutions include the Ministry of Energy, which provides an overall supervisory role in the electricity supply industry, REA for rural electrification, TANESCO for conducting regulated activities, and EWURA for providing technical and economic regulation. The industry also includes private entities that conduct regulated activities.

EWURA exercises its power in line with section 5 of the Electricity Act. It awards licenses for undertaking or seeking to undertake a licensed activity, approves and enforces tariffs and fees charged by licensees, approves licensees' terms and conditions of electricity supply, and approves initiation of the procurement of new electricity supply installations.

EWURA executes its function in line with section 6 of the Electricity Act. It protects customers' interests through the promotion of competition, accessibility, and affordability of electricity services; least-cost investment and the security or supply; improvements in the operational of the electricity supply industry and efficiency in the use of electricity; appropriate standards of quality, reliability, and affordability of electricity supply; and environment conservation.

This report presents the electricity sub-sector regulatory performance for the Financial Year 2023/2024, particularly in the generation, transmission, distribution, supply, and cross-border trade. It is in line with section 30 of the Electricity Act which requires EWURA to monitor, measure, and publish the performance of the regulated entities.

2. OVERVIEW OF THE ELECTRICITY SUPPLY INDUSTRY

An overview of the electricity supply industry is presented in this section. It consists of an institutional structure and the regulatory tools for the administration of the industry.

2.1 Institutional Structure of the Electricity Supply Industry

The electricity supply industry consists of various institutions. The key institutions and their respective roles are presented in **Figure 1**. Likewise, details of their respective roles are presented in **Annex 1**.

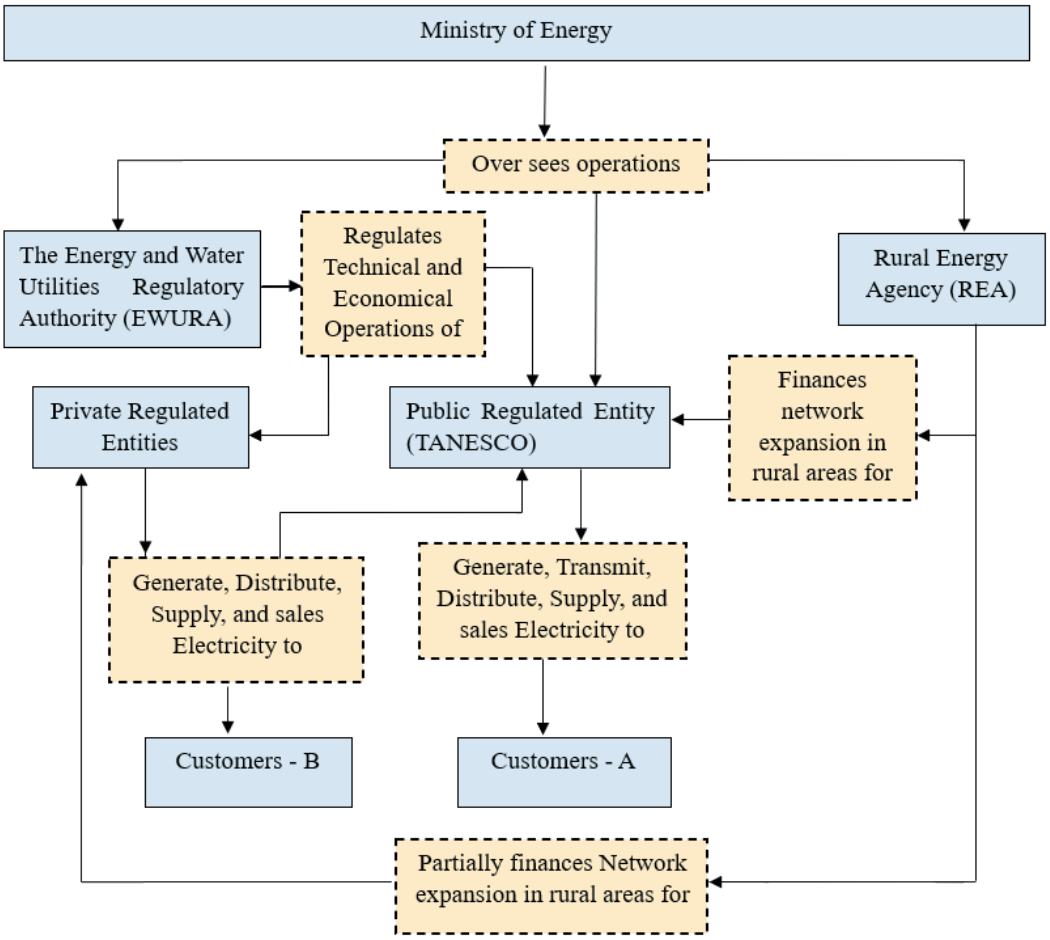


Figure 1: The Electricity Supply Industry Institutional Structure

2.2 Regulatory Tools

The regulatory tools used to administer the electricity supply industry are presented in **Figure 2**. Details for each of the tools are in **Annex 2**

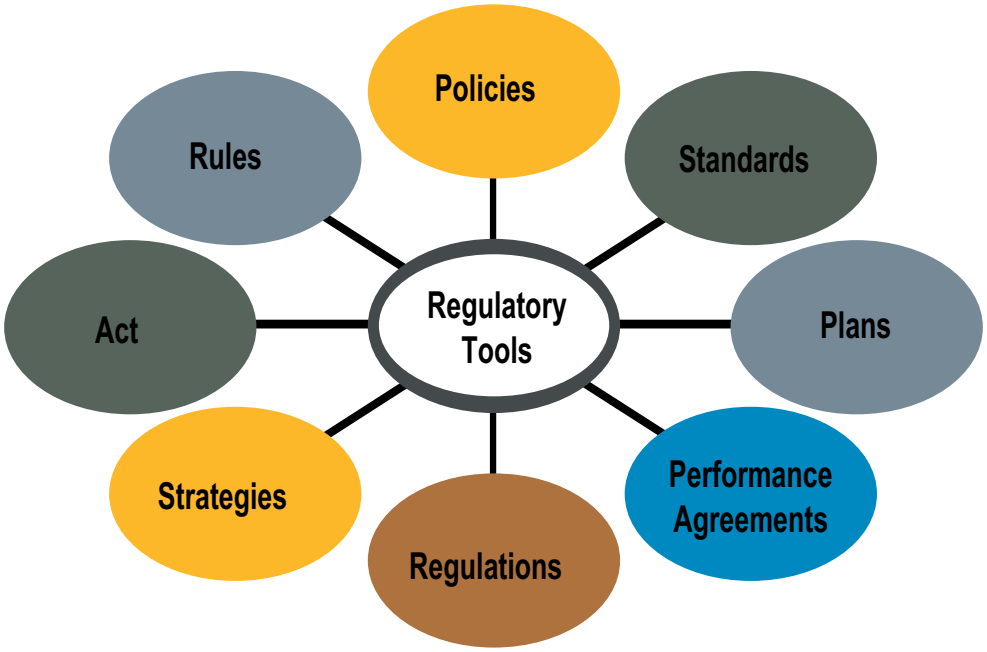


Figure 2: Regulatory Tools in The Electricity Supply Industry

3. LICENSING AND REGISTRATION

The Electricity Supply Industry activities above 1MW require a license in line with Section 8(1) of the Electricity Act Cap.131 as presented in **Figure 3**. Likewise, generation activities in rural areas with installed capacity below 1MW are exempted from license, but only need to be registered in line with 18(3).

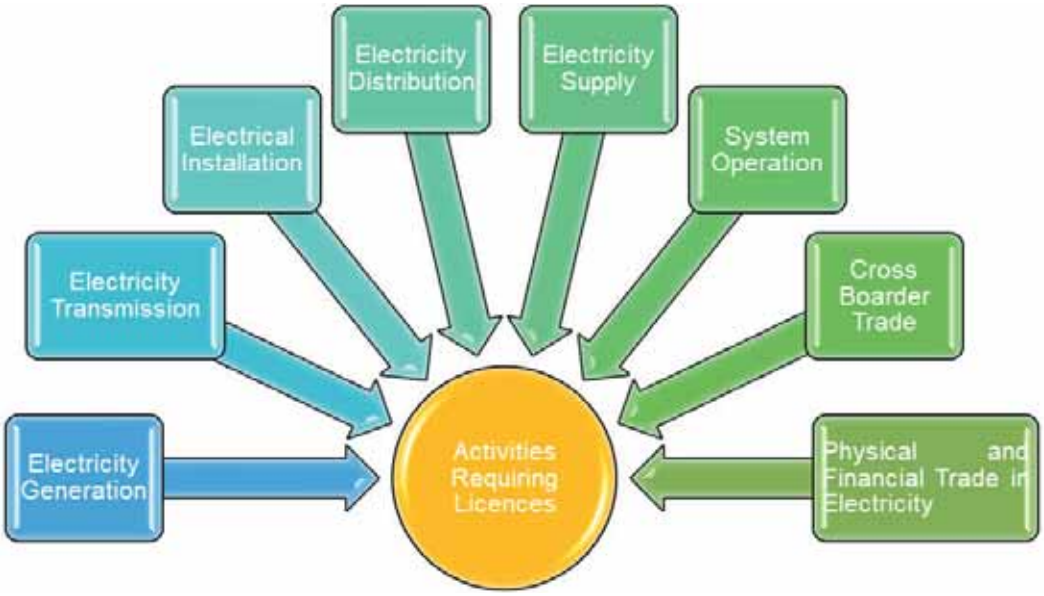


Figure 3: Activities Requiring Licence

3.1 Licensing

As of June 2024, 9,059 licences in **Figure 4** and details in **Annex 3** were issued. 1,572 licenses were issued in FY 2023/2024 as in **Figure 5**[1].

Figure 4: Issued Licences as of June 2024

Figure 5: Issued Licences in FY2023/2024

3.1.1 The Electricity Generation Licences

As of June 2024, there were 30 generating licences issued in line with sections 5 and 8(1)(a) of the Electricity Act Cap. 131 as indicated in **Figure 6**. The specific licenses are in **Figure 7**. Likewise, the trend from 2017/18 to 2023/24 is depicted in **Figure 8** where three (3) licences were issued in FY2023/2024. Details are in **Annex 3.**

Figure 6: Capacity of Electricity Generation Licences Issued as of June 2024

Figure 7: Specific Capacity of Electricity Generation Licences as of June 2024

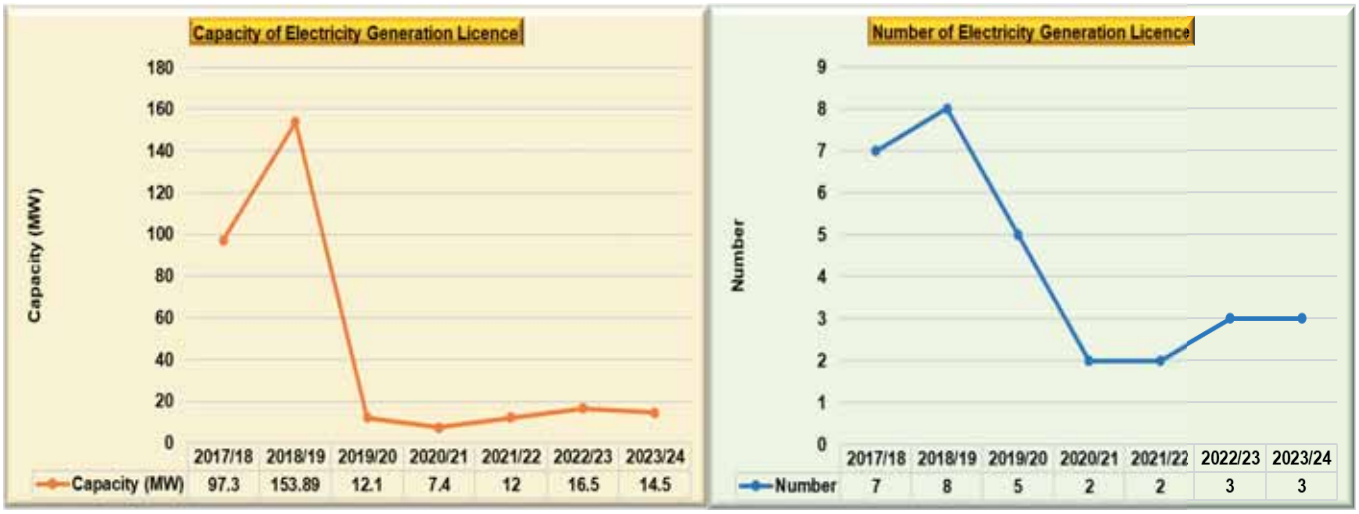


Figure 8: Electricity Generation Licence Issued (FY 2017/18 – 2023/24)

3.1.2 Electricity Transmission Licence

As of June 2024, TANESCO was the only entity licensed for electricity transmission activities in line with sections 5 and 8(1)(b) of the Electricity Act Cap. 131 as detailed in **Annex 3**. It covers transmission activities at voltage levels presented in **Figure 9.**

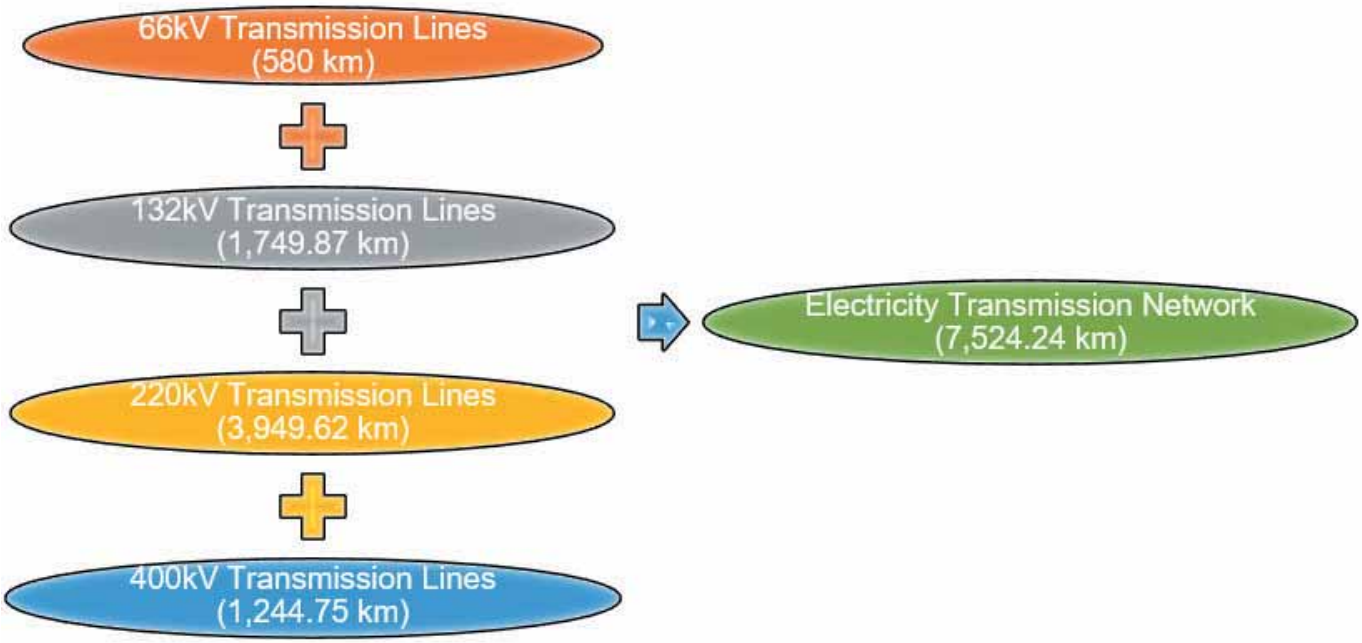


Figure 9: Electricity Transmission Network Voltage Levels as of June 2024

3.1.3 Electricity Distribution Licence

By June 2024, two (2) entities in **Figure 10** had licenses for electricity distribution activities in line with sections 5 and 8(1)(c) of the Electricity Act Cap. 131. Details are in **Annex 3.** It covers distribution activities at voltage levels presented in **Figure 11**.

Figure 10: Electricity Distribution Licensed Entities as of June 2024

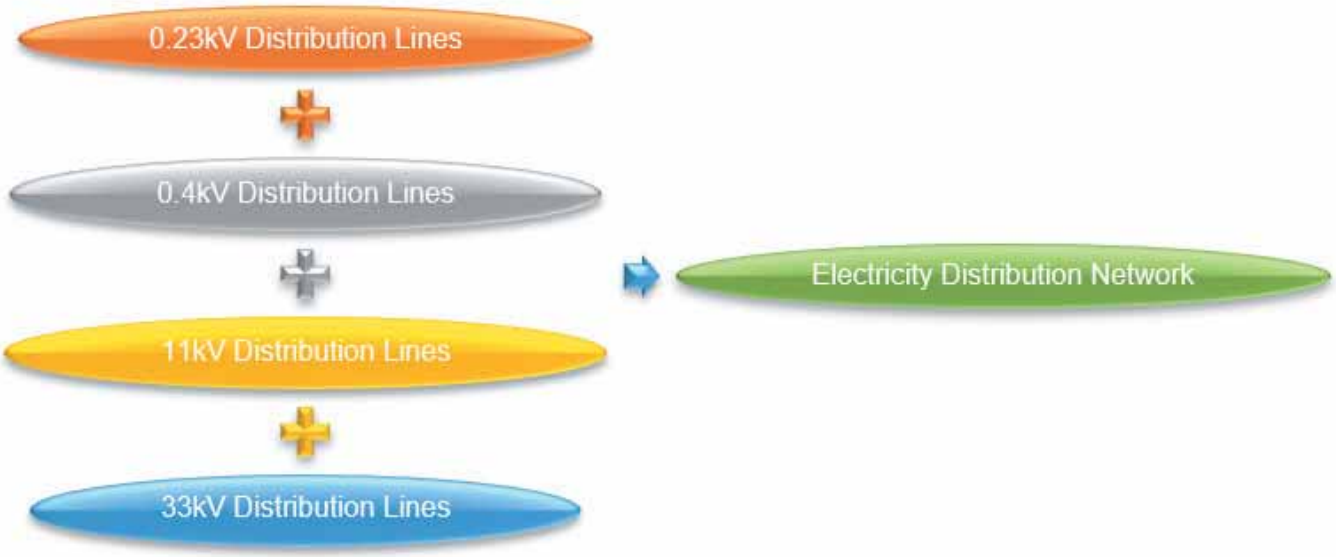


Figure 11: Electricity Distribution Network Voltage Levels as of June 2024

3.1.4 Electricity Supply Licence

In the period under review, TANESCO had a licence for electricity supply activities in line with sections 5 and 8(1)(d) of the Electricity Act Cap.131 as in **Annex 3.** It covers supply services activities to customers connected at three voltage levels presented in **Figure 11**.

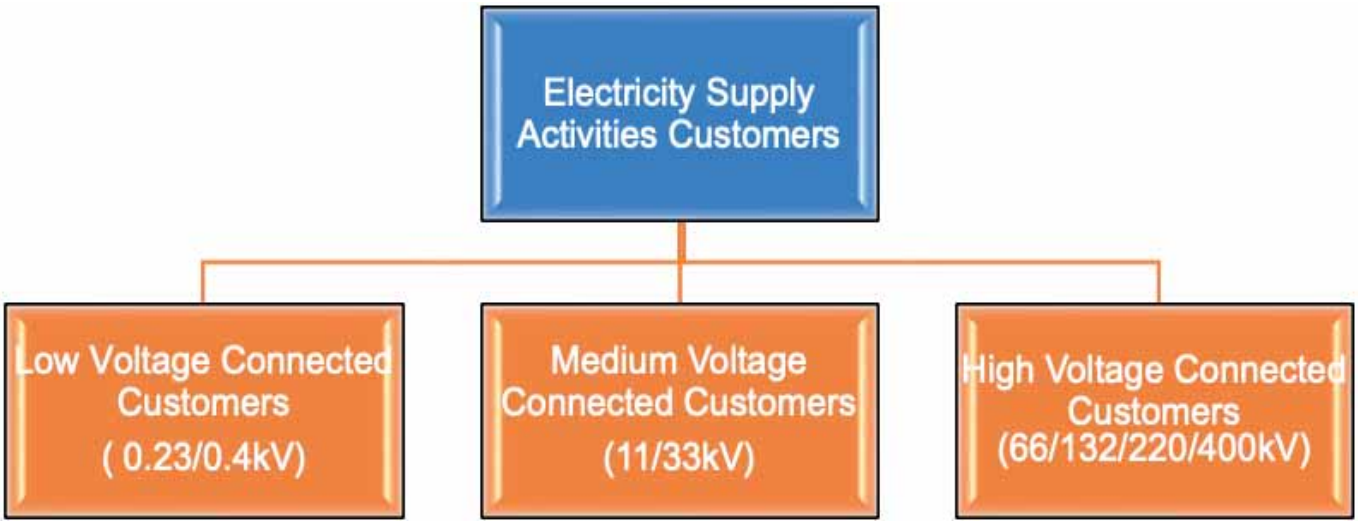


Figure 12: Electricity Supply Voltage Levels

3.1.5 Cross-Border Electricity Trade Licence

As of June 2024, TANESCO had a licence for Cross-Border Electricity Trade in line with sections 5 and 8(1)(f) of the Electricity Act Cap. 131 as depicted in **Annex 3.** It covers cross-border trade with countries and power pools presented in **Figure 13**. The countries include Uganda, under the Uganda Electricity Transmission Co. Ltd (UTCL), and Zambia, under the Zambia Electricity Supply Co. Ltd (ZESCO). Likewise, TANESCO is a non-operating member of the power pools pending the completion of the 400kV interconnection line to Kenya for the Eastern African Power Pool and Zambia for the Southern African Power Pool.

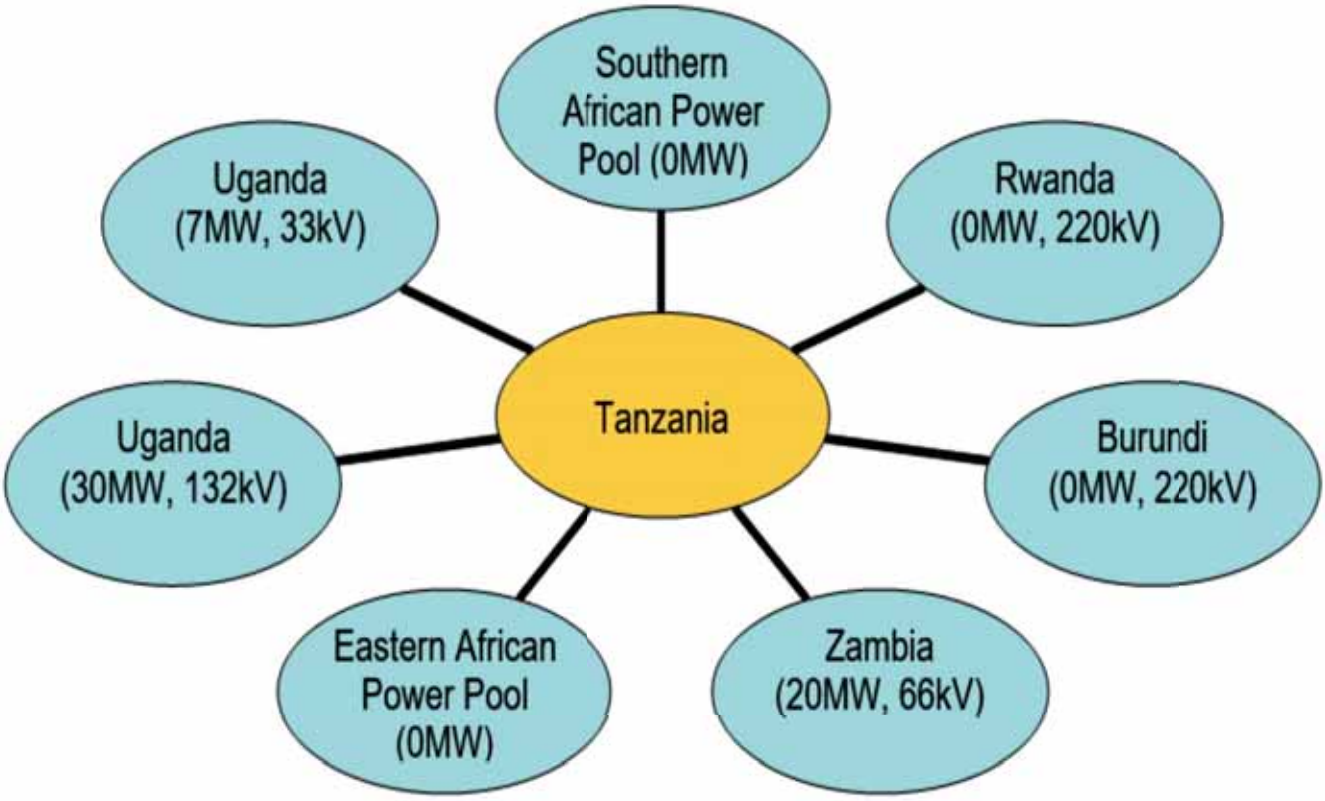


Figure 13: Interconnection and Cross-Border Electricity Trade as of June 2024

3.1.6 Electrical Installation Licences

A total of 9,026 licenses were issued to persons carrying out electrical installations in line with sections 5 and 8(h) of the Electricity Act by June 2024. It includes 1,509 licences issued in FY2023/2024 as presented in **Annex 3.**

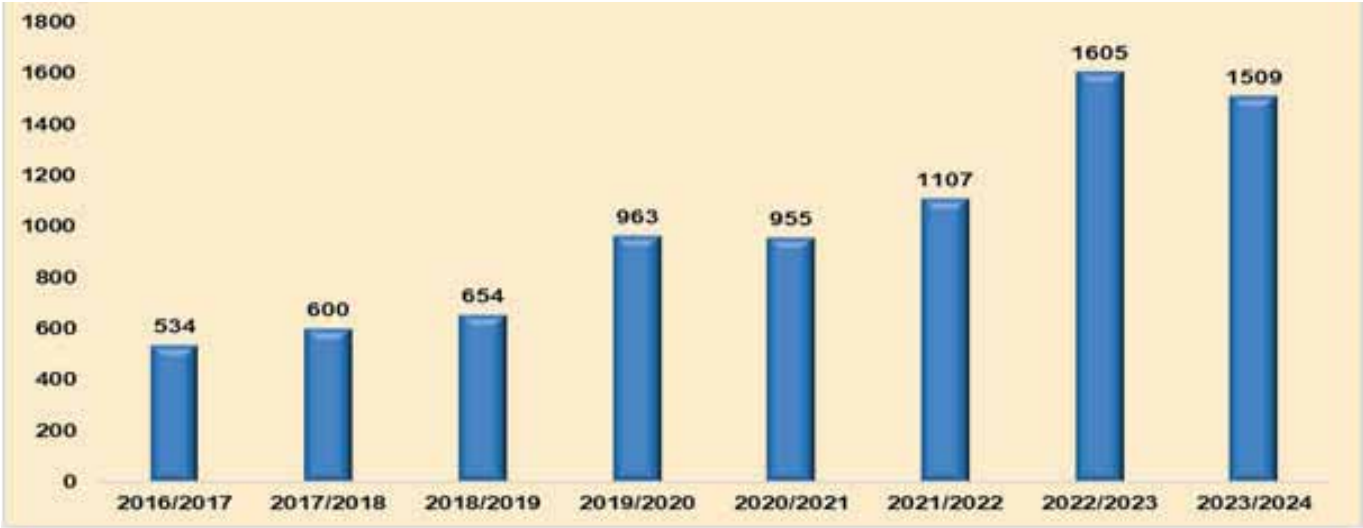


Figure 14: Trend of Electrical Installation Personal Licences from 2016/17 - 2023/2024

3.2 Registrations

During the period under review, 13 entities had registered to generate electricity below one (1) megawatt in line with Section 18 of the Electricity Act, Cap. 131 with their respective capacity and number of sites is depicted in **Figure 15**. Details are shown in **Annex 3.**

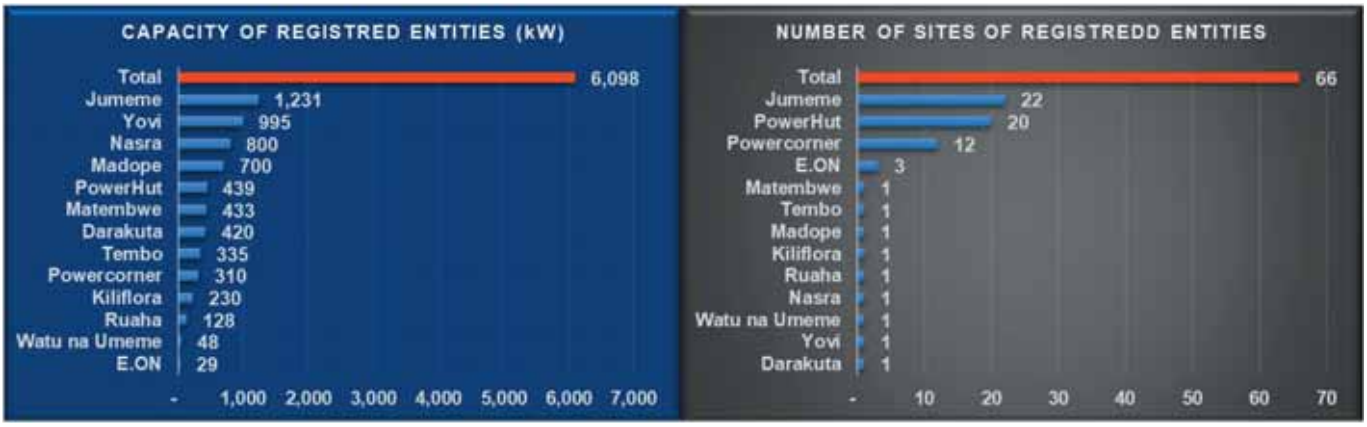


Figure 15: Registered Entities Generating Electricity below 1MW as Of June 2024

Figure 16: Registered Entities from 2016/17-2023/2024

4. THE INITIATION OF PROCUREMENT OF ELECTRICITY SUPPLY INSTALLATIONS

In the procurement of power supply installations, four (4) projects with a potential of 736MW were approved for construction of power plants in line with Section 5 (d) of the Electricity Act cap.131 during the period under review. The details are provided in **Figure 17**.

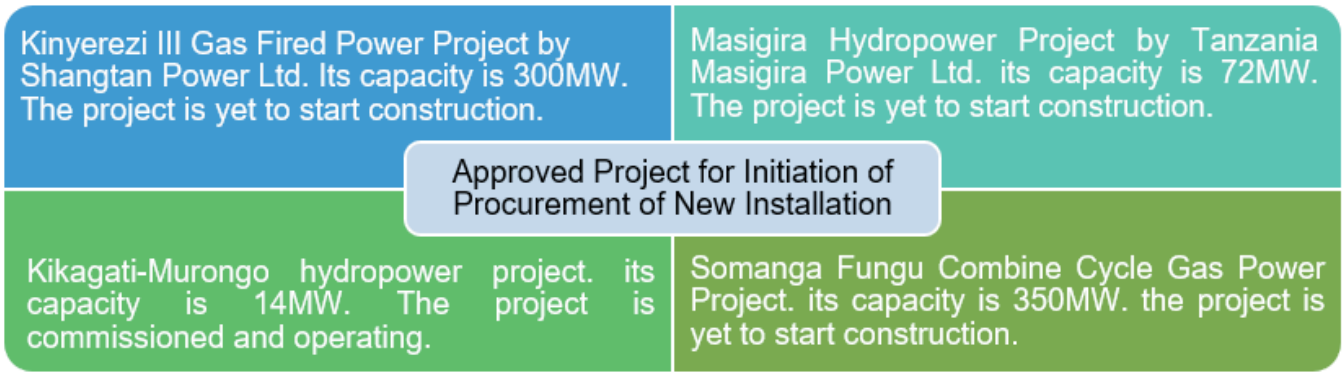


Figure 17: Approved Project for Initiation of Procurement of New Installation of The Electricity Supply as of June 2024

5. POWER PURCHASE AGREEMENTS

Between July 2023 and June 2024, EWURA approved 59 Power Purchase Agreements (PPAs) in line with Section 25(3) of the Electricity Act. The PPAs were signed between TANESCO and private entities within and outside the country as in **Figure 18**. The PPAs account for 629.125MW. Details are in **Annex 5**.

Figure 18: Approved Power Purchase Agreements (PPAs) of June 2024

5.1 Status of Power Purchase Agreements

A total of 20 PPAs with 449MW were under implementation as of June 2024, out of the 59 approved PPAs with a capacity of 629.125MW, as indicated in **Figure 19**. Six (6) of these PPAs (19.13MW) were under construction, and 33 (160MW) were soliciting funds to start construction.

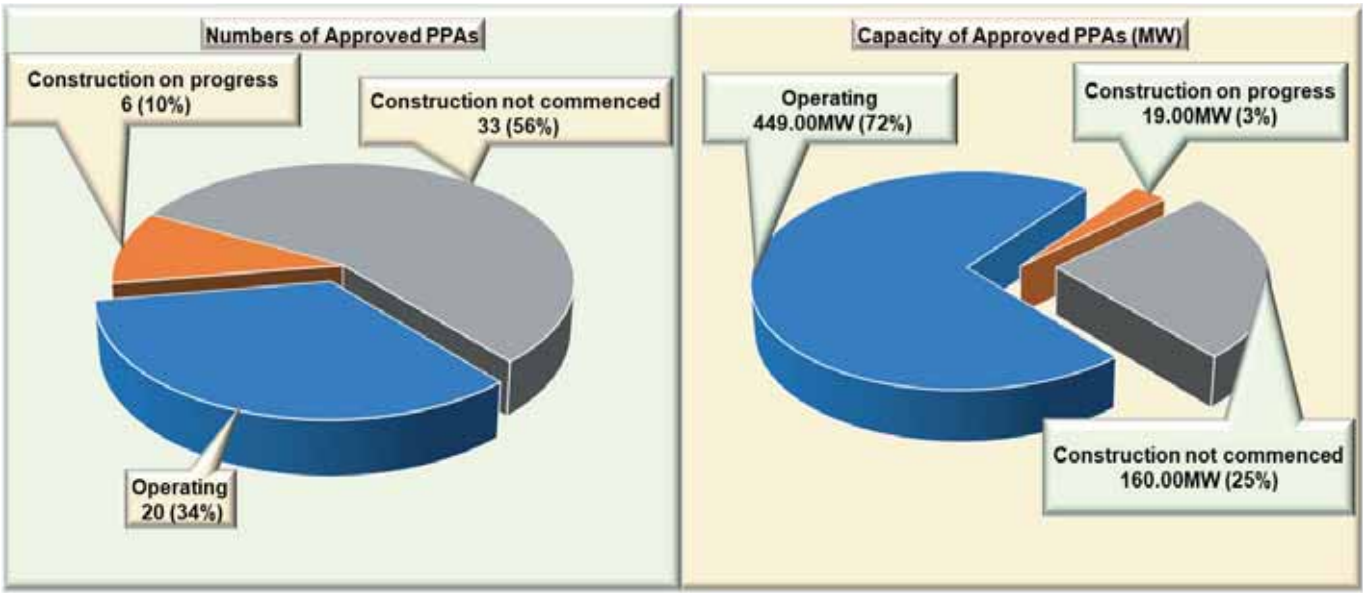


Figure 19: Status of Power Purchase Agreements as of June 2024

5.2 Trend of Power Purchase Agreements

The total approved PPAs from 2014/2015 to 2023/2024 are in **Figure 20**. The highest number and capacity of approved PPAs were in FY 2023/2024 whereby 27 PPAs with a capacity of 332MW were approved.

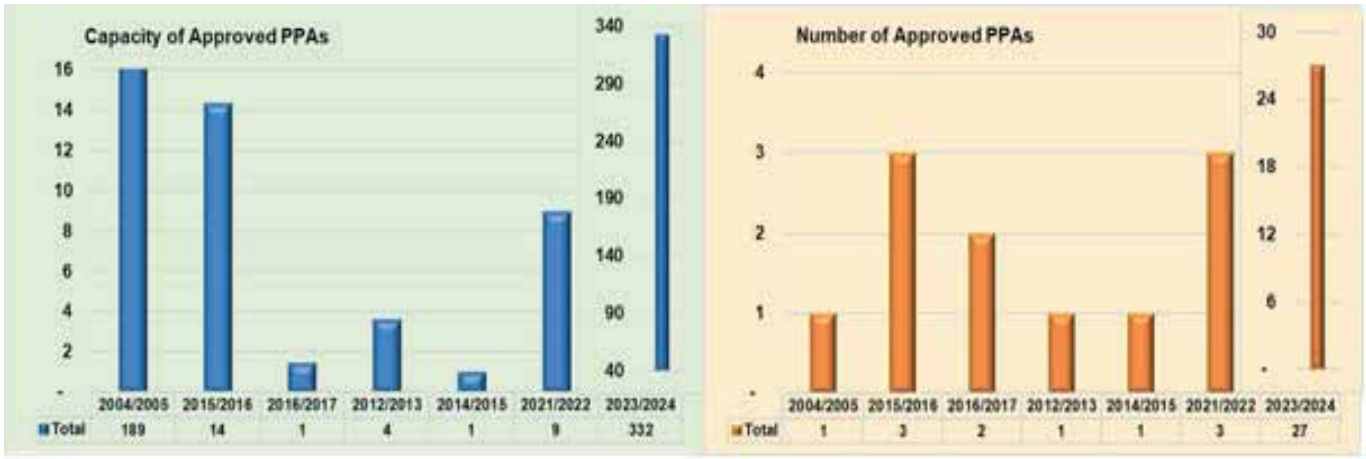


Figure 20: Power Purchase Agreements from FY 2004/2005 – 2023/2024

5.3 Power Purchase Agreement with Operating Power Plants

There were also 20 PPAs with operating power plants as of June 2024 which are indicated in **Figure 21**. Using natural gas, hydro, biomass, and solar technologies, the PPAs account for 449MW of installed capacity, comprising bulk supply to Zanzibar islands and imports from neighbouring countries of Uganda and Zambia.

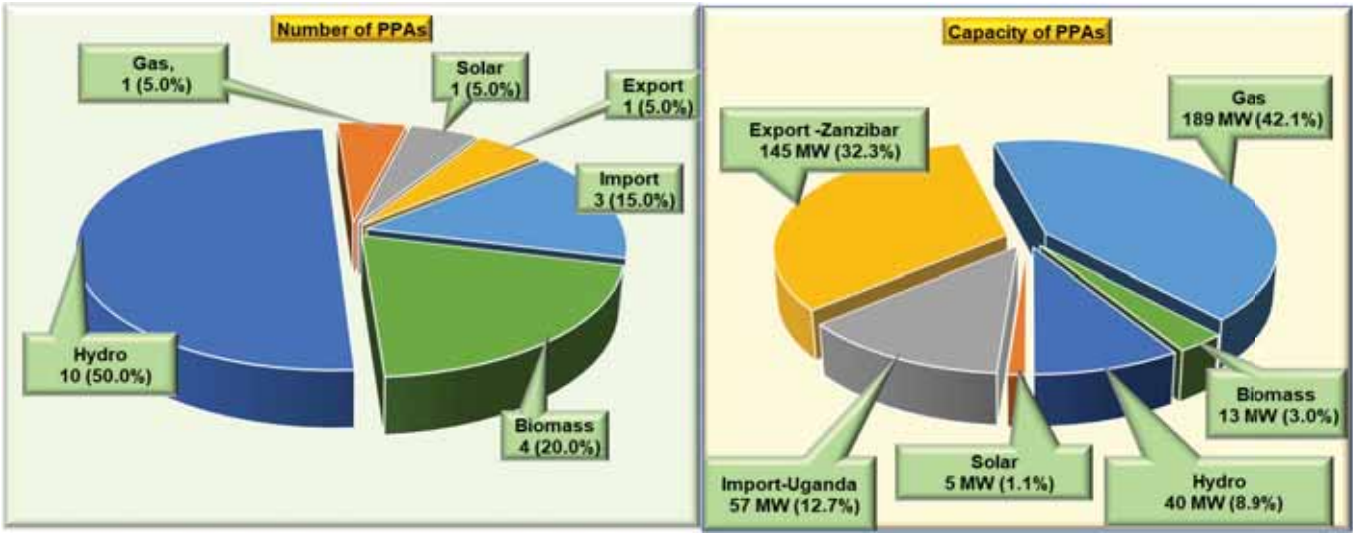


Figure 21: Power Purchase Agreement with Operating Power as of June 2024

5.4 Power Purchase Agreement with Power Plants Under Construction

The 19 PPAs whose power plants were under construction as of June 2024 are shown in **Figure 22**. They account for 19MW of installed capacity, and comprise hydro and solar technologies.

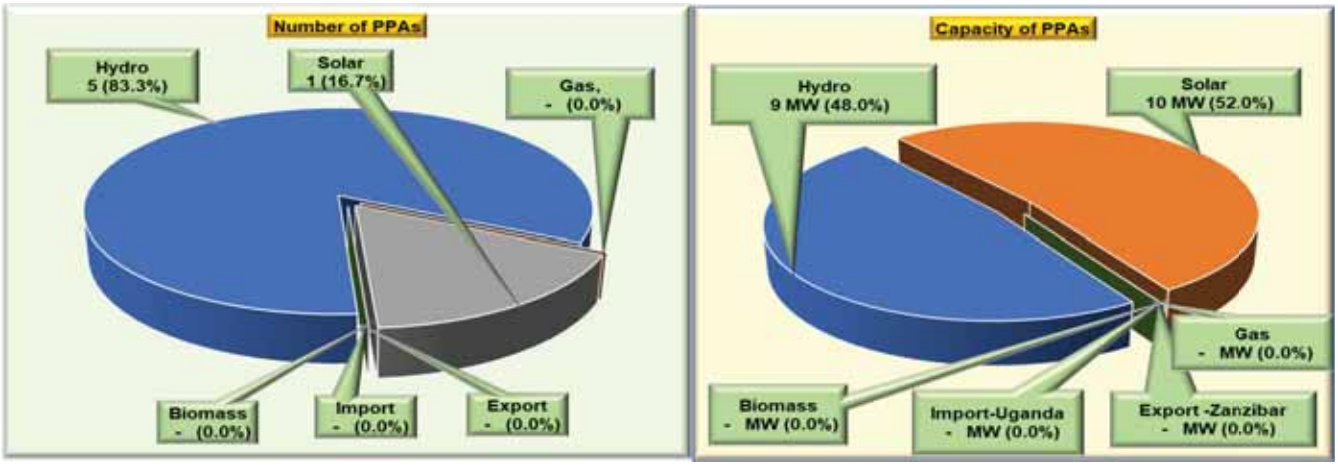


Figure 22: Power Purchase Agreements with Power Plant Under Construction as of June 2024

5.5 Power Purchase Agreement Yet to Start Construction of Power Plants

During the year of review, there were 33 PPAs whose power plant construction had not started yet. As indicated in **Figure 23**. The hydro and solar plants account for 157MW of installed capacity.

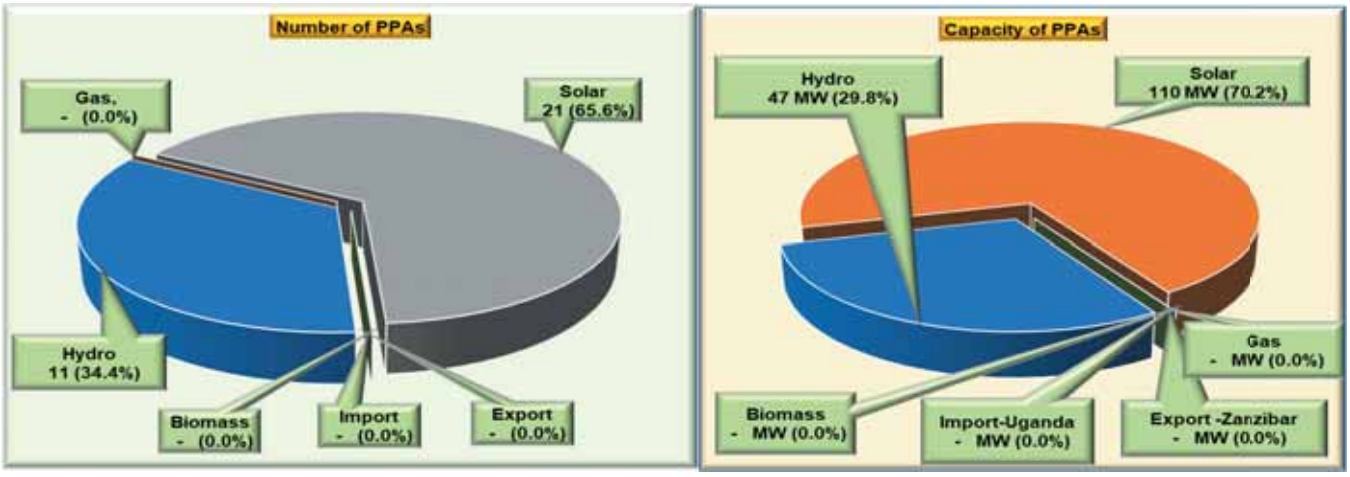


Figure 23: Power Purchase Agreements Yet to Start Construction of Power Plants as of June 2024

6. TARIFF

During the financial year under review, two (2) categories of tariff were approved as shown in **Figure 24** in line with section 5 (b) of the Electricity Act, Cap. 131.

Figure 24: Tariff Categories as Of June 2024

6.1 Tariff For Utilities Selling Electricity to End User Customers

Tariff orders form an important part of the regulatory aspect. As of June 2024, seven (7) tariff orders were approved for utilities selling electricity to their respective end-user customers as indicated in **Figure 25**.

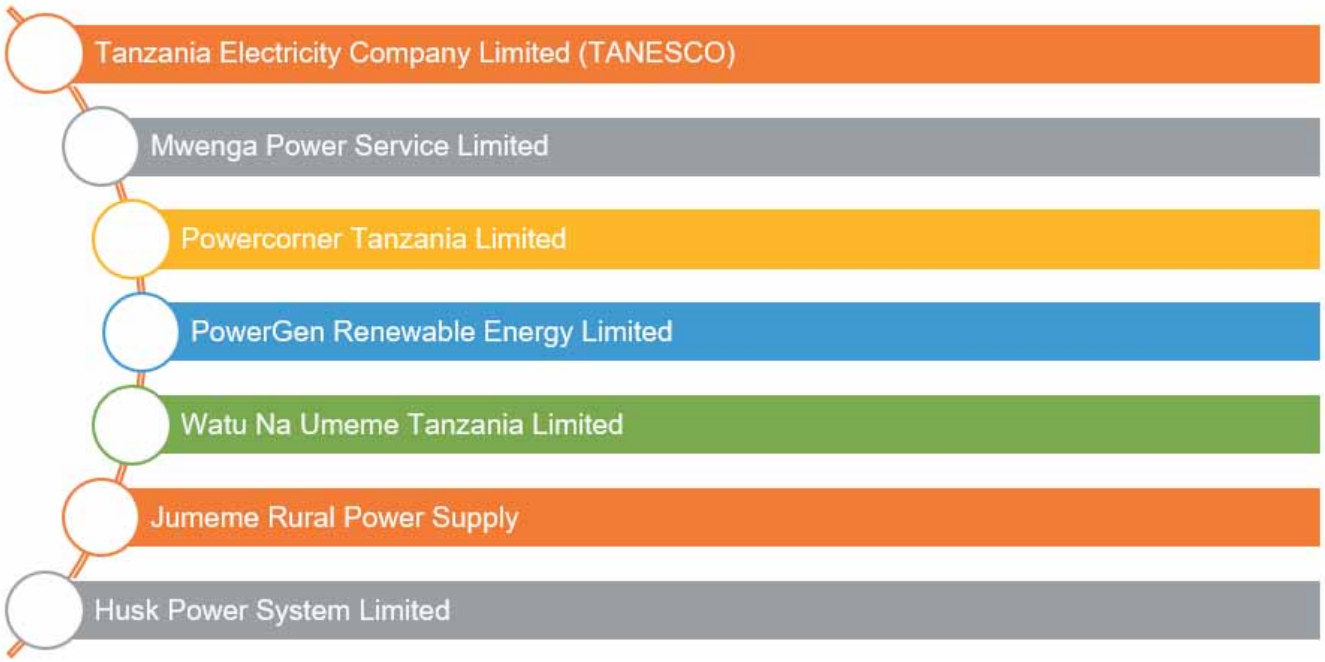


Figure 25: Utilities with Tariffs to Sell Electricity to End-User Customers

6.1.1 Tanzania Electricity Supply Company Limited

The tariff is per the TANESCO Tariff Adjustment Order, 2016 (GN. 2016-010) and the TANESCO Tariff Adjustment Order Amendment,2020 (GN. 1020). It consists of charges depicted in **Figure 26**. Details are in **Annex 8.**

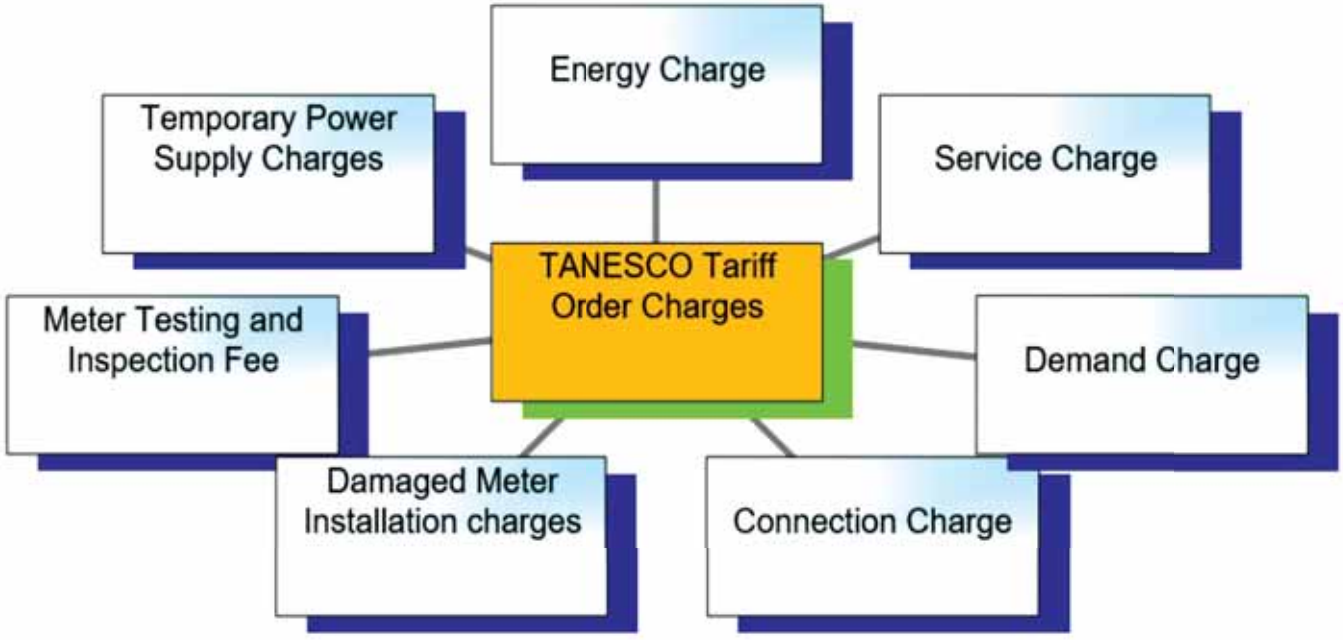


Figure 26: Tariff charges for TANESCO as of June 2024

6.1.2 Mwenga Power Services Limited Tariff Charges

The tariff is per the Mwenga Power Services Limited (MPL) Multi-Year Tariff Adjustment Order, 2022. It consists of charges depicted in **Figure 27**. Details are in **Annex 8.**

Figure 27: Tariff charges for Mwenga Power Services Limited as of June 2024

6.1.3 Powercorner Tanzania Limited

The tariff is as per the Electricity (Powercorner Tanzania Limited ("Powercorner")) (Tariff) Order, 2022. It consists of charges depicted in **Figure 28**. Details are in **Annex 6.**

Figure 28: Tariff Charges for Power Corner Tanzania Limited as of June 2024

6.1.4 PowerGen Renewable Energy Limited

The tariff is as per the Electricity (Powercorner Tanzania Limited ("Powercorner")) (Tariff) Order, 2022. It consists of charges depicted in **Figure 29**. Details are in **Annex 6.**

Figure 29: Tariff Charges for Powergen Renewable Energy Limited as of June 2024

6.1.5 Watu Na Umeme Tanzania Limited

The tariff is as per the Watu Na Umeme Tanzania Limited ("Watu Na Umeme") Tariff Adjustment for Electricity Service) Order, 2022. It consists of charges depicted in **Figure 30**. Details are in **Annex 6.**

Figure 30: Tariff Charges for Watu Na Umeme Tanzania Limited as of June 2024

6.1.6 Jumeme Rural Power Supply

The tariff is as per The Electricity Jumeme Rural Power Supply ("Jumeme") (Tariff) Order, 2022. It consists of charges depicted in **Figure 31**. Details are in **Annex 6.**

Figure 31: Tariff Charges for Jumeme Rural Power Supply as of June 2024

6.1.7 Husk Power System Limited

The tariff is as per Electricity (Husk Power System Limited) (Husk Power) (Tariff Adjustment for Electricity Service) Order, 2022. It consists of charges depicted in **Figure 32**. Details are in **Annex 6.**

Figure 32: Tariff Charges for Husk Power System Limited as Of June 2024

6.1.8 Standardized Small Power Projects Tariff

The tariff is as per The Electricity (Standardized Small Power Projects Tariff) Order, 2019. It applies to small power producers (SPP) as an indicative tariff to generate (100kW—10MW) electricity and sell it to the grid. It consists of tariff categories depicted in **Figure 33**. Its details and respective entities are in **Annex 7.**

Figure 33: Tariff category for Standardized Small power Projects tariff as of June 2024

7. COMPLAINTS AND DISPUTE RESOLUTION

During the Financial Year 2023/24, 146 complaints and disputes between TANESCO and its customers were resolved in compliance with Sections 7(1)(e), 34-38 of the EWURA Act, Cap 414, and 28(3) of the Electricity Act Cap.131, as depicted in **Figure 34**. The nature of complaints is in **Figure 35**, where billing complaints were the highest at 27%.

Figure 34: Complaint and Dispute Resolution as of June 2024

Figure 35: Nature of Complaint During FY2023/2024

8. ELECTRICITY GENERATION

Electricity generation performance is analyzed based on entities licensed to undertake regulated electricity generation activities. It covers areas described in **Figure 36**.

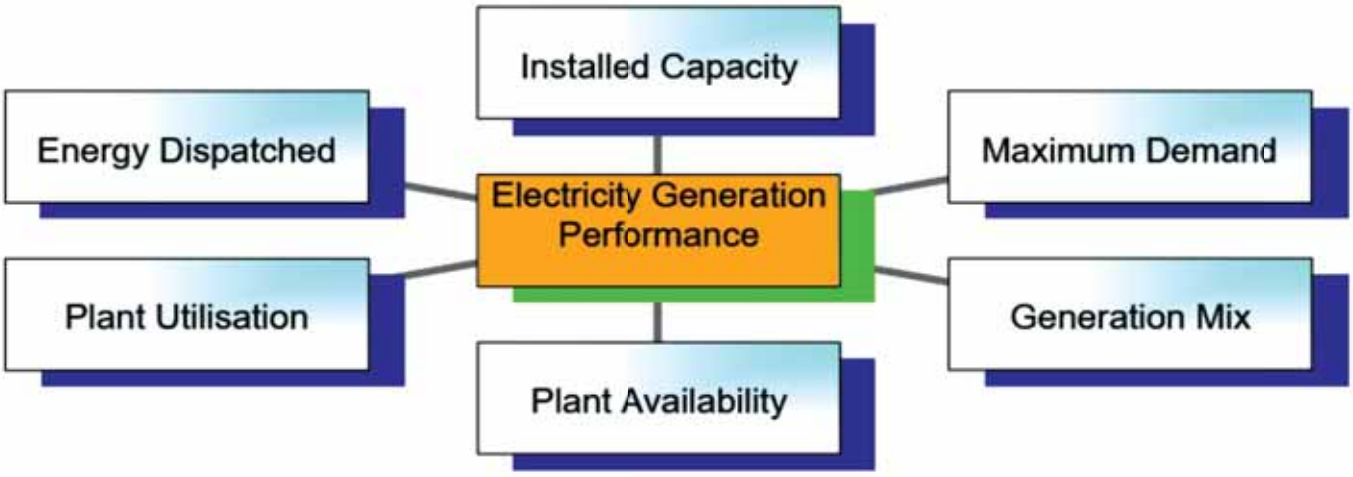


Figure 36: Description of Electricity Generation Performance

8.1 Installed Capacity

As of June 2024, the installed capacity for entities carrying out electricity generation activities for sale was 2,411.33MW as in **Table 1** and details in **Annex 10**. There was an increase of 499.87 MW (26.15%) from 1,911.46MW in 2022/23 as in **Figure 37**.

Table 1: **Summary of Installed Capacity as of June 2024**

Description	Entity	Capacity (MW)	Percentage (%)	Share of Main-Grid and Off-Grid
Grid	TANESCO	2,160.70	91.06%	98.41%
	IPP (SONGAS)	189	7.96%	
	SPP owned by private entities	23.26	0.98%	
	Total	**2,372.96**	**100.00%**	
Off Grid	TANESCO	28.942	75.42%	1.59%
	SPP owned by private entities	7.4	19.28%	
	VSPP owned by private entities	2.03	5.29%	
	Total	**38.372**	**100.00%**	
Total	TANESCO	2,189.64	90.81%	100.00%
	IPP (SONGAS)	189	7.84%	
	SPP (all private entities)	30.66	1.27%	
	VSPP (all private entities)	2.03	0.08%	
	Total	**2,411.33**	**100.00%**	

Source: *TANESCO*

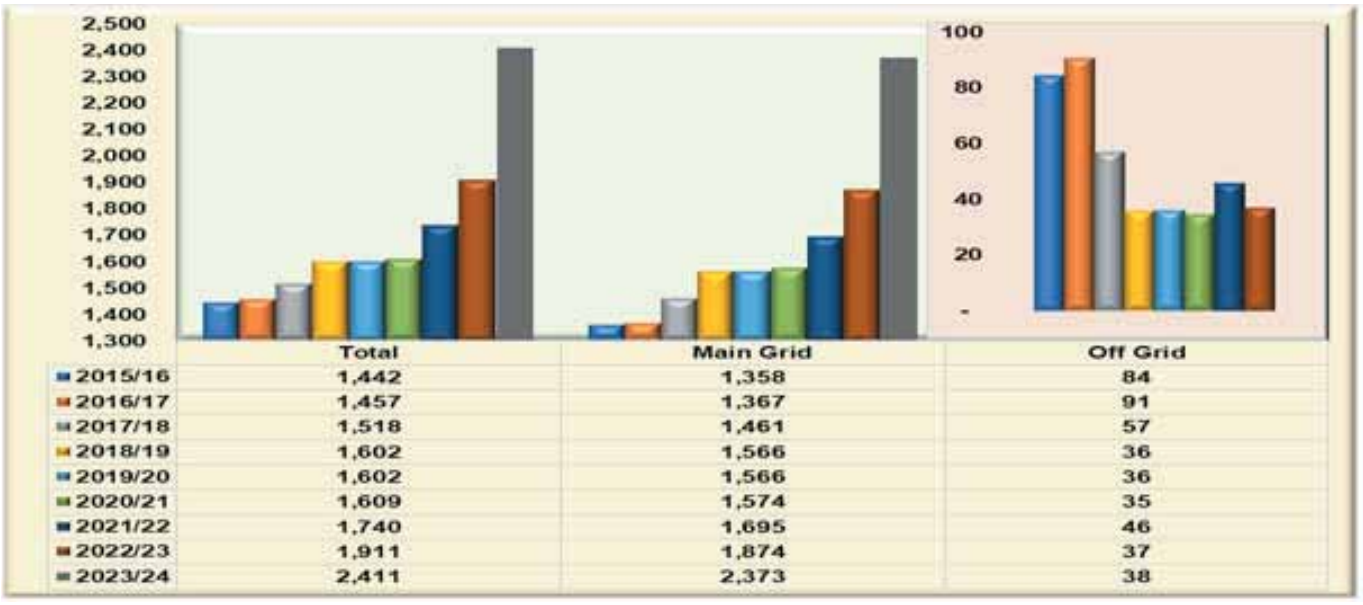


Figure 37: Trend in Installed Capacity from FY 2015/16 to 2023/24

8.2 Electricity Maximum Demand

Analysis shows that in the period under review, the maximum demand for electricity reached 1,645.23MW as in **Figure 38** and details in **Table 2**. It raised to 174.73MW (11.88%) from 1,470.50MW in FY 2022/2023. The growth is attributed to increased electricity accessibility and connectivity from 67.5% and 32.8% in June 2017 to 78.4% and 37.7% as of July 2020, respectively. It is also due to an increase in the security of electricity supply driven by growth in social-economic activities as depicted by the installed capacity increase in **Figure 37.**

Figure 38: Maximum Demand (MD) from FY 2017/18 to 2023/24

Table 2: Maximum Demand (MD) from FY 2017/18 to 2023/24

Year	Maximum Demand (MW)	Date	±MW	±%
2017/18	1,045.70	27th June 2018	-	-
2018/19	1,116.58	30th Nov.2018	70.88	6.78
2019/20	1,151.66	27th February 2020	35.08	3.14
2020/21	1,201.02	2nd June 2021	49.36	4.29
2021/22	1,340.68	26th May 2022	139.66	11.6
2022/23	1,470.50	12th June 2023	129.82	9.68
2023/24	1,645.23	14th June 2024	174.73	11.9

***Source**: TANESCO*

8.3 Energy Generation Mix Main Grid

The energy generation mix comprised natural gas (67.10%), hydropower (32.42%), liquid fuel (0.47%), and biomass (0.01%) in FY 2023/24 as depicted in **Figure 39**. There was an increase in hydropower generation by 5.50% due to the commissioning of the Julius Nyerere hydropower project (470MW). Furthermore, there was a decrease in electricity generation from natural gas by 5.72%.

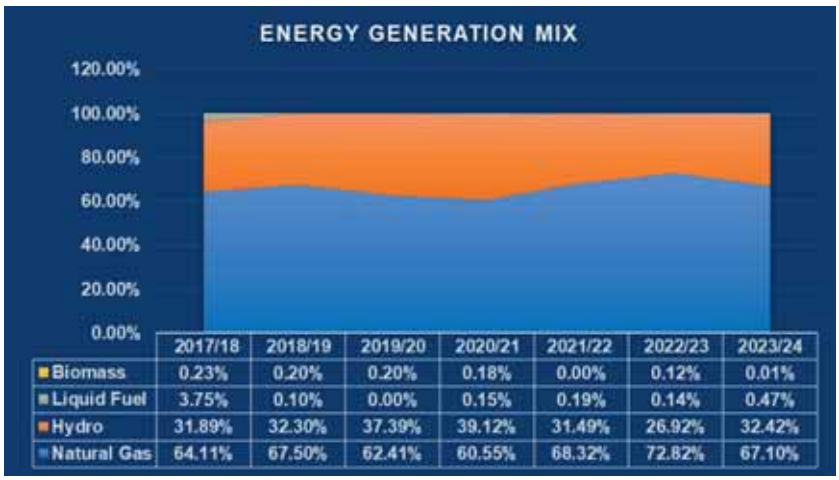


Figure 39: Energy Generation Mix (%) from FY 2017/18 – 2023/24

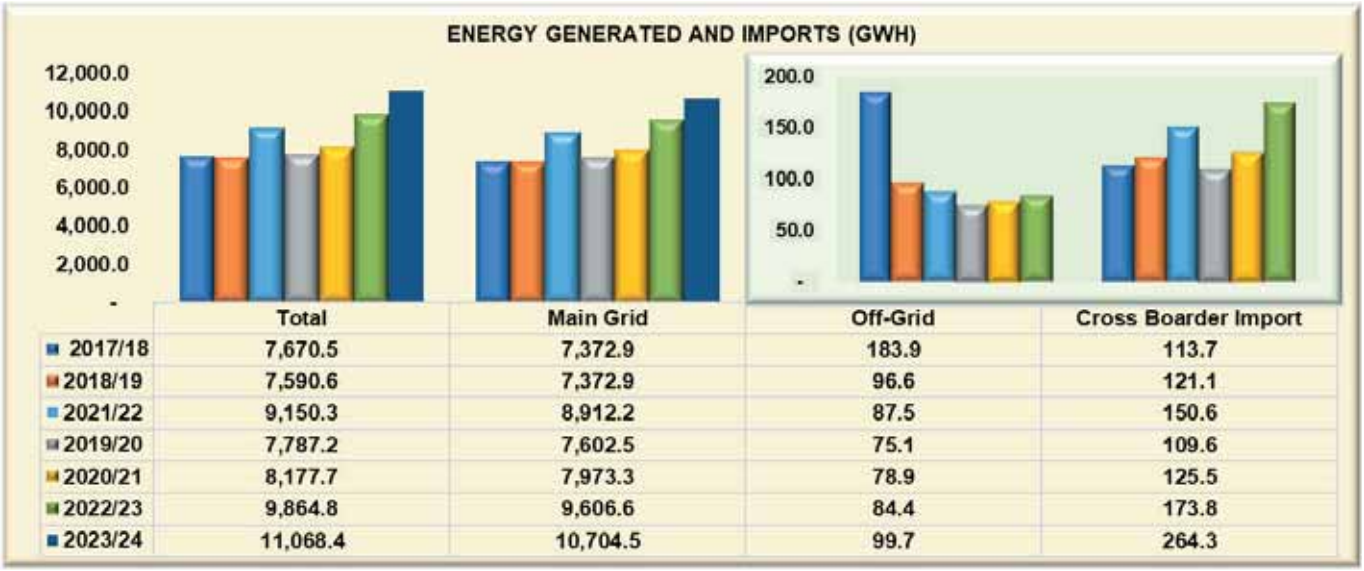
8.4 Energy Generation and Imports

In FY 2023/2024, the energy generated and imported by entities carrying out electricity activities for sale was 11,068.40 GWh with imports from neighboring countries accounting for 264.29GWh (2.39%) as shown in **Table 3**. It increased by 1,203.63GWh (12.20%) from 9,864.77GWh in 2022/23 as depicted in **Figure 40**.

Table 3: Electricity Generation and Imports for 2023/24

Description	Utility	Energy (GWh)	Contribution (%)
Main Grid	TANESCO	9,063.58	84.67%
	IPP (Songas)	1,520.03	14.20%
	SPP owned by private entities	120.85	1.13%
	Total Main Grid	**10,704.46**	**100.00%**
Off-Grid	TANESCO	81.8	82.09%
	SPP owned by private entities	13.76	13.81%
	VSPP owned by private entities	4.09	4.10%
	Total Off-Grid	**99.65**	**100.00%**
Imports	Kigagati (Uganda)	37.54	14.20%
	kyaka (Uganda)	116.27	43.99%
	Mbala (Zambia)	59.55	22.53%
	Rusumo Power Company Limited (Rwanda)	50.93	19.27%
	Total Imports	**264.29**	**100.00%**
Summary	TANESCO	9,145.38	82.63%
	IPP (SONGAS)	1,520.03	13.73%
	SPP (all private entities)	134.61	1.22%
	VSPP (all private entities)	4.09	0.04%
	Imports	264.29	2.39%
	Total Energy	**11,068.40**	**100.00%**

Source: *TANESCO and EWURA*

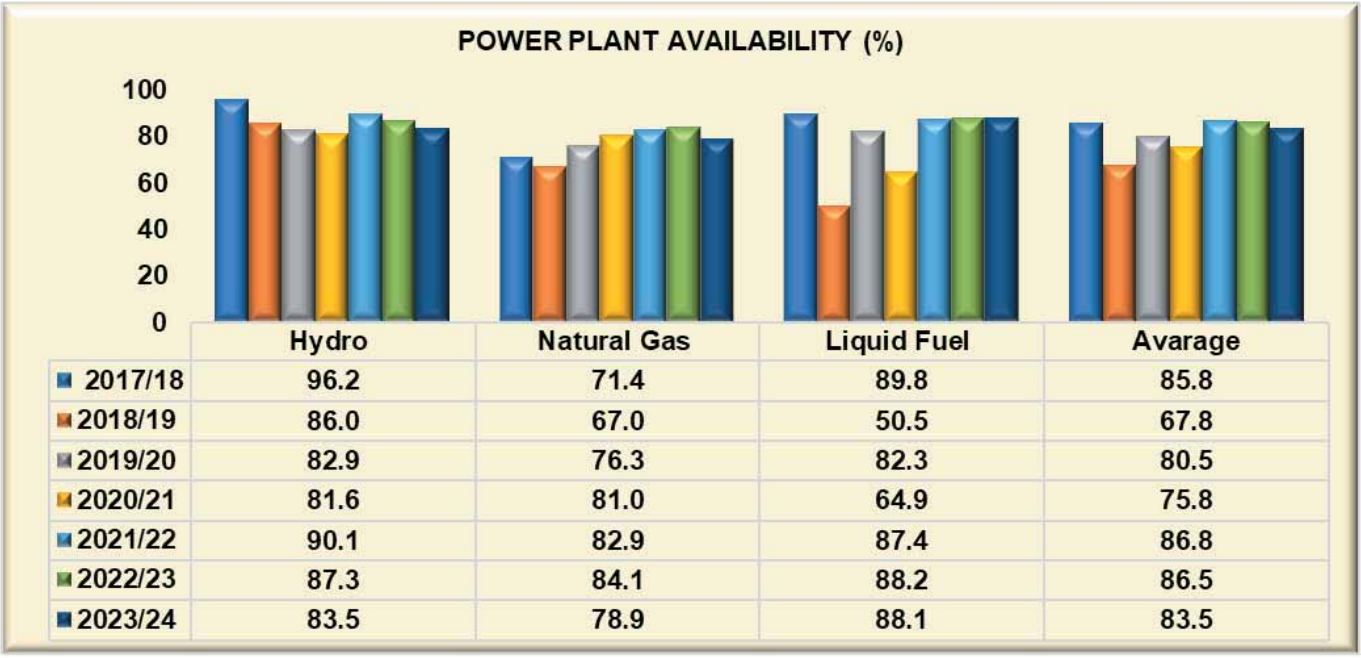


	Total	Main Grid	Off-Grid	Cross Boarder Import
2017/18	7,670.5	7,372.9	183.9	113.7
2018/19	7,590.6	7,372.9	96.6	121.1
2021/22	9,150.3	8,912.2	87.5	150.6
2019/20	7,787.2	7,602.5	75.1	109.6
2020/21	8,177.7	7,973.3	78.9	125.5
2022/23	9,864.8	9,606.6	84.4	173.8
2023/24	11,068.4	10,704.5	99.7	264.3

Figure 40: Energy Generated and Imports (GWh)

8.5 Availability of Power Plants

Power plant availability reached 83.48% in FY 2023/24 as in **Figure 41** and details in **Annex 11**. It decreased by 3.05% from 86.53% in FY2022/23 due to maintenance of power plants.



	Hydro	Natural Gas	Liquid Fuel	Avarage
2017/18	96.2	71.4	89.8	85.8
2018/19	86.0	67.0	50.5	67.8
2019/20	82.9	76.3	82.3	80.5
2020/21	81.6	81.0	64.9	75.8
2021/22	90.1	82.9	87.4	86.8
2022/23	87.3	84.1	88.2	86.5
2023/24	83.5	78.9	88.1	83.5

Figure 41: Power Plant Availability (%)

8.6 Power Plants Utilization

The power plant utilization in the main grid was 40.1% in FY2023/24 a decrease of 4.4% from 44.5% in FY 2022/23 as in **Figure 42** and details in **Annex 11**. The decrease was attributed to deteriorating hydrology conditions.

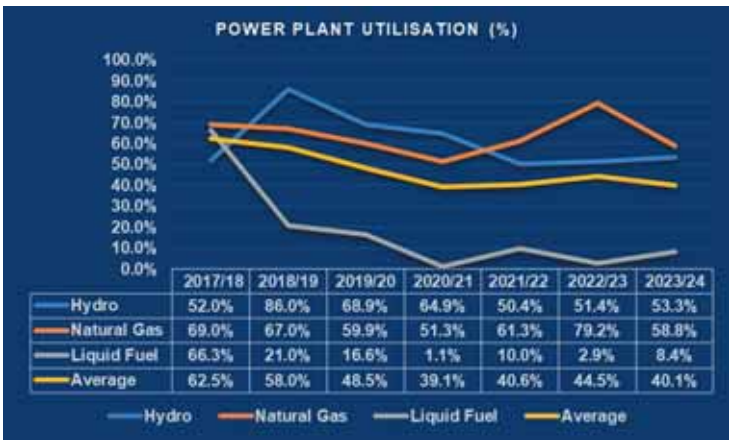


Figure 42: Power Plant Utilization (%)

8.7 Private Sector Participation in Energy Generation Segment

During FY 2023/24 private entities generating electricity for sale contributed 221.70MW, an increase of 3.16MW (1.45%) from FY 2021/22 as in **Figure 43**. Entities selling electricity to the main grid are in **Figure 44.** Likewise, those selling electricity in the off-grid are shown in **Figure 45**.

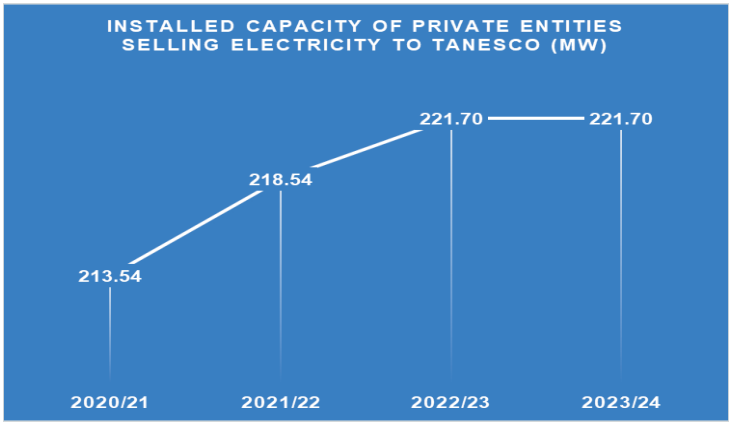


Figure 43: Installed Capacity of Private Entities Selling Electricity

Figure 44: Installed capacity of Private Entities selling electricity to the Main Grid

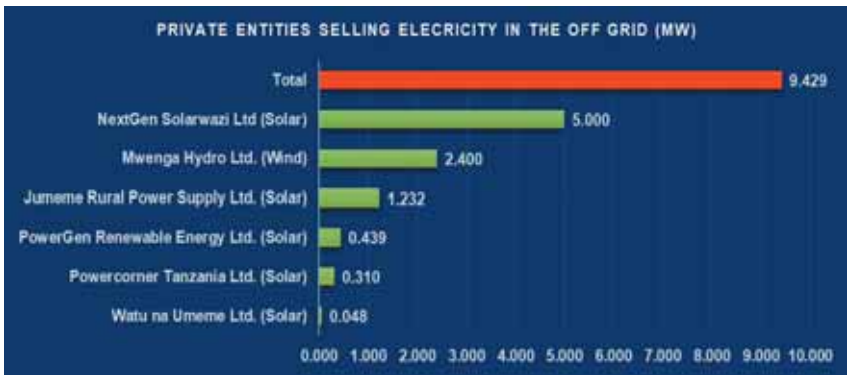


Figure 45: Installed capacity of Private Entities selling electricity to the Off Grid

9. ELECTRICITY TRANSMISSION

The performance of the electricity transmission area is analyzed based on entities licensed to undertake regulated electricity transmission activities. It covers areas described in **Figure 46**. TANESCO was the only entity with a licence for electricity transmission activities.

Figure 46: Description of Electricity Transmission Performance

9.1 Electricity Transmission Infrastructure

The transmission line increased to 7,524km in FY2023/2024, an upsurge of 674km (9.84%) from 6.850km in FY2023/24 as in **Figure 47** and details in **Annex 12**. The total number of grid substations reached 67 in 2023/2024, an increase of four (4) (6.35%) from 63 in FY2022/2023 as in **Figure 48**. Its respective capacity reached 6,699 MVA in FY 2023/2024, an increase of 65 MVA (0.98%) from 6,634MVA in FY 2022/23.

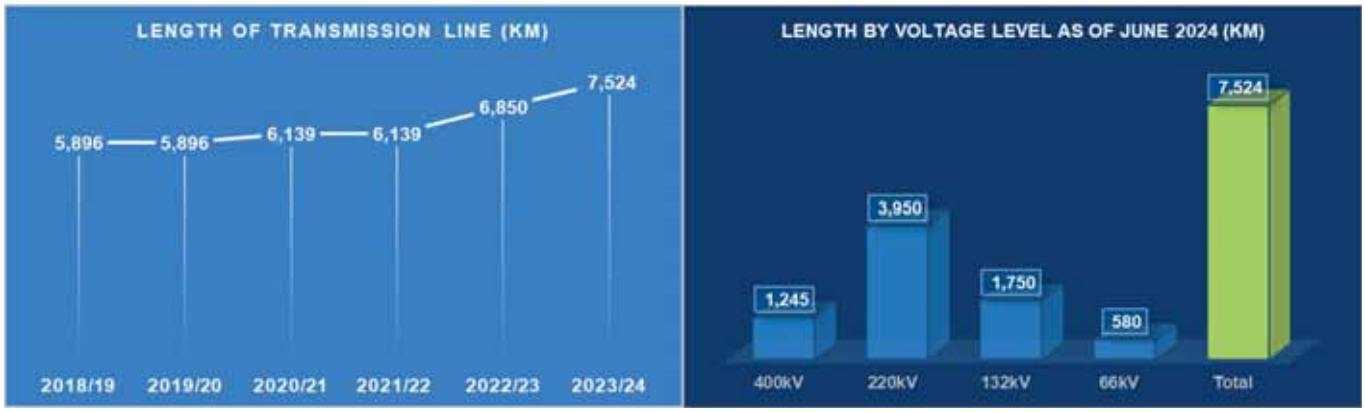


Figure 47: Length of Transmission Line

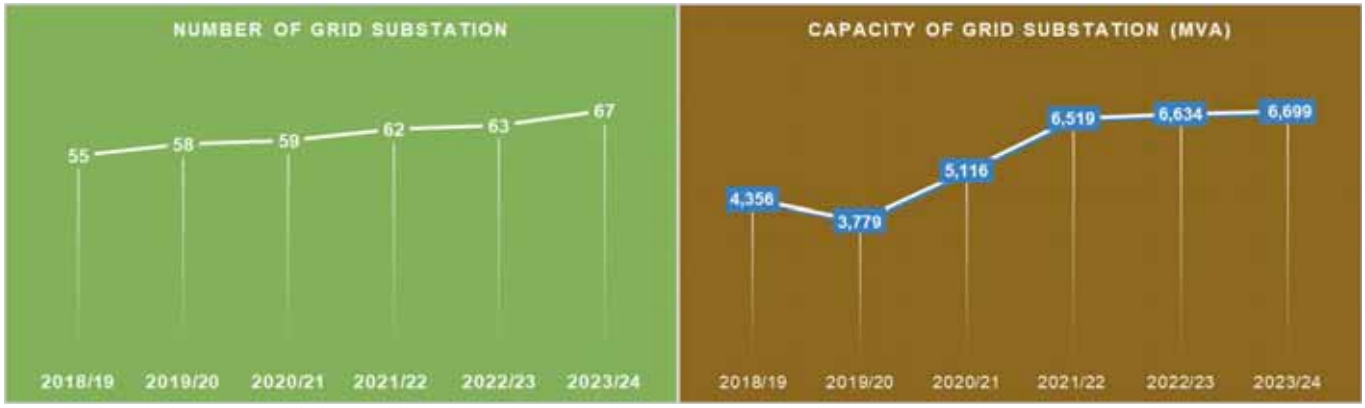


Figure 48: Number and Capacity of Grid Substation

9.2 Customers Connected to Transmission Infrastructure

As of last year, there were seven (7) customers (**Figure 49**) who were connected to the electricity transmission infrastructure. The data includes customers connected at 220kV and 132kV.

Customers Connected To The Electricity Transmission Network						
Bulyanhulu Gold Mine (220kV)	Zanzibar Electricity Corporation (132kV)	Tanganyika Portland Cement (132kV)	Tanga Cement (132kV)	Rhino Cement (132kV)	Nyamongo Gold Mine (132kV)	Buzwagi Gold Mine (132kV)

Figure 49: Customers Connected to The Transmission Infrastructure

9.3 Reliability of Electricity Transmission Infrastructure

The performance in reliability of electricity transmission infrastructure was analysed using two indices as shown in **Figure 50**. The system Average Interruption Frequency Index at Connection Point ($SAIFI_{CP}$) was 8.1 in FY2023/24, within a target of <10 in **Figure 51**. Likewise, the System Average Interruption Duration Index (SAIDI-CP) was 6.3 hours, within the target of 6.5 hours.

Figure 50: Description of Electricity Transmission Infrastructure Reliability Indices

Figure 51: Performance of Electricity Transmission Infrastructure Reliability Indices

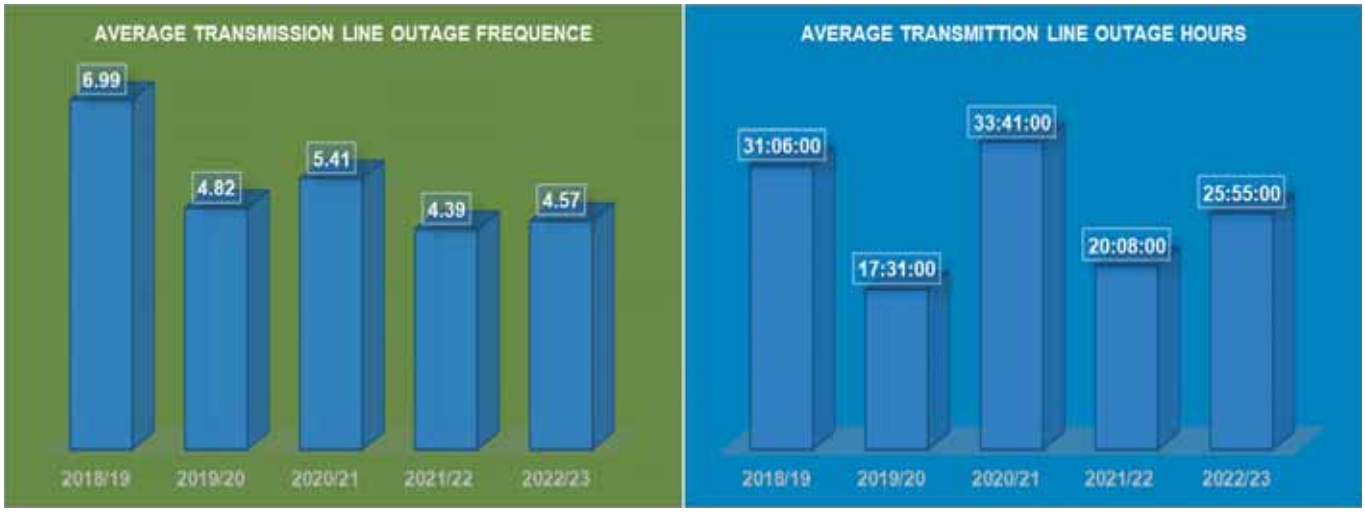


Figure 52: Average Transmission Line Outage Hours and Frequency

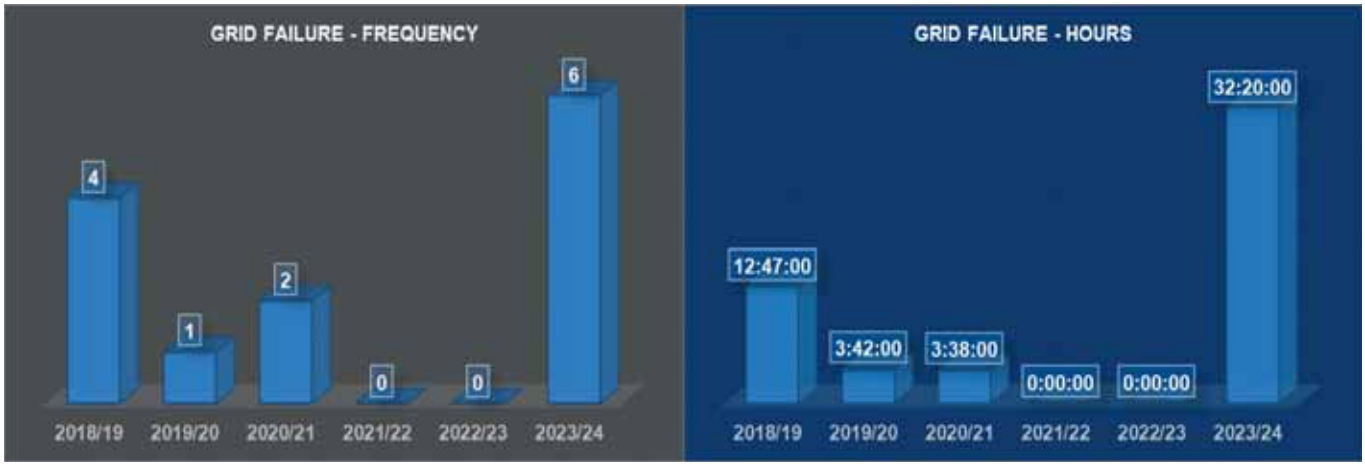


Figure 53: Total Grid Failure Frequency and Hours

9.4 Unserved Energy

The unserved energy in FY 2023/34 accounted for 818.85GWh as in **Figure 54**. It accounts for TZS 198.18 billion at an average tariff of TZS 242/kWh. It was projected to decrease significantly following the commissioning of the Julius Nyerere Hydro Power Project.

Figure 54: Unserved Energy in FY2023/24

10. ELECTRICITY DISTRIBUTION

Electricity distribution performance is analyzed based on entities licensed or registered for regulated electricity distribution activities. It covers areas described in **Figure 36**.

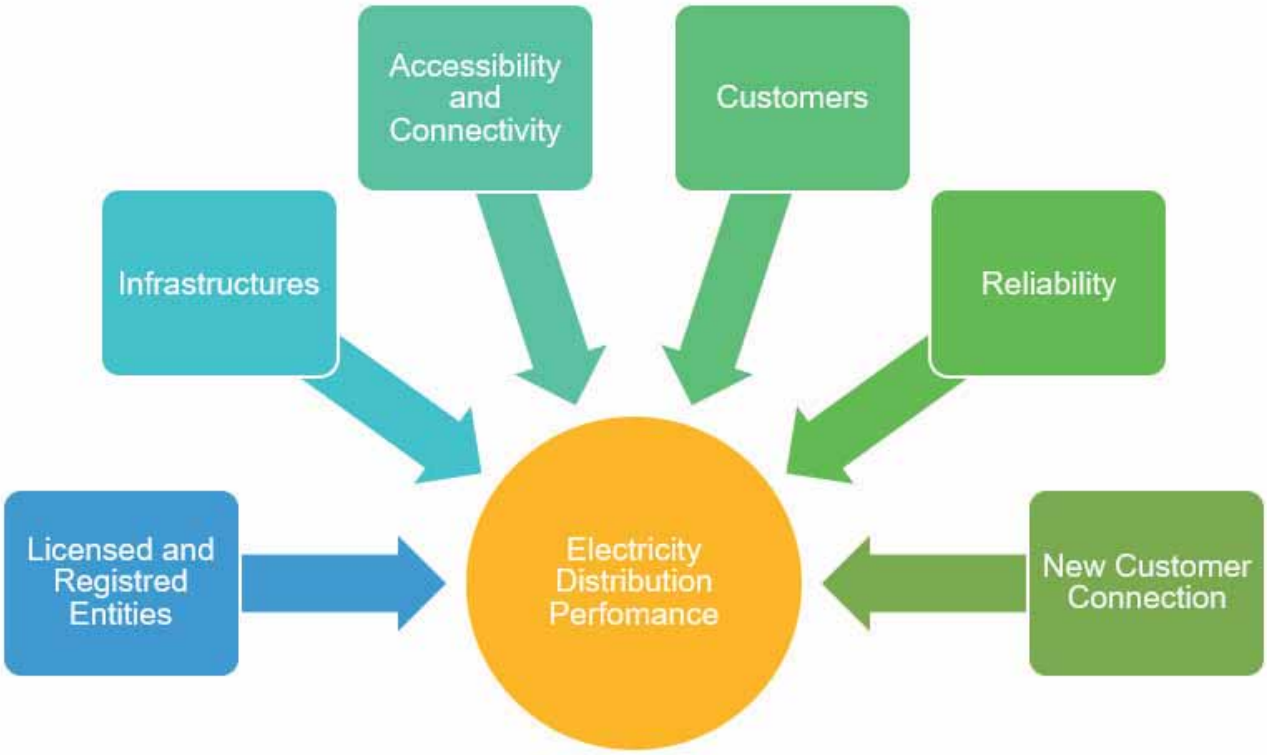


Figure 55: Description of Electricity Distribution Performance

10.1 Licensed Entities for Electricity Distribution Activities

Two (2) entities in **Figure 56** as of June 2024, had a licence for electricity distribution activities. Their capacity was above one (1) megawatt.

Figure 56: Entities Licensed for Electricity Distribution Activities

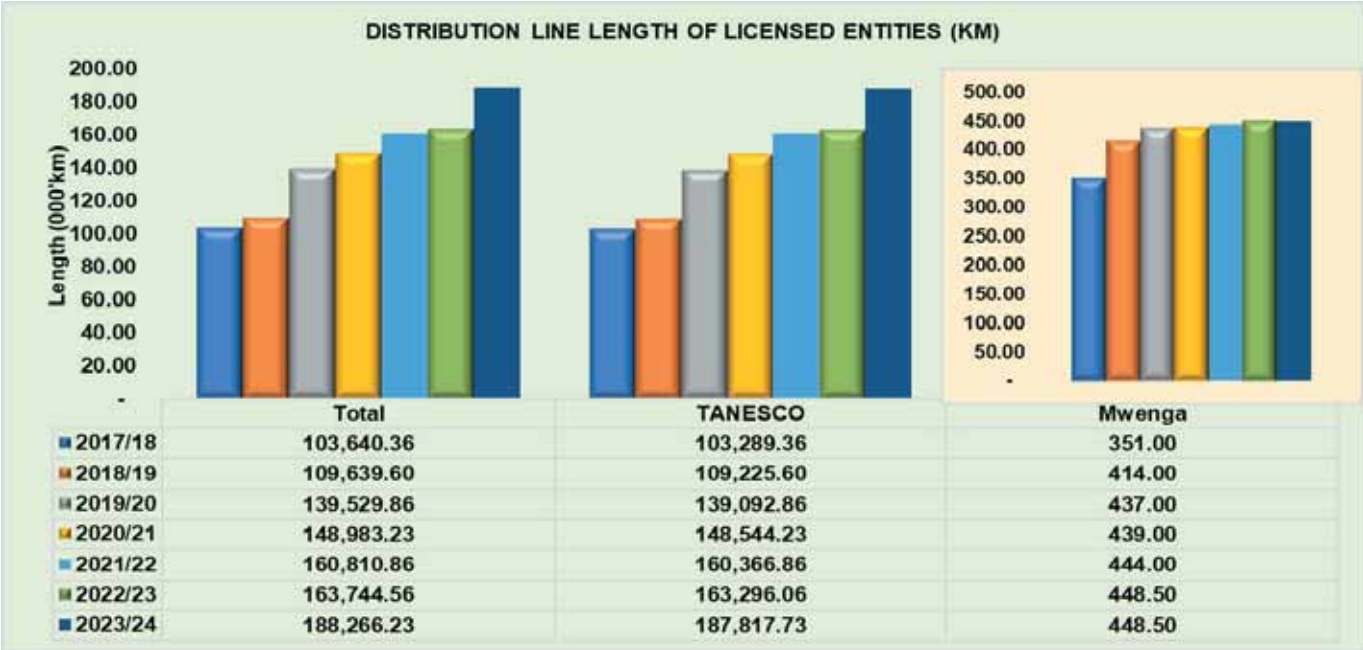
10.2 Registered Entities for Electricity Distribution Activities

Four (4) entities in **Figure 57** as of June 2024, had registered for electricity distribution activities. The entities had a capacity below one (1) megawatt.

Figure 57: Entities Registered for Electricity Distribution Activities

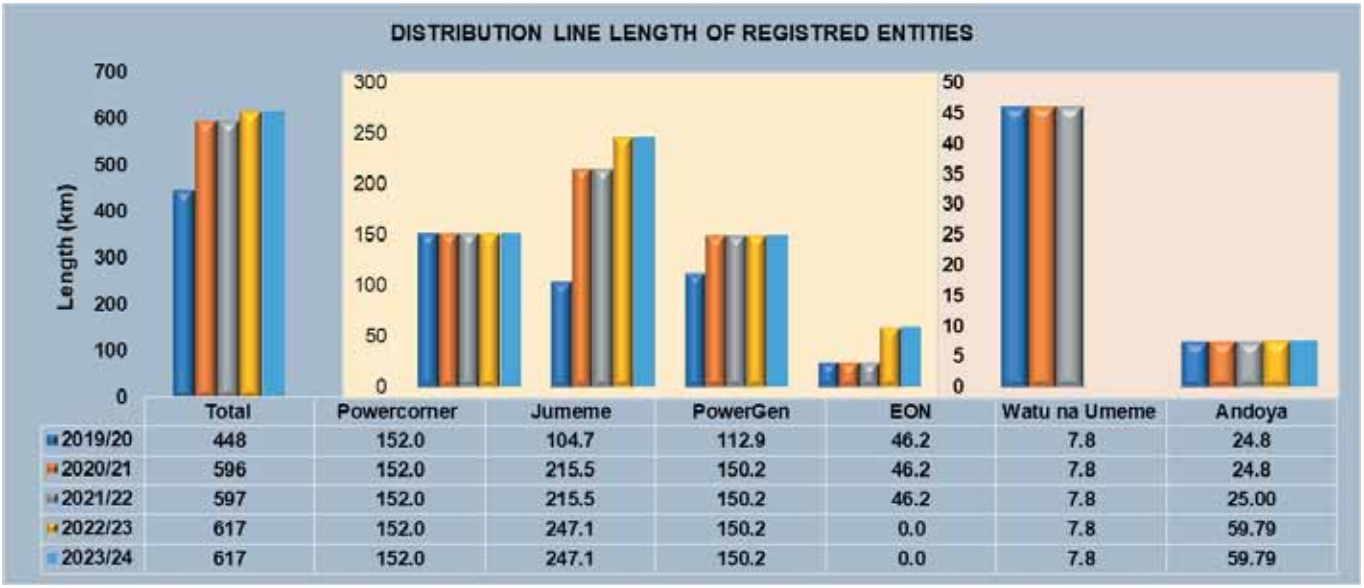
10.3 Electricity distribution line

The line length for licensed entities increased by 24,521.67 km (14.98%) from 163,744.56 km in FY2022/23 to 188,266.23 km in FY2023/24 as in **Figure 58**. Likewise, for registered entities, the line length remains at 617km as in **Figure 59**.



	Total	TANESCO	Mwenga
2017/18	103,640.36	103,289.36	351.00
2018/19	109,639.60	109,225.60	414.00
2019/20	139,529.86	139,092.86	437.00
2020/21	148,983.23	148,544.23	439.00
2021/22	160,810.86	160,366.86	444.00
2022/23	163,744.56	163,296.06	448.50
2023/24	188,266.23	187,817.73	448.50

Figure 58: Distribution Line Length of Licensed Entities



	Total	Powercorner	Jumeme	PowerGen	EON	Watu na Umeme	Andoya
2019/20	448	152.0	104.7	112.9	46.2	7.8	24.8
2020/21	596	152.0	215.5	150.2	46.2	7.8	24.8
2021/22	597	152.0	215.5	150.2	46.2	7.8	25.00
2022/23	617	152.0	247.1	150.2	0.0	7.8	59.79
2023/24	617	152.0	247.1	150.2	0.0	7.8	59.79

Figure 59: Distribution Line Length of Registered Entities

10.4 Electricity accessibility and connectivity

The overall electricity accessibility increased from 67.5% in FY 2016/17 to 78.4% in FY 2019/20 as in **Figure 60**. Likewise, connectivity increased from 32.8% in FY 2016/17 to 37.7% in FY 2019/20. Studies are going on to establish the current status.

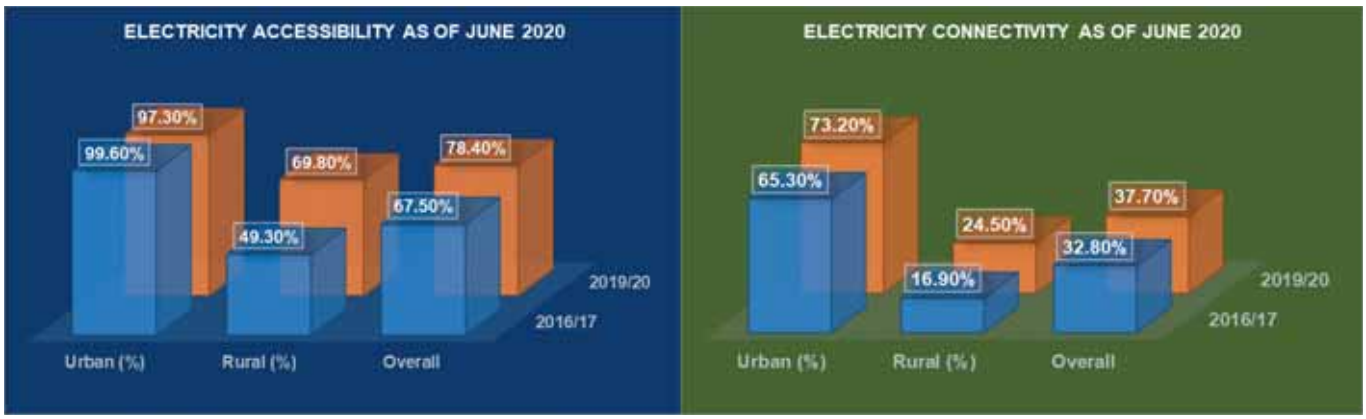


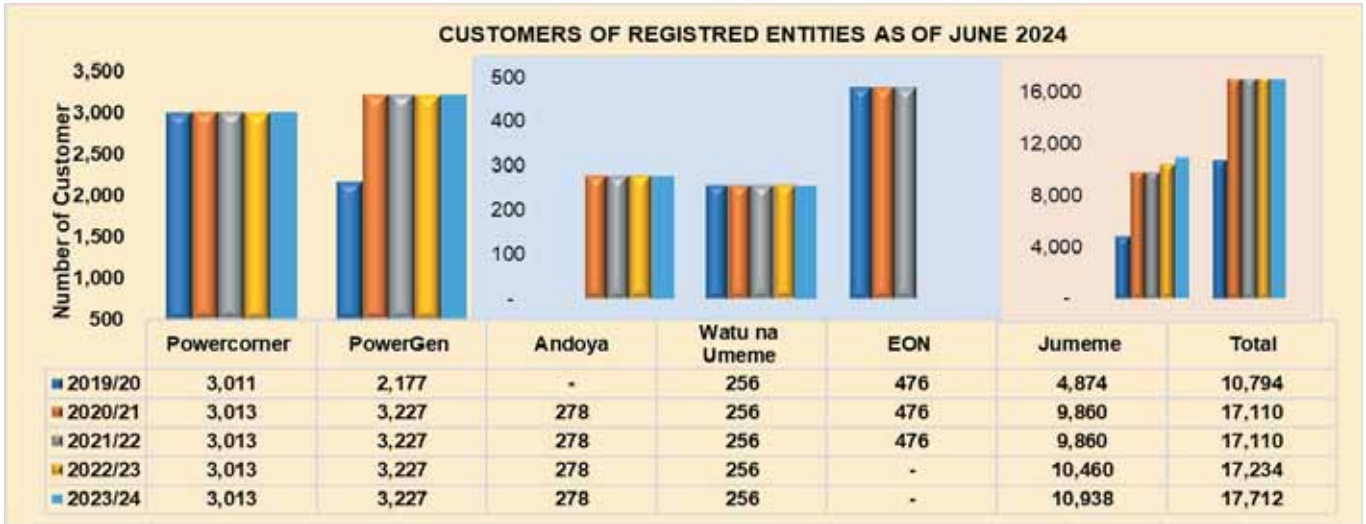
Figure 60: Electricity Accessibility and Connectivity

10.5 Customers

Customers connected to the distribution network increased by 559,595 (12.65%) from 4,422,664 in FY 2022/23 to 4,982,259 in FY 2023/24 as in **Figure 62**. Likewise, details of customers for registered entities are in **Figure 62**.

	Total	TANESCO	Mwenga	Registered entities
2017/18	24,177,260	2,223,638	2,921	0
2018/19	2,488,158	2,484,202	3,956	0
2019/20	2,880,350	2,864,560	4,591	11,199
2020/21	3,312,574	3,290,490	5,105	16,979
2021/22	3,864,696	3,842,096	5,621	16,979
2022/23	4,422,664	4,400,070	5,636	16,958
2023/24	4,982,259	4,957,278	7,269	17,712

Figure 61: Customers of Licensed and Registered Entities



	Powercorner	PowerGen	Andoya	Watu na Umeme	EON	Jumeme	Total
2019/20	3,011	2,177	-	256	476	4,874	10,794
2020/21	3,013	3,227	278	256	476	9,860	17,110
2021/22	3,013	3,227	278	256	476	9,860	17,110
2022/23	3,013	3,227	278	256	-	10,460	17,234
2023/24	3,013	3,227	278	256	-	10,938	17,712

Figure 62: Customer of Registered Entities as of June 2024

10.6 Reliability Of Electricity Supply

Three indices in **Figure 63** assessed the reliability of electricity supply in line with TZS 1374:2011 (Power quality–Quality of service and reliability) standard in the main grid and off-grid. The assessment was conducted for two licensed entities for electricity distribution activities presented in **Figure 56**.

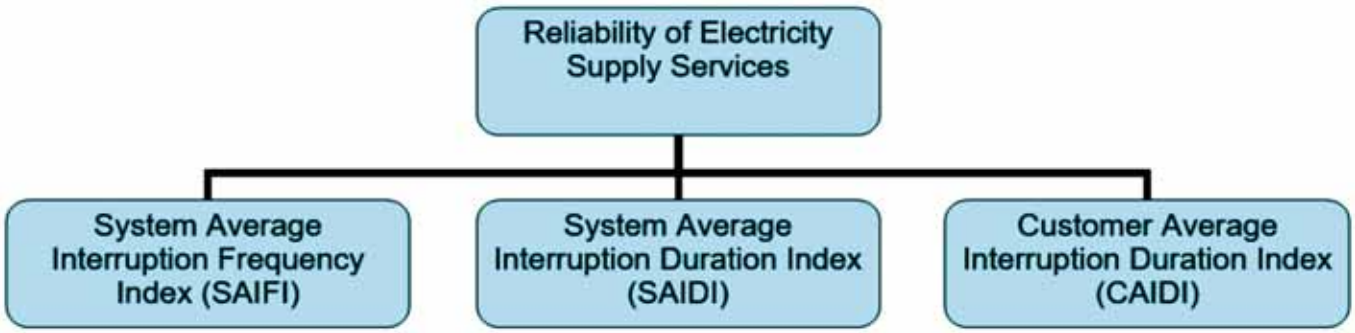


Figure 63: Indices for The Reliability of Electricity Supply

10.6.1 TANESCO

a) System Average Interruption Frequency Index (SAIFI)

SAIFI measures the average number of interruptions each customer experiences annually. Reviews indicate that it improved by 12 (47.7%) from 26 in FY 2022/23 to 14 in FY 2023/2024 as in **Figure 64**. The region's performance is indicated in **Figure 65**.

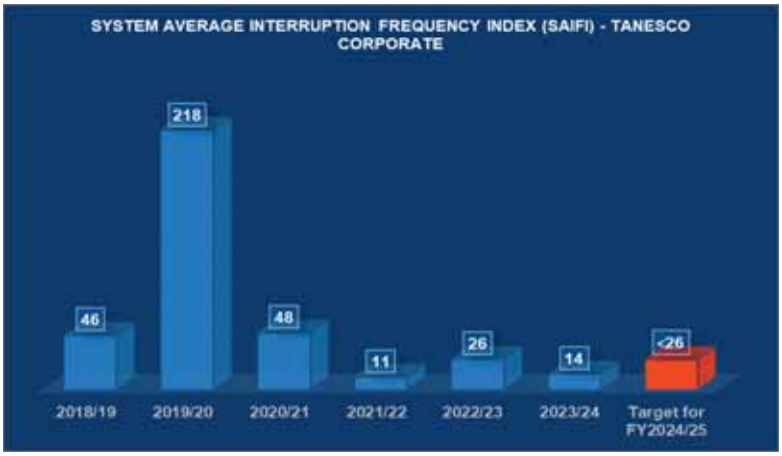


Figure 64: System Average Interruption Frequency Index (SAIFI) – TANESCO Corporate

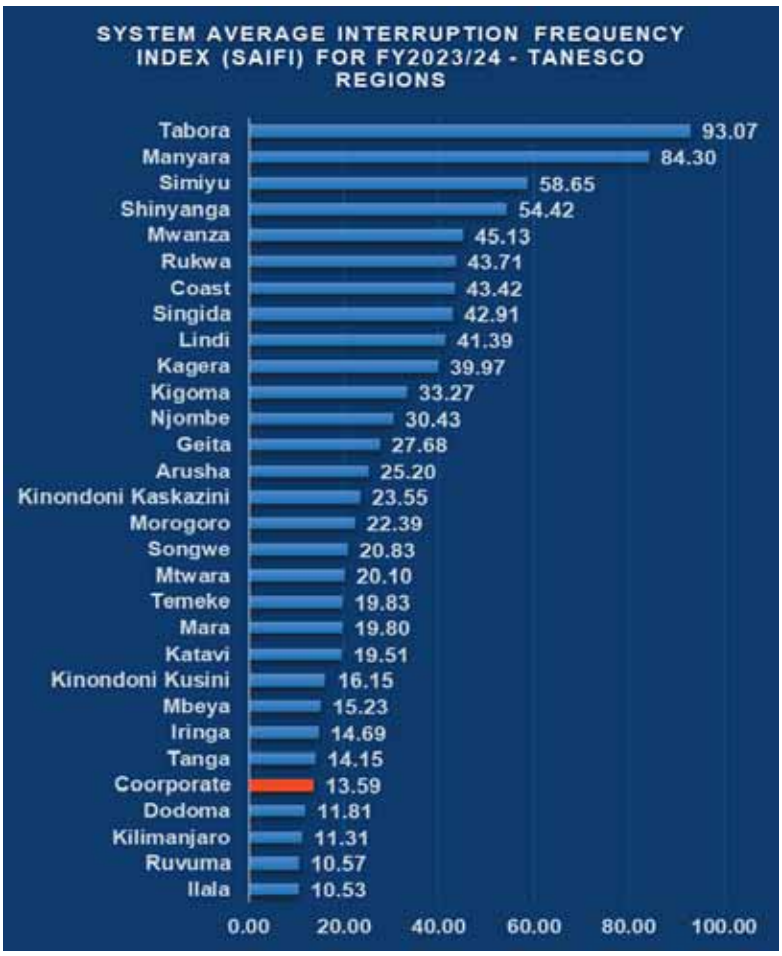


Figure 65: System Average Interruption Frequency Index (SAIFI) in FY 2023/24 – TANESCO Regions

b) The System Average Interruption Duration Index (SAIDI)

SAIDI measures the average outage duration in minutes that each customer experiences annually. It improved by 982 minutes (63.9%) from 1,536 in FY2022/23 to 554 in FY2023/24 as in **Figure 66**. The region's performance is in **Figure 67**.

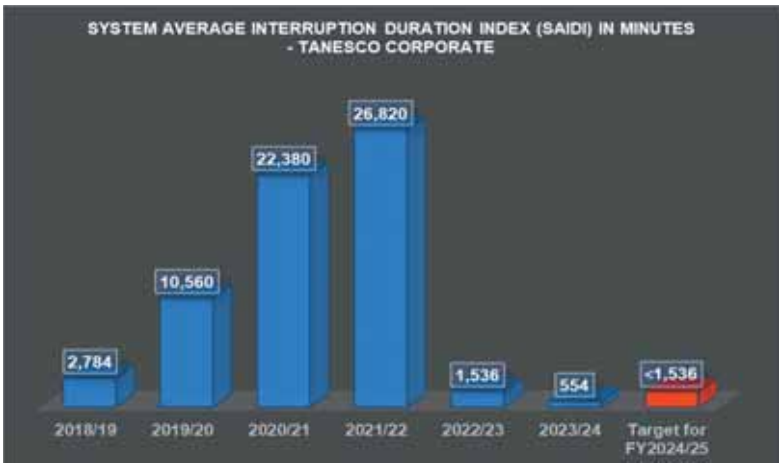


Figure 66: System Average Interruption Duration Index (SAIDI) in Minutes – TANESCO Cooperate

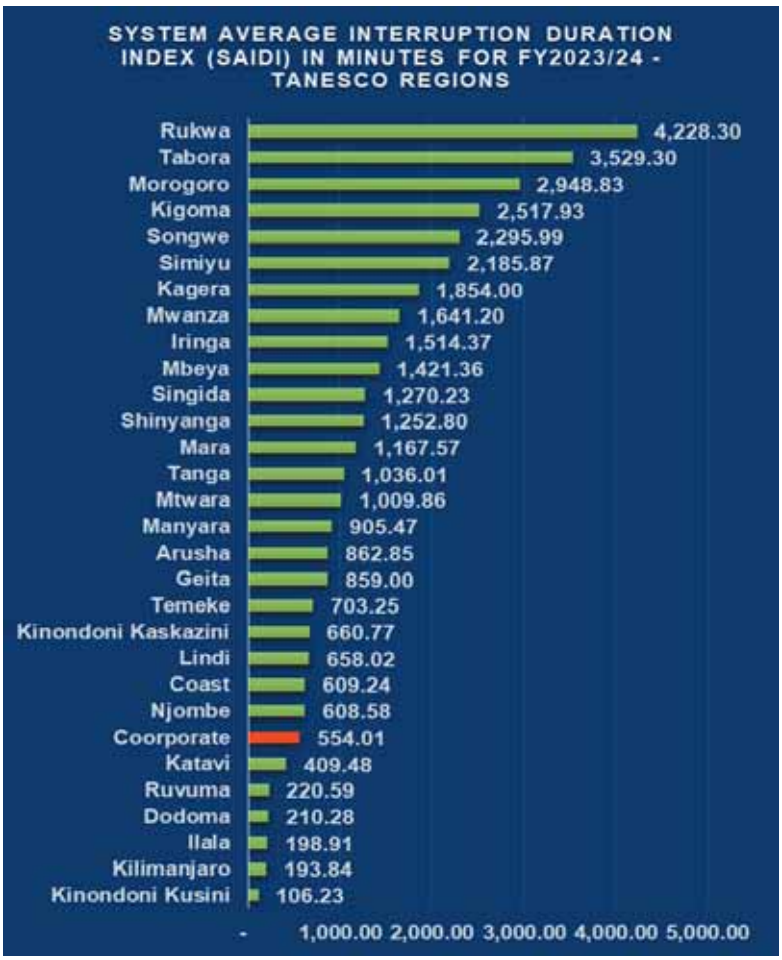


Figure 67: System Average Interruption Duration Index (SAIDI) in Minutes for FY2023/24 – TANESCO Regions

c) The Customer Average Interruption Duration Index (CAIDI)

CAIDI indicates the average duration in minutes that each outage lasts. It improved by 18.3 minutes (31%) from 59.1 in FY2022/23 to 40.8 in FY2023/24 as in **Figure 68**. The region's performance is in **Figure 69**.

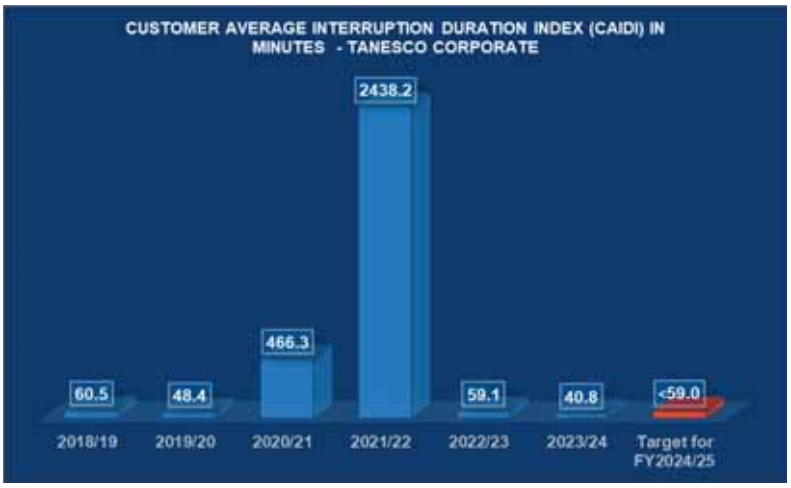


Figure 68: Customer Average Interruption Duration Index (CAIDI) in Minutes – TANESCO Corporate

Figure 69: Customer Average Interruption Duration Index (CAIDI) in FY2023/24 – TANESCO Regions

10.6.2 Mwenga Power Services Ltd

a) System Average Interruption Frequency Index (SAIFI)

The system Average Interruption Frequency Index at Mwenga during the year under review improved by 12.3 (41%) from 30.0 in FY2022/23 to 17.7 in FY2024 as in **Figure 70**.

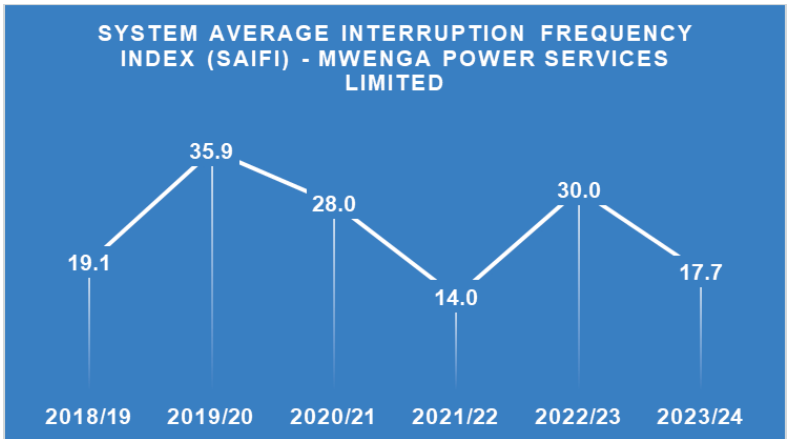


Figure 70: System Average Interruption Frequency Index (SAIFI) – Mwenga Power Services Ltd.

b) The System Average Interruption Duration Index (SAIDI)

The System Average Interruption Duration Index at Mwenga during the period under review improved by 893 minutes (51.4%) from 1,737.0 in FY2022/23 to 843.6 in FY2023/24 as in **Figure 71**.

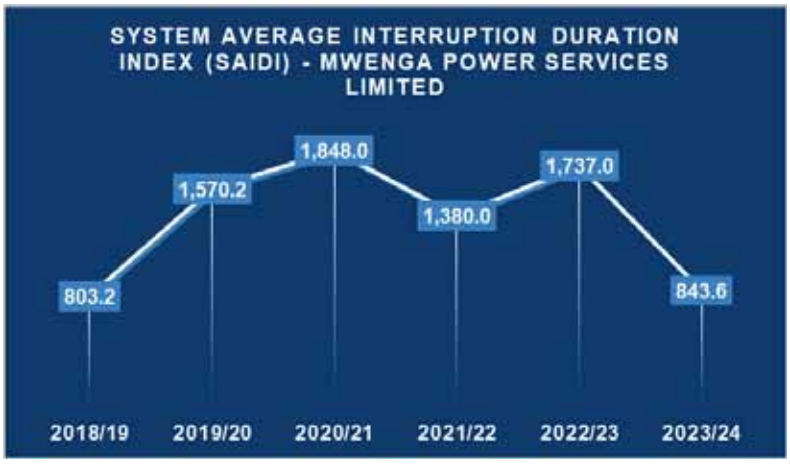


Figure 71: System Average Interruption Duration Index (SAIDI) in Minutes – Mwenga Power Services Limited

c) The Customer Average Interruption Duration Index (CAIDI)

The Customer Average Interruption Duration Index improved by 10 minutes (17.2%) from 58.0 in FY2022/23 to 48.0 in FY2023/24 as in **Figure 72**.

Figure 72: Customer Average Interruption Duration Index (CAIDI) in Minutes – Mwenga Power Services Limited

10.6.3 Andoya Hydro Electric Power Limited

a) System Average Interruption Frequency Index (SAIFI)

During the year under review, the SAIFI at Andoya Hydro Electric Power Limited improved by 2 (2.1%) from 97 in FY2022/23 to 95 in FY2024 as in indicated in **Figure 70**.

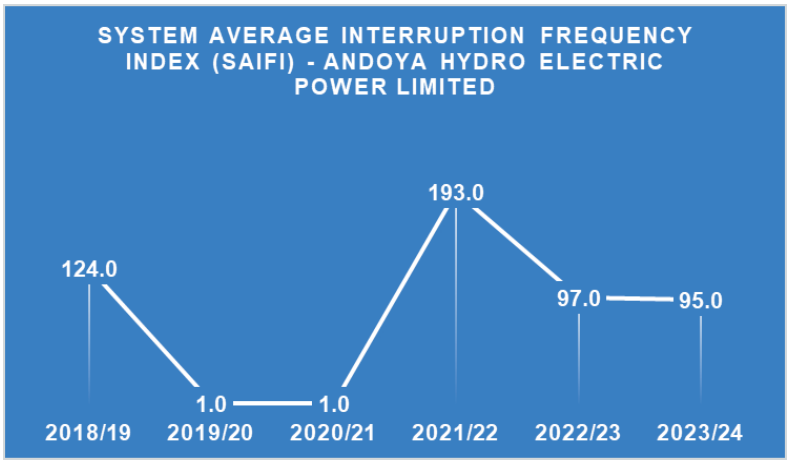


Figure 73: System Average Interruption Frequency Index (SAIFI) – Andoya Hydro Electric Power Limited

b) The System Average Interruption Duration Index (SAIDI)

Items of SAIDI, there was an improvement of one (1) minute (1.0%) from 102.0 in FY2022/23 to 101 in FY2023/24 as in **Figure 71**.

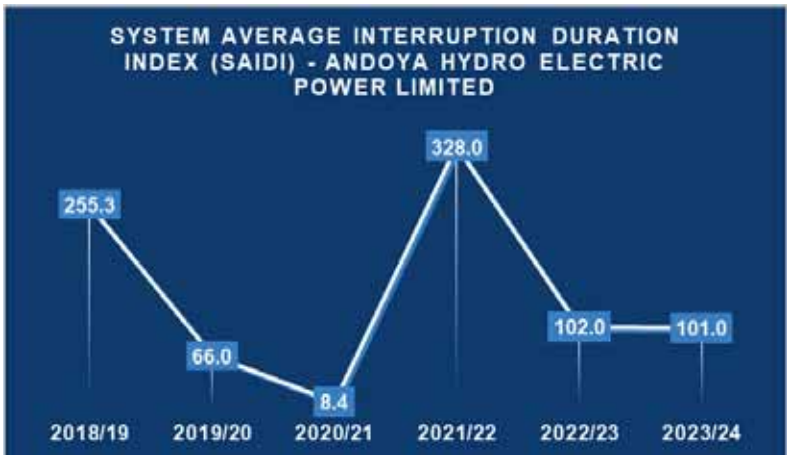


Figure 74: System Average Interruption Duration Index (SAIDI) in Minutes – Andoya Hydro Electric Power Limited

c) The Customer Average Interruption Duration Index (CAIDI)

For CAIDI It increased by 0.013 minutes (1.2%) from 1.05 in FY2022/23 to 1.06 in FY2023/24 as in **Figure 72**.

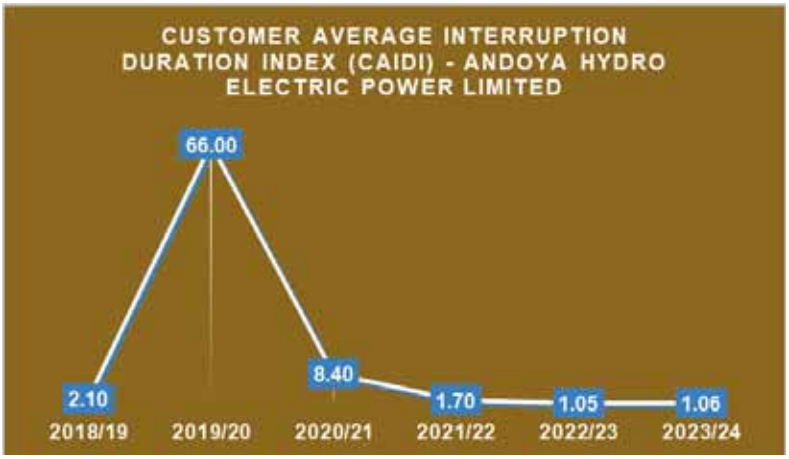


Figure 75: Customer Average Interruption Duration Index (CAIDI) in Minutes – Andoya Hydro Electric Power Limited

11. ENERGY LOSSES

Energy losses were assessed for regulated electricity transmission or distribution entities in **Figure 76**. The losses target is 14% from July 2021 to 12% in June 2025 in line with the Electricity Supply Industry Reform Strategy and Roadmap (ESI-RSR), 2014.

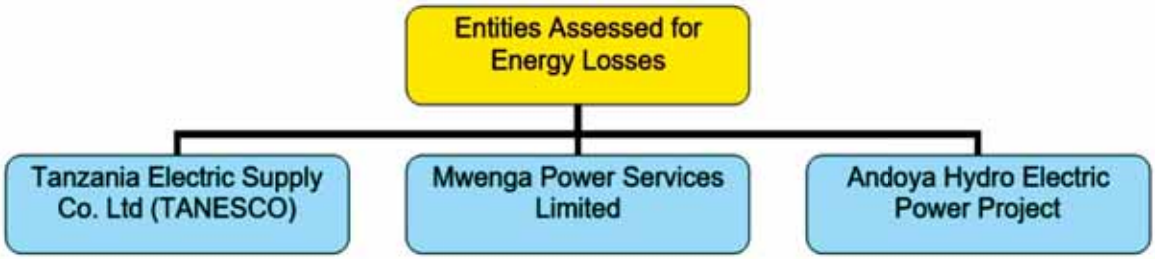


Figure 76: Entities Assessed for Energy Losses

11.1 TANESCO

The energy loss in transmission and distribution systems has increased from 14.57% in 2022/23 to 14.61% in 2023/24 as shown in **Figure 77**. To continue reducing losses, EWURA has guided TANESCO to undertake the construction and rehabilitation of infrastructure, import electricity from neighbouring countries for load centres far from generating plants, and conduct massive operational campaigns against energy theft.

Figure 77: TANESCO Energy Losses (FY 2019/20 – FY 2023/24)

11.2 Mwenga Power Services Ltd

The electricity distribution energy losses experienced by Mwenga Power Services over the period under review are shown in **Figure 78**. The losses increased by 0.01% from 5.99% in FY2022/23 to 6% in FY2023/24.

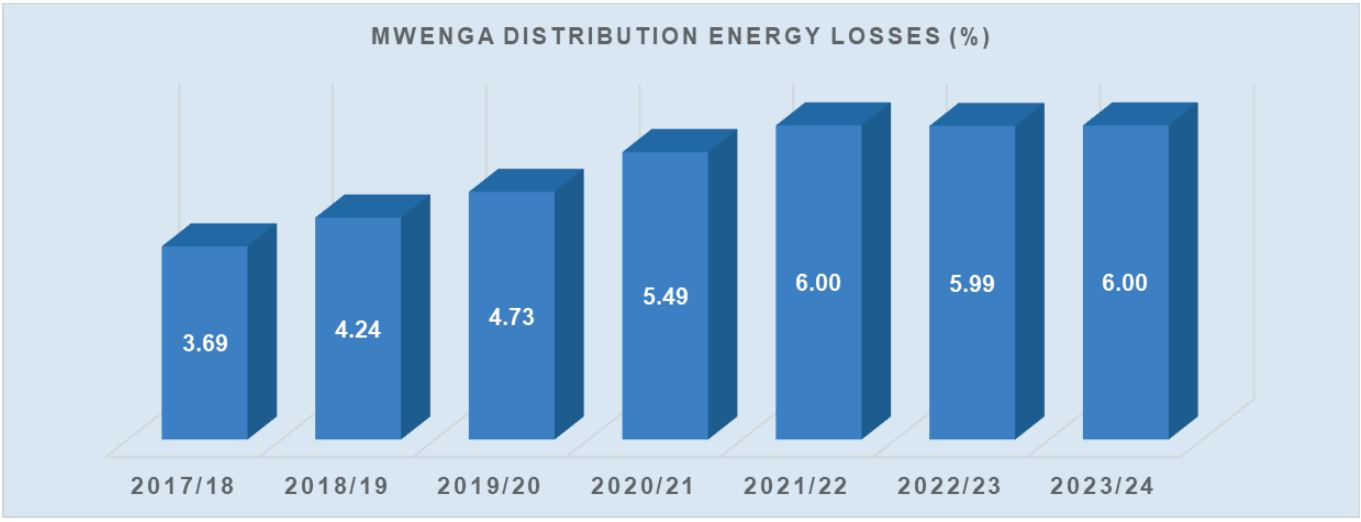


Figure 78: Mwenga Energy Losses (FY 2019/20 – FY 2023/24)

11.3 Andoya Hydro Electric Power Co. Ltd

The Andoya Electricity Distribution Energy losses are in **Figure 79**. The losses improved by 0.02% from 1.33% in FY2022/23 to 1.31% in FY2023/24.

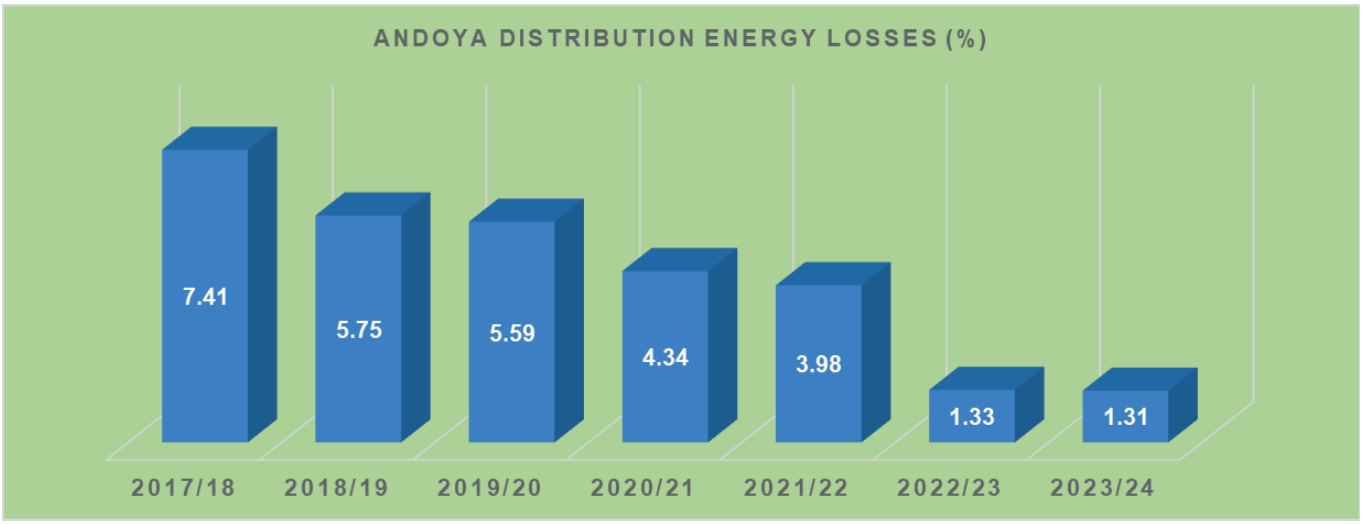


Figure 79: Andoya Electricity Distribution Energy Losses (FY 2019/20 – FY 2023/24)

12. INVESTMENT IN ELECTRICITY INFRASTRUCTURE

During the period under review, various projects were under development in line with Section 6(1)(c) of the Electricity Act 2008 which aims to promote investment and security of electricity supply in the electricity supply industry. These include both public and privately developed infrastructure as in **Figure 80**.

Figure 80: Investment in Electricity Infrastructure

12.1 Public Developed Infrastructure

The government through TANESCO is investing in the development of various electricity infrastructures. It includes electricity generation and transmission infrastructures.

12.1.1 Electricity Generation Infrastructure

Four strategic projects were under construction during the period under review. The projects will account for a total of 2,235.5MW upon commissioning. Its respective progress is shown in **Figure 81**. The strategic projects are the Julius Nyerere Hydropower Project, which is at 99.21% with four units (9,8,7, and 6), dispatching 940MW to the grid, a 50MW Kishapu-Shinyanga Solar Project (at 22%), a 49.5MW Malagarasi Hydropower Project (at 2.2%), and a 21MW Hale Hydropower Rehabilitation Project (at 31%.)

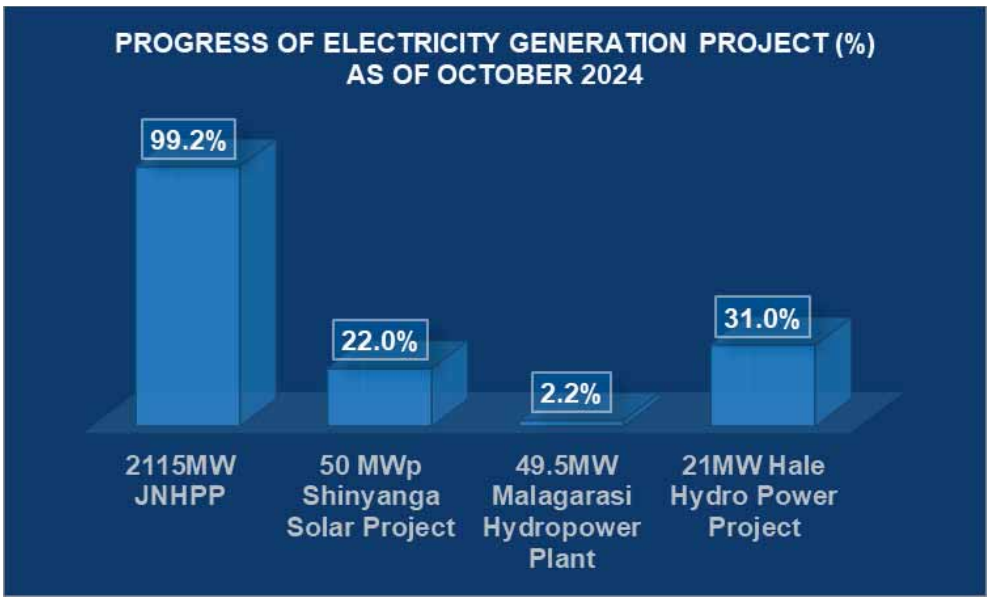


Figure 81: Progress of Electricity Generation Projects (%)

12.1.2 Electricity Transmission Line

In electricity transmission line development, 27 projects were under construction during the review period. The projects will account for 5,033km upon commissioning. Its respective progress is indicated in **Figure 82**. The projects will increase the security of the electricity supply in the main grid.

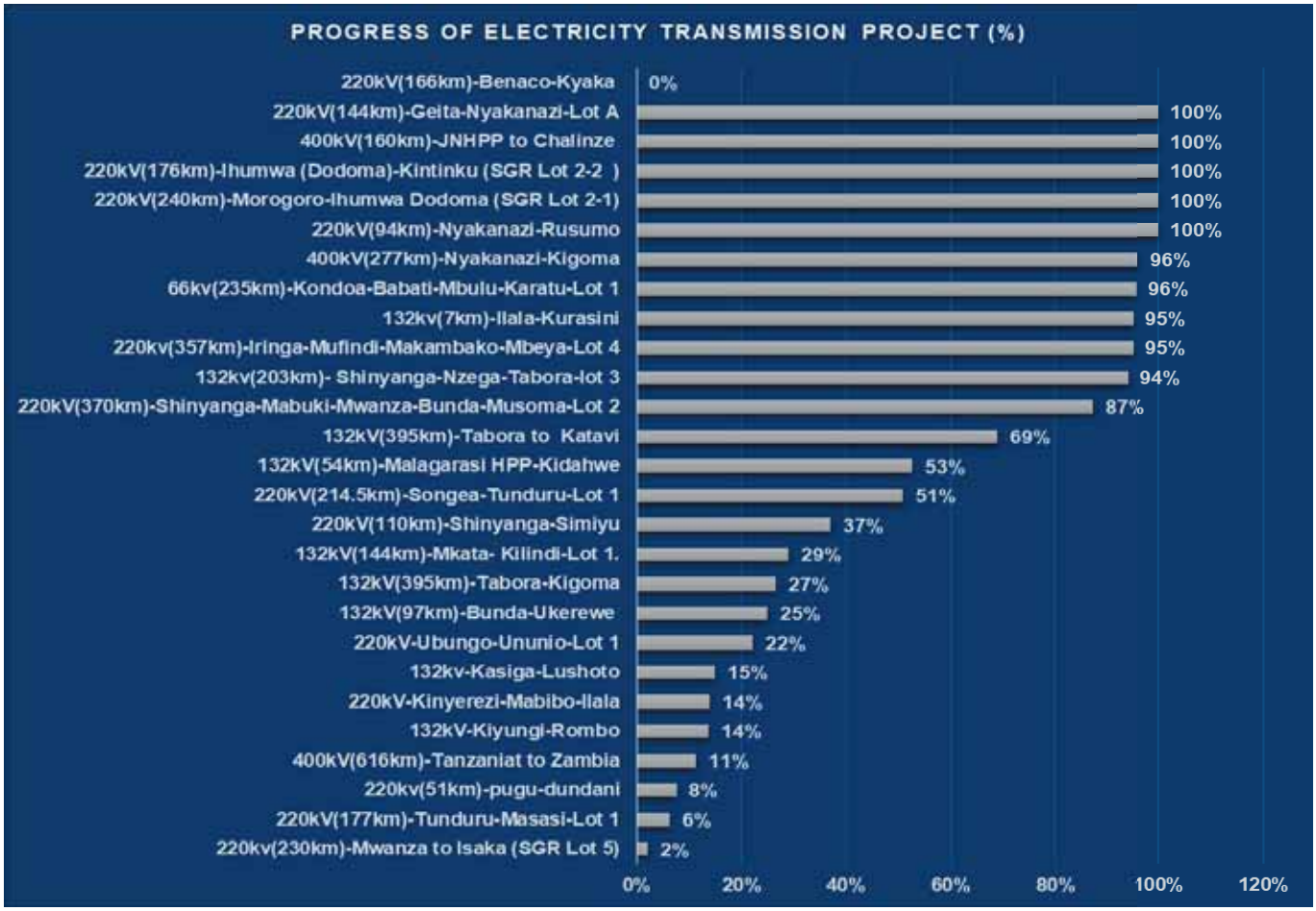


Figure 82: Progress of Electricity Transmission Line Projects (%)

12.1.3 Electricity Grid Substation

During the period under review, the grid substation saw the introduction of 39 projects that were under construction. The projects accounts for 3,801MVA upon commissioning. The progress of the projects is in **Figure 83**.

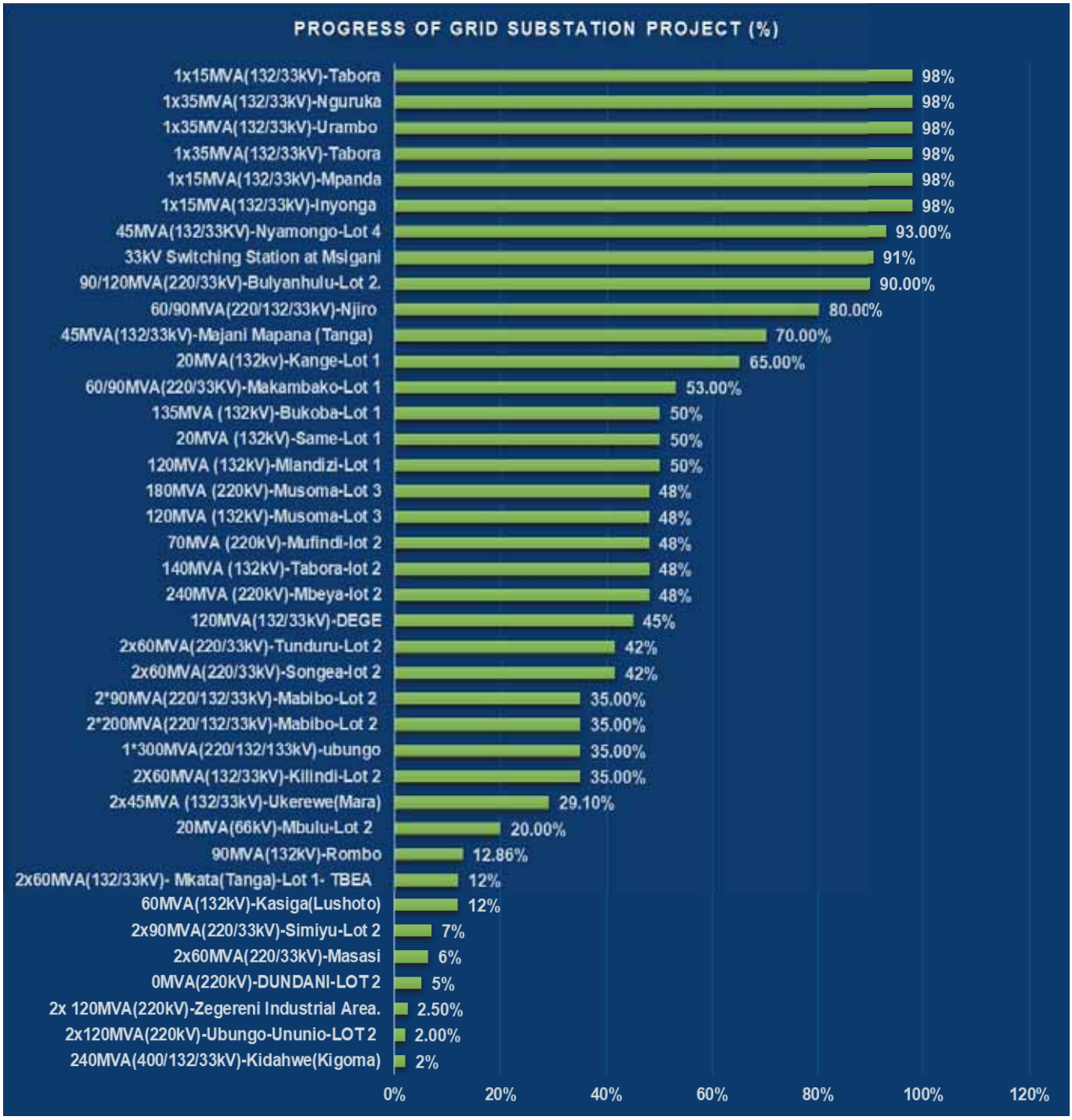


Figure 83: Progress of Grid Substation Projects (%)

12.2 Private Developed Infrastructure

In the private sector, 39 electricity generation projects signed a Small Power Purchase Agreement (SPPA) for generating electricity as shown in **Figure 84**. The projects account for 179.59MW upon commissioning. Details are in **Annex 13**.

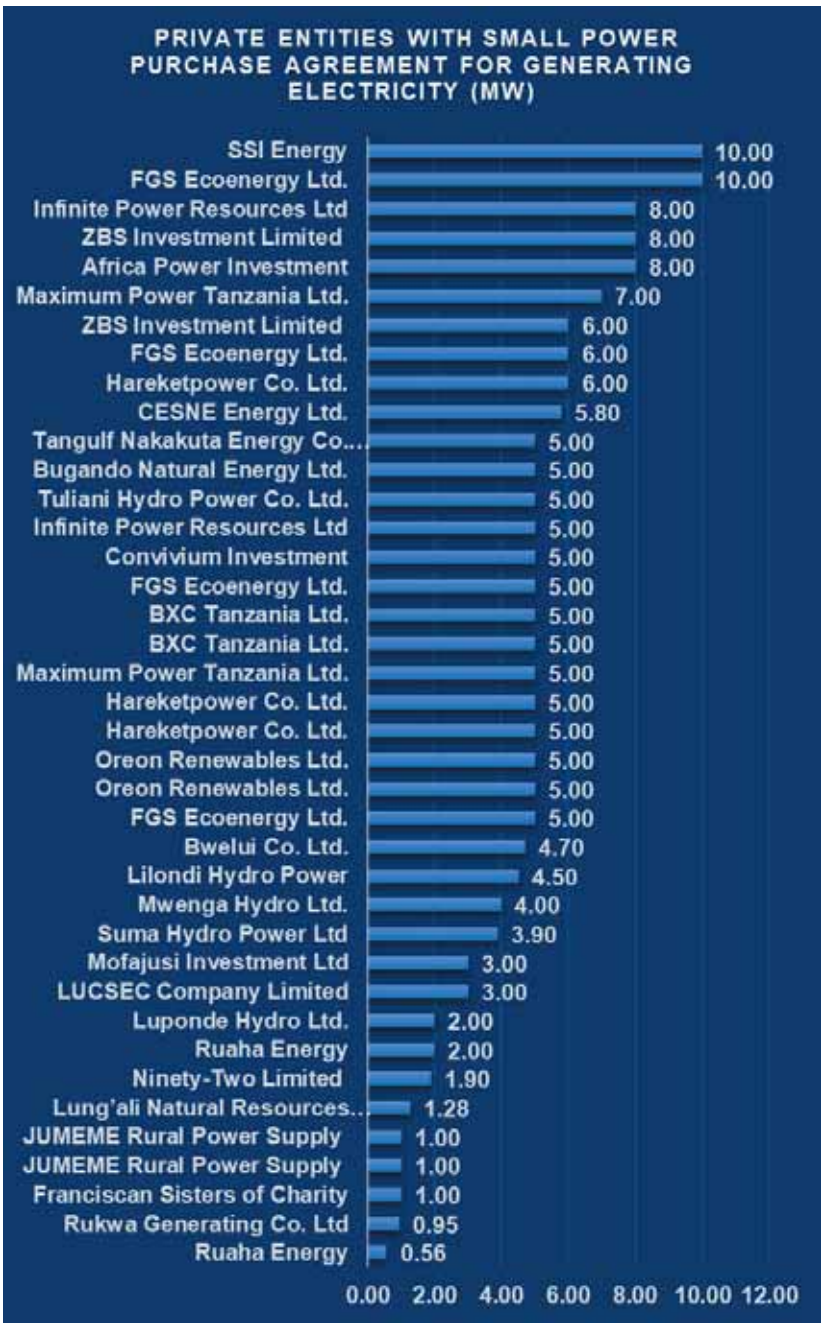


Figure 84: Private Entities with Standardized Power Purchase Agreements (SPPA) for Generating Electricity

13. CLEAN COOKING

Electricity as a source of clean energy for cooking is a critical government agenda. To that effect, the clean cooking strategy, known as *The National Clean Cooking Strategy 2024,* was developed and launched in April 2024.

13.1 Access to Clean Fuels and Technologies for Cooking

The National Clean Cooking Strategy 2024 indicates the population using clean cooking solutions has gradually increased from 1.5% in 2010 to 6.9% in 2021 as shown in **Figure 85**. The National Clean Cooking Strategy 2024 aims to ensure that 80% of the population uses clean energy for cooking by 2034.

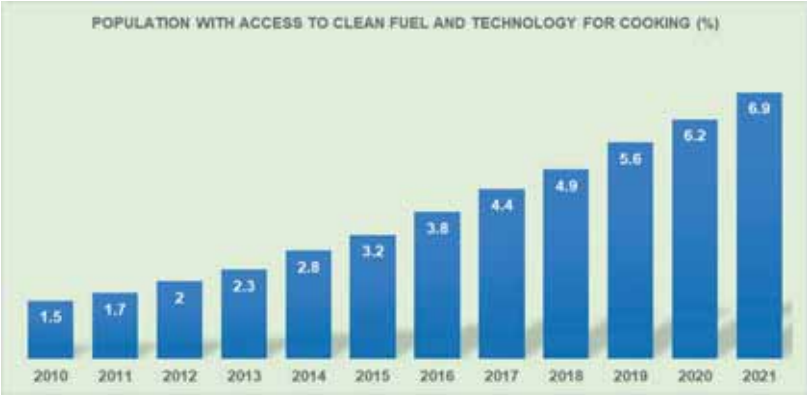


Figure 85: Population with Access to Clean Fuels and Technologies for Cooking

13.2 Fuels And Technologies Used for Cooking

Figure 86 indicates household cooking energy use in mainland Tanzania in 2019/20 as The National Clean Cooking Strategy 2024. It indicates that 64% use firewood, 26% charcoal, 5% Liquefied Petroleum Gas (LPG), 3% electricity, and 2% other sources of energy. Thus, the National Clean Cooking Strategy 2024 aims to ensure that 80% of the population uses clean energy for cooking by 2034.

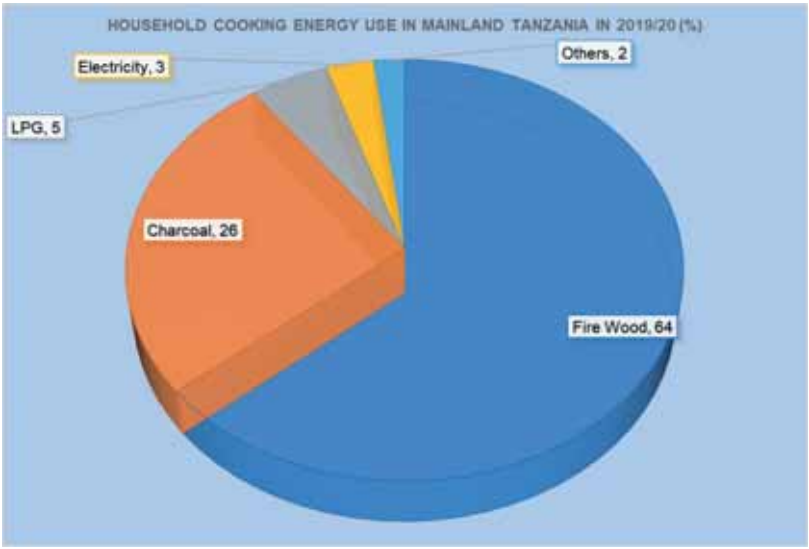


Figure 86: Household Cooking Energy Use in Mainland Tanzania In 2019/20 (%)

13.3 Strategies for Promoting Electricity for Clean Cooking

The National Clean Cooking Strategy 2024 provides that 80% of the population will use clean energy for cooking by 2034. Thus, electricity is envisaged to play an important along with other technologies. This is supported by government incentives on clean technologies, whereby there has been an increase in accessibility of electricity from 67.5% in 2017 to 78.4% in 2020, an increase in connectivity of electricity from 32.8% in 2017 to 37.7% in 2020, an increase in the availability of energy-efficient equipment, as well as policies and regulatory framework as in **Figure 87**.

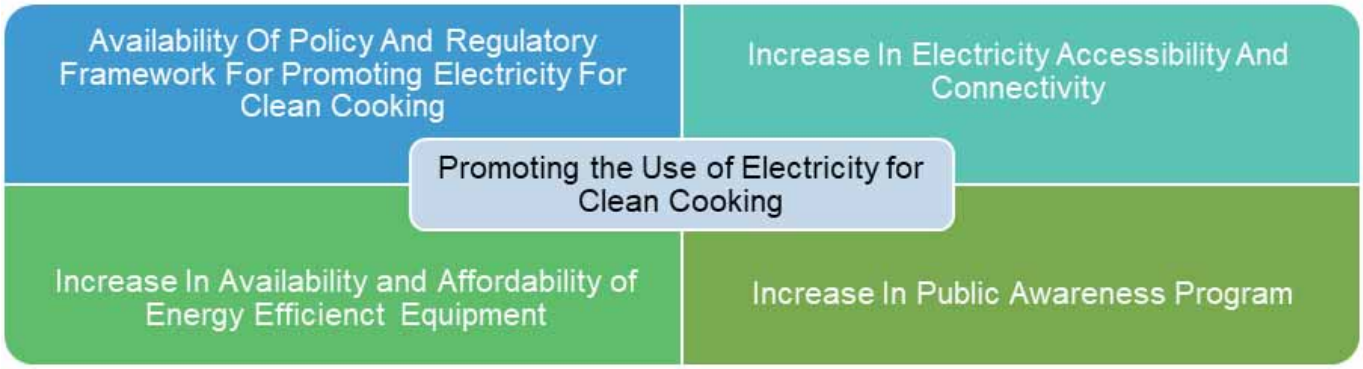


Figure 87: Strategies for Promoting the Use of Electricity for Clean Cooking

14. FINANCIAL PERFORMANCE

TANESCO is Tanzania's main electricity supplier. The company imports power from Uganda (37 MW) and Zambia (20MW) for the Kagera and Rukwa regions respectively. Also, the utility has long-term power purchase agreements with Independent Power Producers and Small Power Producers (IPPs and SPPs), namely, Songas Tanzania Limited (189MW), Tanganyika Wattle Company Limited (1.5MW), Tanganyika Planting Company Limited (9MW), Andoya Hydro Electric Power Company Limited (1MW), Mwenga Hydro Limited (4MW), and Tulila Hydro Electric Plant Company Limited (5MW).

Others are Yovi Hydropower Company Limited (0.95MW), Matembwe Village Company Limited (0.59MW), Darakuta Hydropower Development Company Limited (0.32MW), Luponde Hydro Limited (0.9MW) and NextGen Solawazi Limited (5MW). Therefore, this section focuses on the financial performance of 12 entities from FY 2020/21 to 2023/24.

14.1 Revenue Generation

In FY 2023/24, the average revenue from the sale of electricity of all entities increased by 10% compared to an increase of 4% recorded in FY 2022/23. The revenue increased from TZS 2,205.93 billion to TZS 2,418.26 billion. Revenue from other sources increased by 63% compared to a decrease of 25% recorded in previous financial year. The overall revenue increased by 15%. In addition, 85% of revenue was generated from the sale of electricity and 15% from other sources. **Figure 88** shows the four-year trend of revenues from the sale of electricity and other income and is detailed in **Annex 14**.

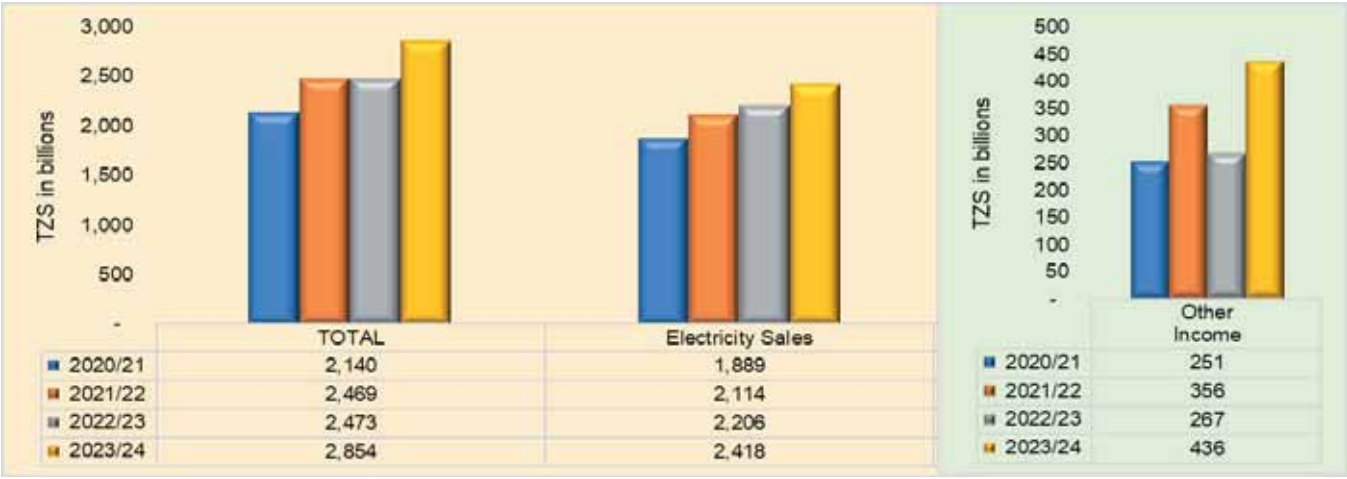


Figure 88: Total Revenue by Source (TZS in million)

During FY 2023/24, the increased revenue generated from the sale of electricity was associated with Mwenga Hydro Limited (43%) which stands out among the utilities, NextGen Solawazi (25%), Mwenga Power (33%), Matembwe Village Company Limited (82%) TANESCO (12%) and Darakuta Hydropower Development Company Limited (31%). However, utilities that recorded a decrease in revenue from the sale of electricity were Yovi Hydropower Company Limited (1%), Songas Tanzania Limited (4%), Tulila (8%), Tanganyika Planting Company (26%), Andoya Hydro Electric Power Company Limited (28%), Luponde (71%) as well as Tanganyika Wattle Company Limited (89%). The main reasons for the decrease in revenue were the mechanical breakdown of generating units and inadequate hydrology conditions. Revenue generated by each utility is presented in **Figure 89** and detailed in **Annex 14**.

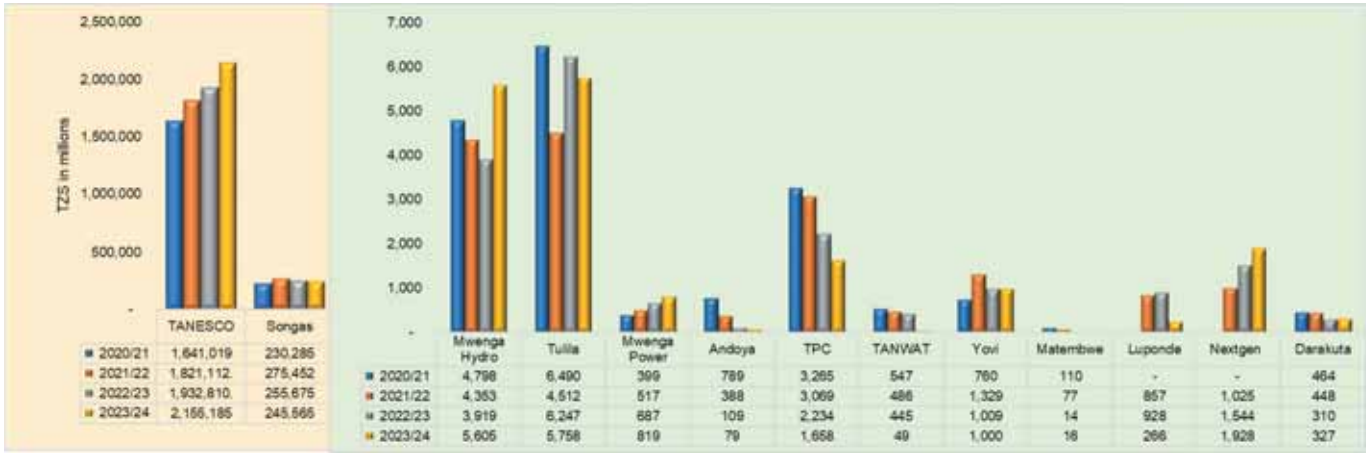


Figure 89: Revenue from the Sale of Electricity by Utility

TANESCO being a public service provider generates most of its revenue from selling electricity. During the period under review, the sales made to general Usage Customers (T1) contributed to 50%, High Voltage supply customers (T3) 38%, whilst Low Voltage Supply (T2) and Domestic Low Usage (D1) customers amounted to 10% and 2% of the total electricity sales revenue respectively. The consumption pattern of power remained the same as the previous financial year.

During FY 2023/24, TANESCO recorded a general increase in sales from electricity by 12%, compared to an increase of 6% recorded in the previous year. The rise was associated with an increase in new connections of 554,867 customers. The increased revenue was also associated with increased power consumption by an average of 10%, by Domestic Low Usage (10%), General Usage (12%), High Voltage Supply (8%), and Low Voltage Supply (11%). **Figure 90** shows three years of TANESCO revenue by customer category and is detailed in **Annex 16**. The electricity consumption by region/location is in **Figure 91**.

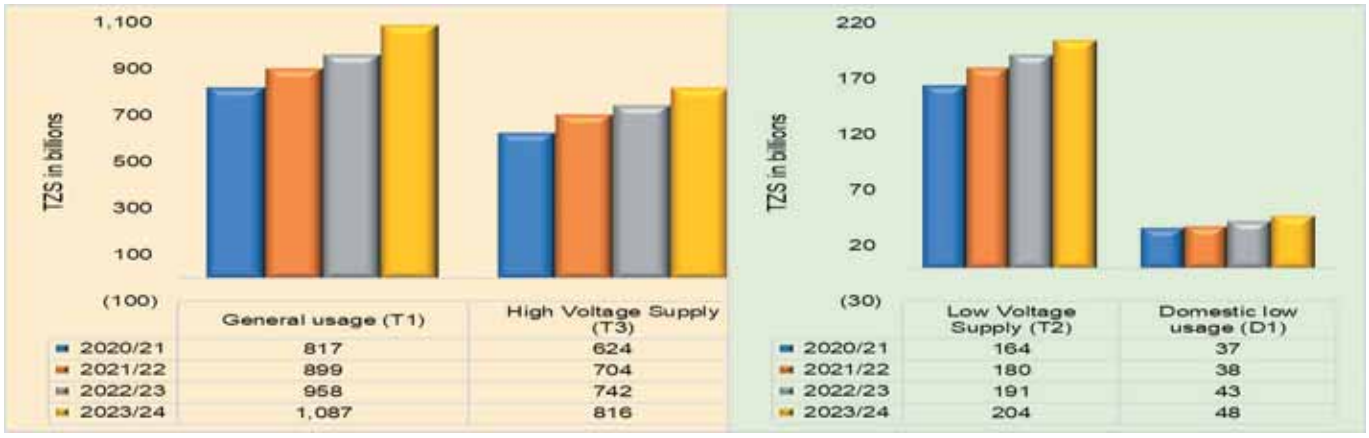


Figure 90: TANESCO Revenue by Customer Category (TZS Billions)

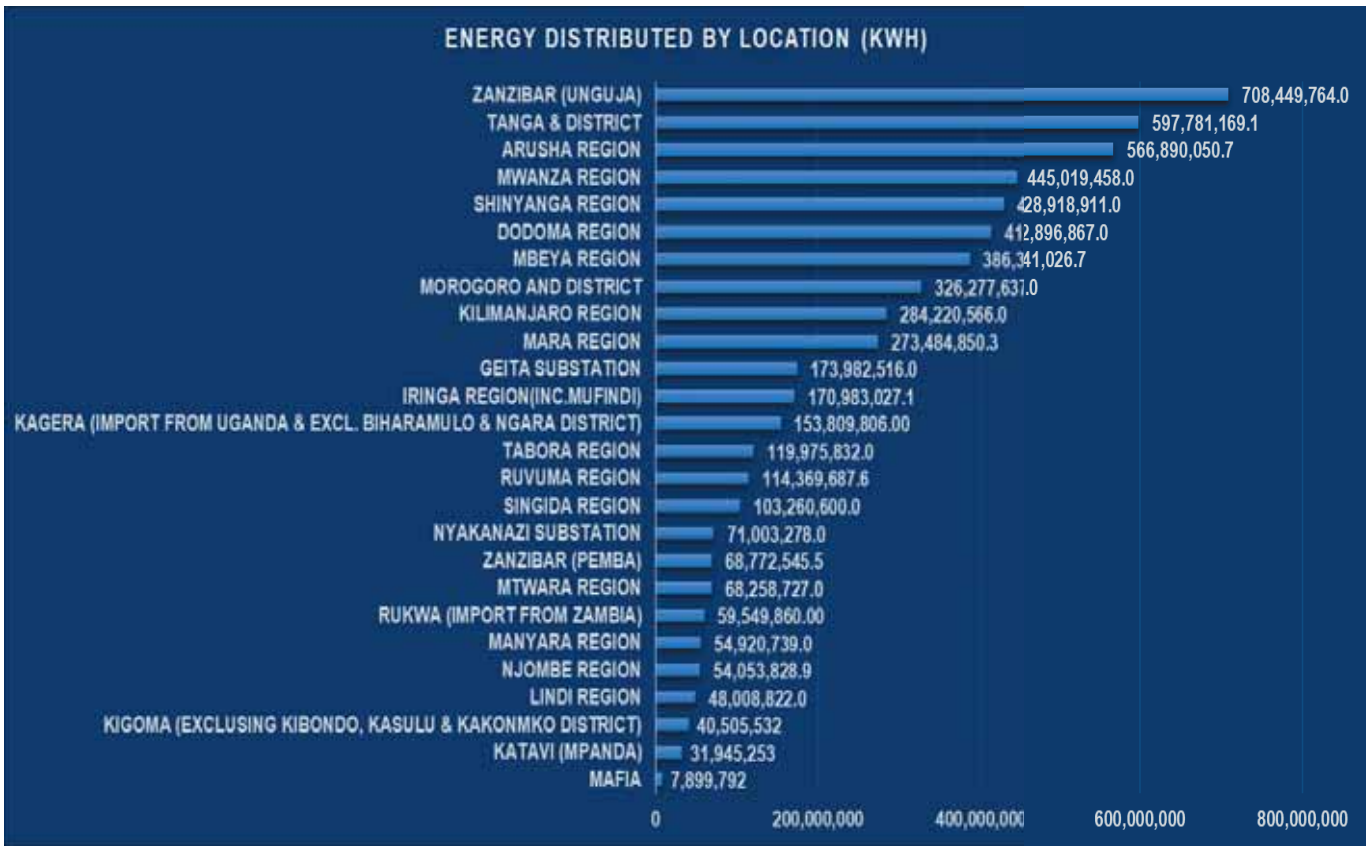


Figure 91: Energy Distributed by Location (kWh)

14.2 Large Power Users of TANESCO

The electricity consumption generated by TANESCO was largely consumed by Bulyanhulu and Geita mines; Commercial Centers; Beverage Industries (Breweries, Coca-Cola, Pepsi); Steel Industries; Cement Industries (Twiga Cement); and government and private Institutions.

14.3 TANESCO Cost Structure

The cost structure for TANESCO's operations was mainly dominated by generation and transmission business segments that covered TZS 1,088.12 billion. Electricity distribution covered TZS 404.98 billion, depreciation (TZS 418.60 billion), purchase of electricity (TZS 319.08 billion), administration costs (TZS 261.85 billion), income tax (TZS 13.84 billion), finance costs (TZS 37.37 billion) and impairment of financial assets (TZS 39.17 billion). Further, staff costs amounted to TZS 365.72 billion equivalent to 14% of total costs. **Figure 92** shows TANESCO's composition of the cost structure.

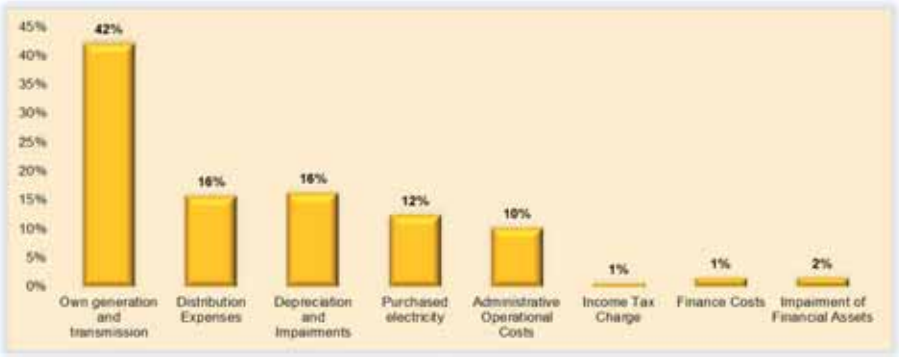


Figure 92: TANESCO's Cost Structure

During the year under review, the overall costs of TANESCO decreased by 22% compared to a decrease of 0.9% recorded in the previous FY. In FY 2023/24, distribution expenses and income tax charges decreased by 11% and 9% respectively. The costs of the remaining categories such as own generation and transmission, depreciation and impairments, purchase of electricity, administrative operational costs, finance costs as well as impairment of financial assets and generation costs increased. **Figure 93** shows the trend of TANESCO's costs.

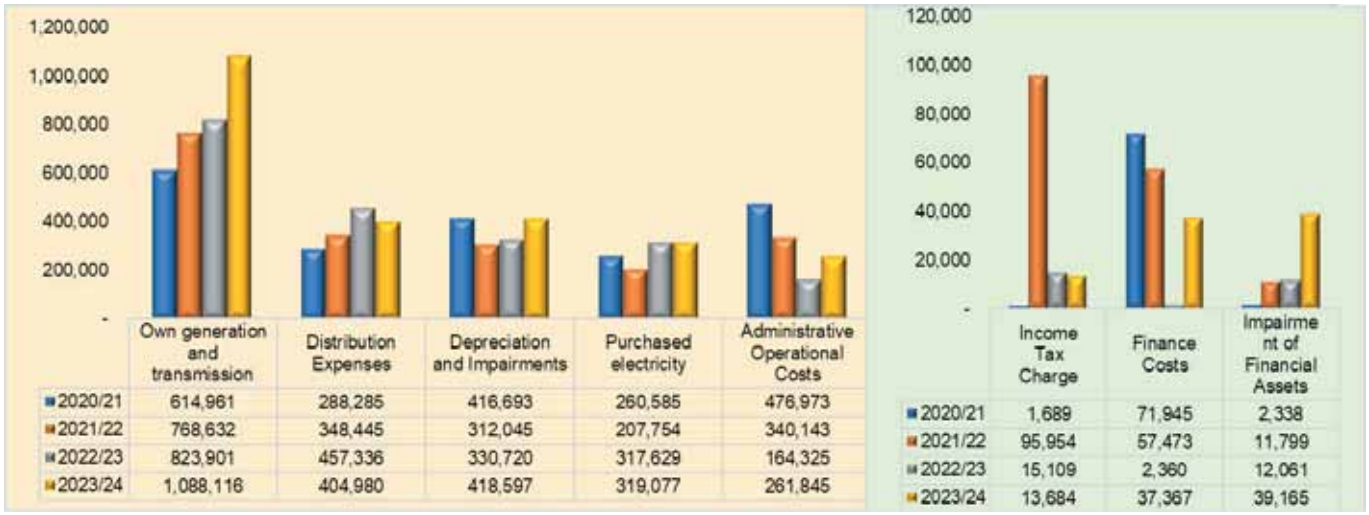


Figure 93: TANESCO's Costs Components Trend

14.4 Cost per Unit Sold

Comparing total costs against total units sold, in FY 2023/24, the average unit cost of electricity sold by TANESCO increased by 10% compared to a decrease of 7% recorded in FY 2022/23. The overall average costs of units sold increased from TZS 256/kWh in FY 2022/23 to TZS 283/kWh in FY 2023/24. **Figure 94** shows the trend of TANESCO's costs.

Figure 94: TANESCO's Average Cost

The increase in generation cost by 32% was associated with an increase in generation activities whereby units sold increased by 10%. Furthermore, to reduce power deficits in the country, TANESCO imported 59,550,860 kWh from Zambia to feed the Rukwa region and 153,810,806 kWh from Uganda to feed the Kagera region. **Figure 95** shows imported electricity from Uganda and Zambia from FY 2020/21 to FY 2023/23 in MW.

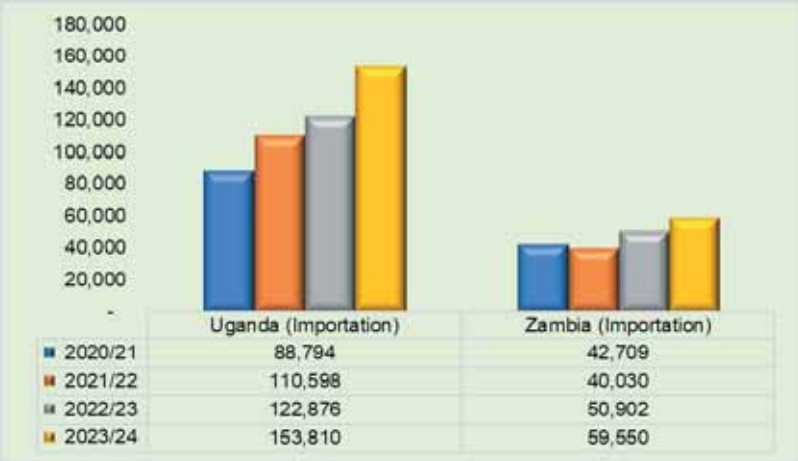


Figure 95: TANESCO's imported Electricity in MW

14.5 PROFIT MARGIN RATIO ANALYSIS

The objective of analyzing the profit margin ratio is to assess the utility performance in terms of net profit generated from electricity income. The general rule of thumb considers a 10% net profit margin as average, a 20% margin as good, and a 5% margin as low. The Profit Margin Ratio was computed as the net profit percentage of sales from electricity. **Table 4** shows the years' profit margin ratio by utilities.

Table 4: Profit Margin Ratio

Utility	2020/21	2021/22	2022/23	2023/24
TANESCO	5%	6%	4%	0.3%
SONGAS	8%	17%	-10%	3%
Mwenga Power	-172%	-110%	-54%	-60%
Mwenga Hydro	-6%	14%	-21%	-5%

Source: *Licensee's Financial Statement*

In FY 2023/24, TANESCO's profit margin ratio was 0.3% equivalent to TZS 6.09 billion, whereas in the previous year, the profit margin was 3.7% equivalent to TZS 72.4 billion. The profit margin was associated with increased sales from electricity by 12% (TZS 222 billion) and the rise in new connections (554,867 customers) equivalent to 13%. Songas Tanzania Limited recorded a profit margin of 83.1% equivalent to TZS 7.5 billion. On the other hand, Mwenga Power Services and Mwenga Hydro Limited recorded negative profit margins. The analysis showed that TANESCO maintained a positive profit margin ratio for four consecutive years while Mwenga Power Services recorded a negative profit margin ratio for four years consecutively. The positive ratio implied profit while the negative ratio implied utilities did not generate profit.

14.5.1 CURRENT RATIO ANALYSIS

The current ratio analysis is a liquidity ratio that measures a company's ability to pay short-term obligations or those due within one year. It tells how a company can maximize the current assets on its balance sheet to satisfy its current debt and other payables. A good current ratio ranges from 1 to 2, which means that the business has two times more current assets than liabilities to cover its debts. A current ratio below one means that the company does not have enough liquid

assets to cover its short-term liabilities. **Figure 96** shows the current ratios trend from FY 2020/21 to 2023/24 by utilities.

Figure 96: Current Ratio by Utilities

The analysis shows that, for four consecutive years, Songas Tanzania Limited recorded the current ratio recommended in best practice. This implies the company was better positioned to meet short-term obligations and efficiently utilize its working capital. In FY 2023/24 Mwenga Hydro Limited recorded an excessive current ratio. TANESCO and Mwenga Power Services Limited were unable to pay short-term obligations on time as they recorded a ratio below 1.

15. MARKET COMPETITION ANALYSIS

The current Electricity Supply Industry market structure is the single buyer model as in **Figure 1**. The public utility, namely TANESCO conducts electricity generation, transmission, distribution, supply, cross-border trade, and system operation, among others. Likewise, private entities generate, and sell electricity to TANESCO with the option to sell to other customers whom TANESCO does not supply. Therefore, this section highlights market completion analysis based on issues described in **Figure 97**.

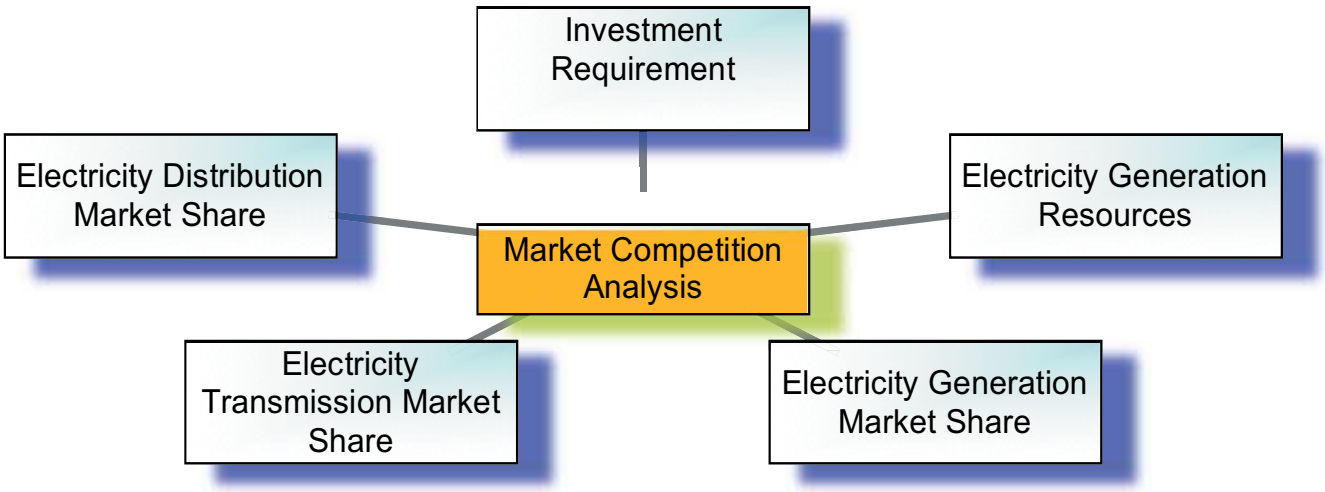


Figure 97: Market Competition Analysis

15.1 Investment Requirement

The Power System Master Plan (PSMP) of 2020 indicates the continuous growth in electricity demand. The demand is forecasted to grow from 2,677MW in 2025 to 17,611MW in 2034 as shown in **Figure 98**. This indicates the need for a significant investment in electricity generation, transmission, and distribution infrastructures.

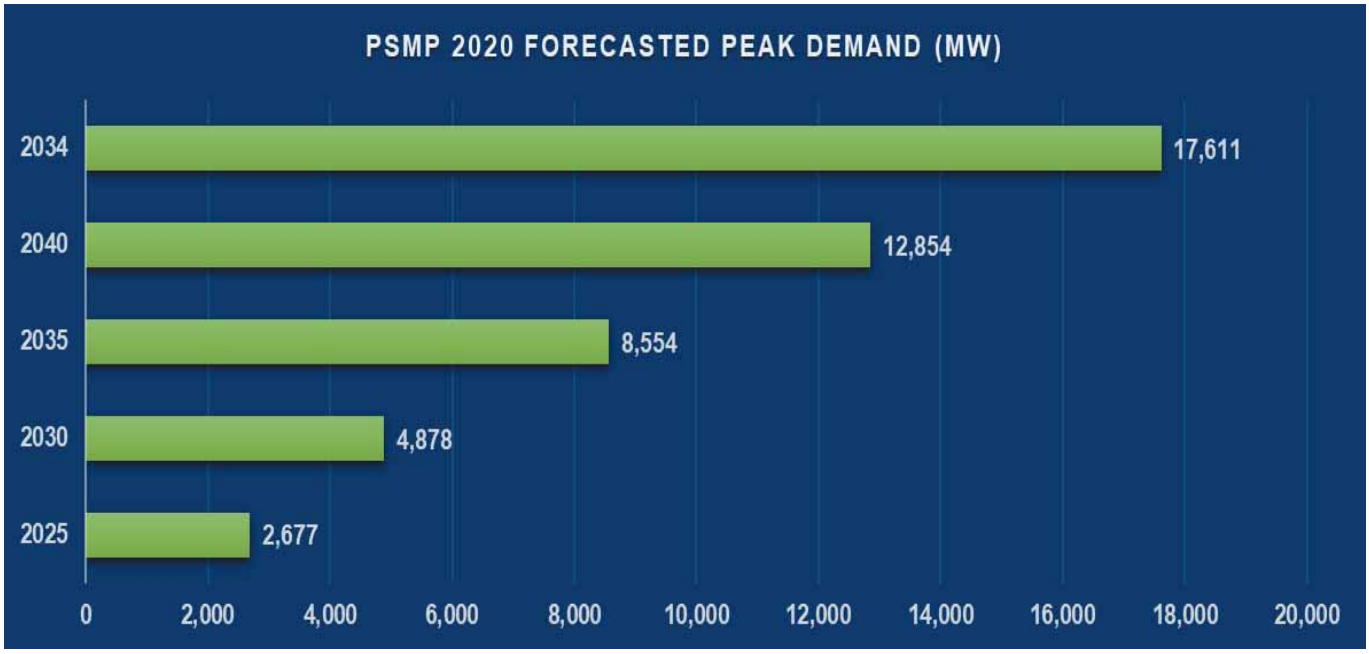


Figure 98: Forecasted Electricity Demand (2025-2034)

15.2 Electricity Generation Resources

The PSMP indicates the availability of significant resources for electricity generation. The resources account for 23,495.73MW as in **Figure 99**. The developed resources as of June 2024, accounted for 2,411.00 MW (10.3%) in **Figure 37.** This indicates a need for significant investment to develop the available resources, thereby requiring private participation where economically viable.

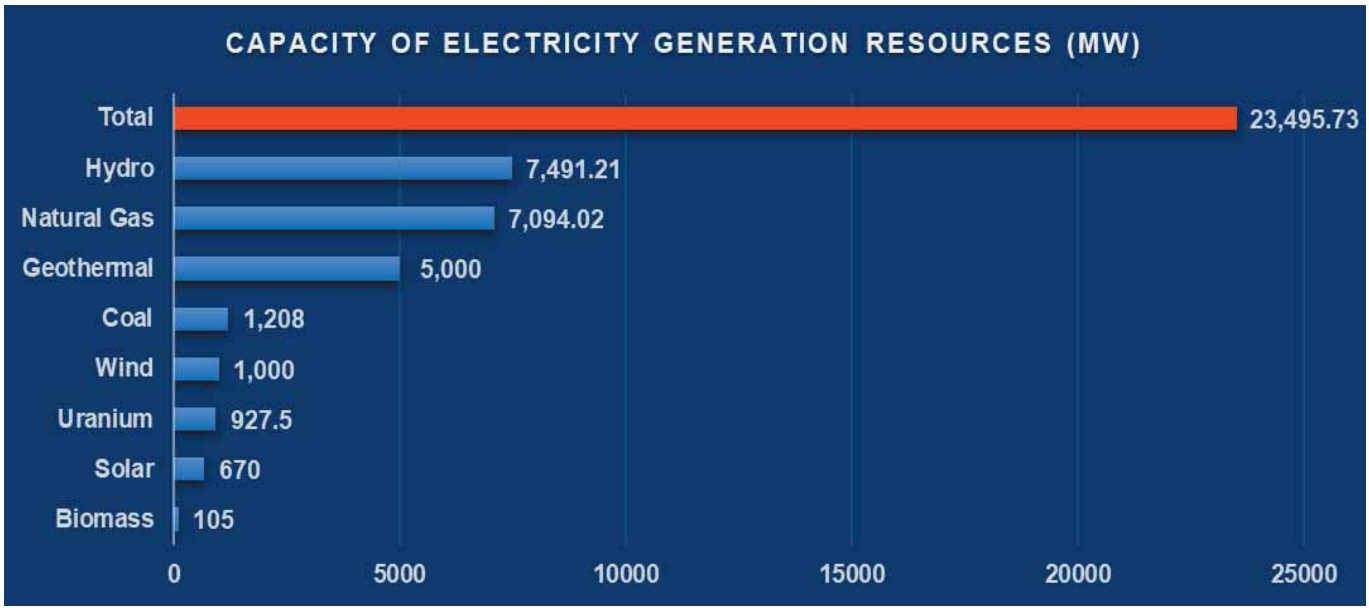


Figure 99: Capacity of Available Electricity Generation Resources (MW)

15.3 Electricity Generation Market Share

The market share by installed capacity as of June 2024 indicated that TANESCO accounts for 91% and private entities 9% as in **Figure 100**. Likewise, in electricity generation, TANESCO accounts for 83% and private entities 17% as in **Figure 101**. This indicates a need for more private investment in the electricity supply industry.

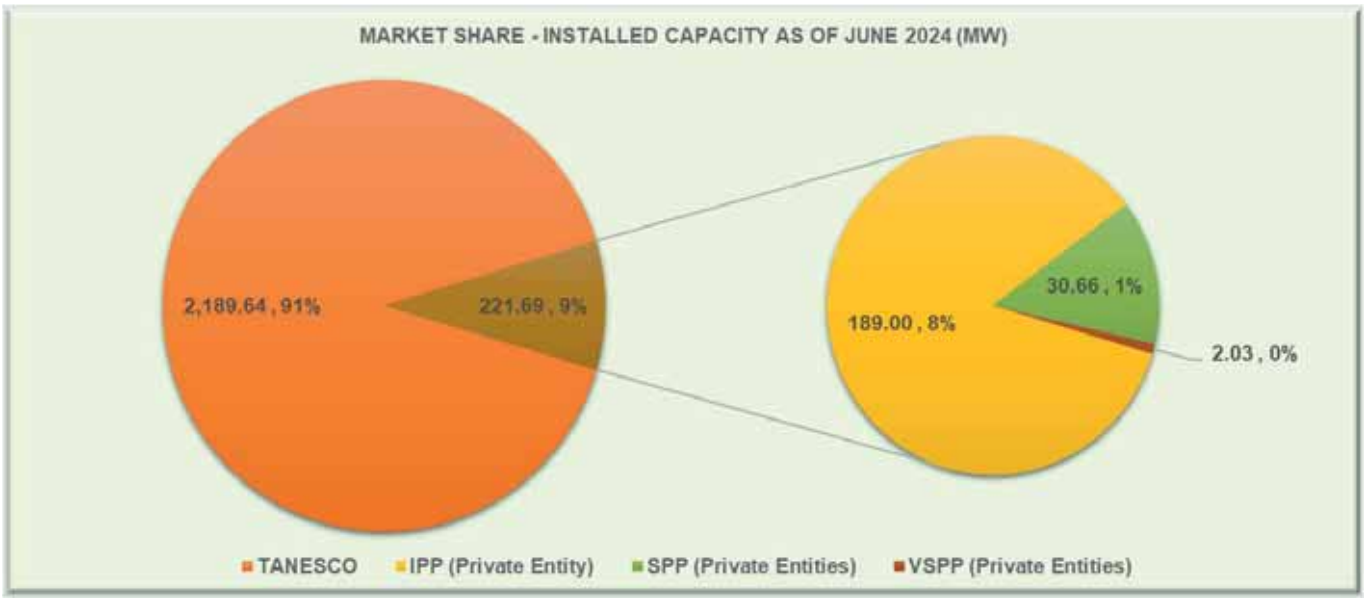


Figure 100: Market Share – Installed Capacity as of June 2024 (MW)

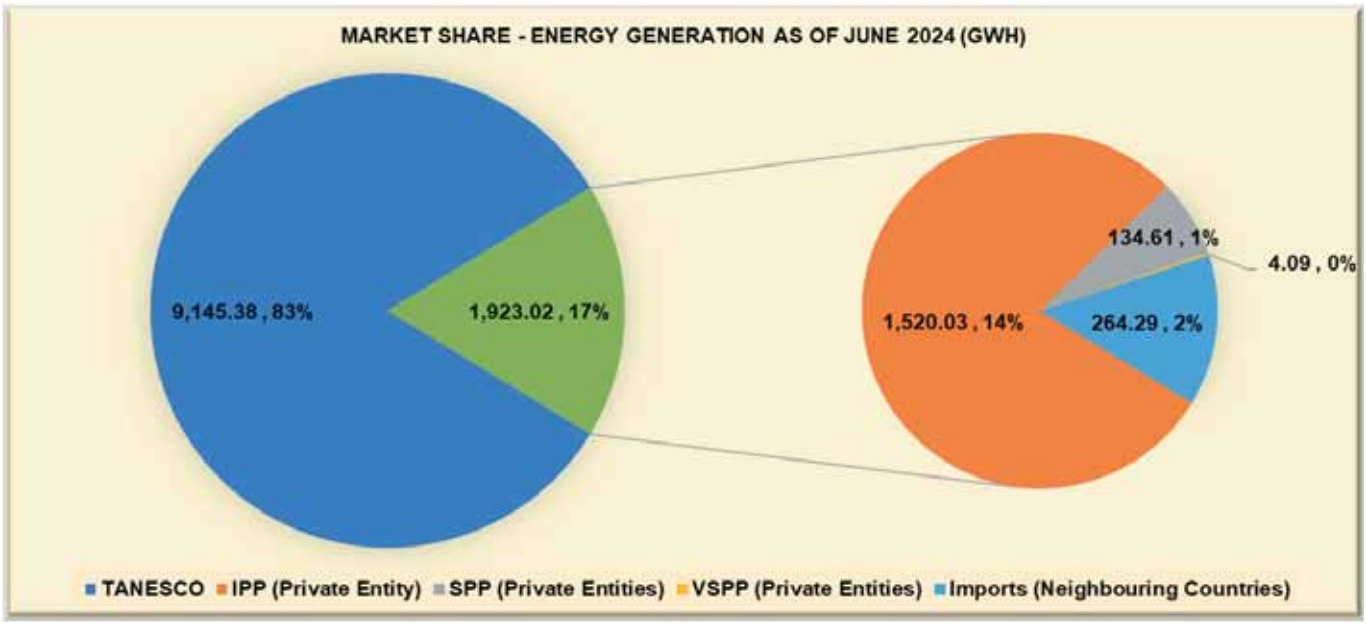


Figure 101: Market Share – Electricity Generation as of June 2024 (MWh)

15.4 Electricity Transmission Market Share

TANESCO, being the oldest and a state-owned company, enjoys a 100% share in electricity transmission activities. This aligns with Rule 5(4) of the Electricity (Generation, Transmission and Distribution Activities) rules, 2024. Private entities can finance the construction of the transmission infrastructures in line with Regulation 4 of the Electricity (General) Regulations, 2020.

15.5 Electricity Distribution Market Share

The market share by the customer as of June 2024 was 99.50% for TANESCO and 0.50% for other entities as in **Figure 102** and details in **Figure 61** and **Figure 62**. Likewise, the largest infrastructure market shareholder is TANESCO is 99.44%, while 0.56% are for private entities as in **Figure 103** and details in **Figure 58** and **Figure 59** respectively. This indicates a need for more private investment in the electricity supply industry.

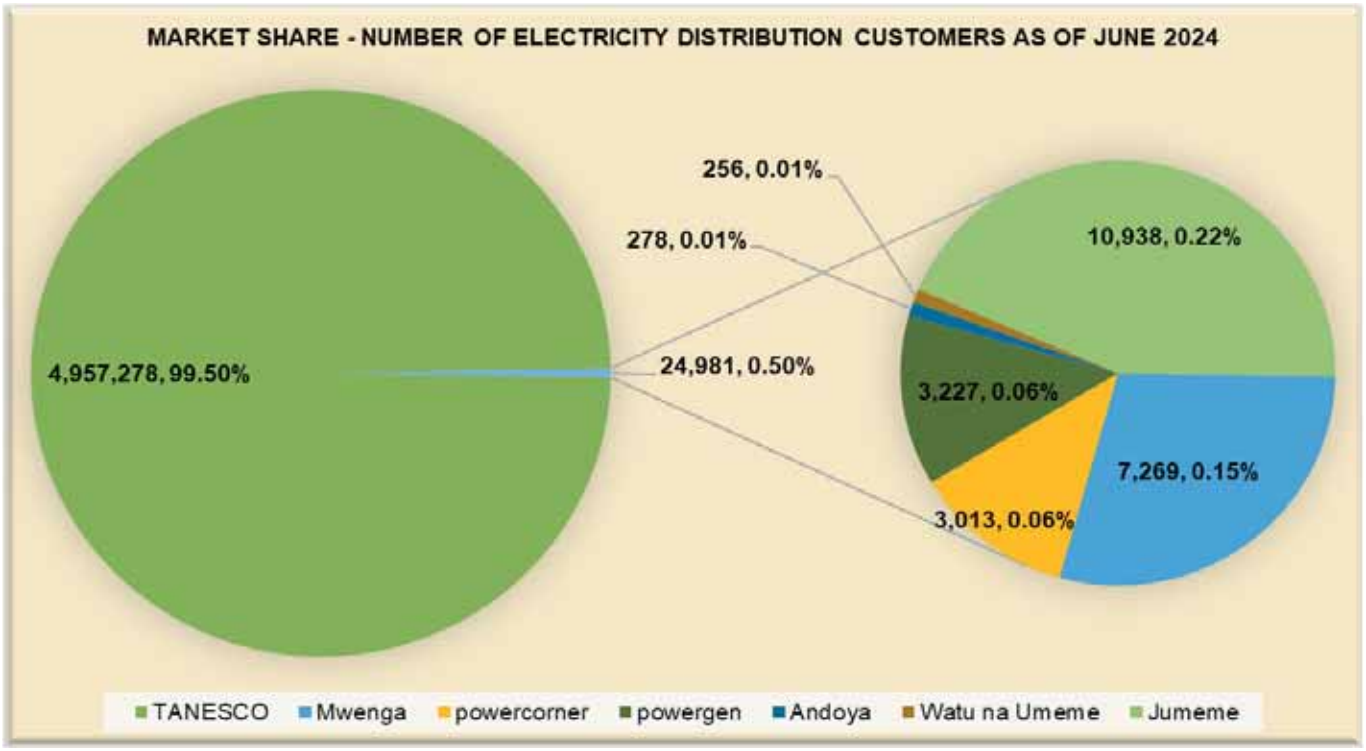


Figure 102: Market Share – Electricity Distribution Customer as of June 2024

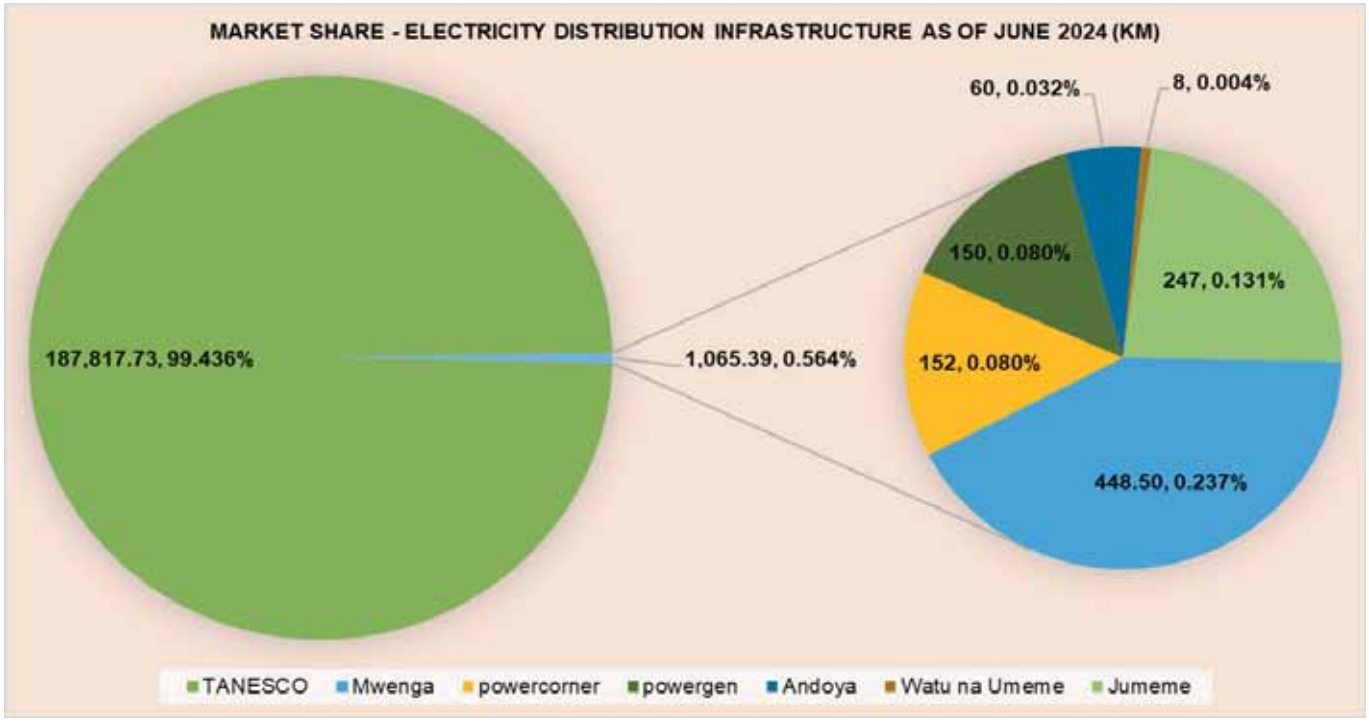


Figure 103: Market Share – Electricity Distribution Infrastructure as of June 2024 (KM)

16. REGULATORY IMPACT

During the period under review, EWURA made the following regulatory impact as a result of its duties and responsibilities upon the electricity sub-sector.

16.1 Affordability of electricity services:

Electrical Installation Licences: During the year under review, 1,569 licenses were issued, hence increasingthe number of licensed personnel to provide electrical installation services, particularly in rural areas thereby promoting customer service through competition. Furthermore, it increased the safety of people and their property.

Tariff Order: Seven (7) tariff orders were approved for utilities supplying electricity to end-user customers. Likewise, one (1) tariff order was issued to small power project selling electricity to the grid. The approved tariff rates are meant to ensure the affordability of electricity services to customers as well as the efficient operation of regulated entities.

16.2 Security Of Electricity Supply

Generation Licence: Three-generation licences were issued of which its commissioning will complement the Government's effort to ensure the security of power supply by adding 14.5MW at the National Grid.

Power Purchase Agreement (PPA): The regulator approved 27 PPAs for private entities to develop power plants during the year under review. When commissioned, the approved PPA will account for 332MW, ensuring the security of the electricity supply.

16.3 Quality and Reliability of Services

Performance agreement: In June 2024, EWURA signed with TANESCO performance agreement that establish key performance indicators necessary for promoting the quality and reliability of electricity supply.

Compliance Monitoring: Compliance monitoring inspections were carried out to all regulated entities to ensure efficient operation and compliance with relevant legislations, aiming at ensuring the quality of electricity supply.

Reliability Of Electricity Supply: The System Average Interruption Frequency Index (SAIFI) improved by 12 (47.7%) from 26 in FY2022/23 to 14 in FY2024. The System Average Interruption Duration Index (SAIDI) improved by 982 minutes (63.9%) from 1,536 in FY2022/23 to 554 in FY2023/24.

16.4 Investments

Several projects that will increase the security of electricity supply upon commissioning were under implementation as follows: For the public sector, there were four (4) Electricity Generation Infrastructures (2,235.5MW), 27 transmission lines (5,033km), and 39 grid substations (3,801MVA). Meanwhile, the private sector developed 39 electricity generation projects accounting for 179.59MW.

16.5 Sustainability of Regulated Entities

In promoting efficient operations and sustainability of regulated entities, tariffs for six (6) mini-grid operators were approved to ensure cost-reflective tariffs and hence sustainability of mini-grids. Likewise, compliance monitoring continued to be conducted as part of enforcing compliance with the approved tariffs for the regulated entities. Furthermore, regulated entities were monitored and measured in compliance with performance agreements to ensure efficient and effective operation.

16.6 Electrification

Compliance monitoring on the performance of regulated entities was going on in line with the performance agreement and relevant legislation to ensure the timely connection of customers to the power supply. As a result, 554,867 new customers were connected in FY2023/2024.

17. CONSUMER SAFEGUARD

17.1 Customer Service Charter

EWURA continued to monitor the services provided by the regulated entities to ensure the quality and reliability of services EWURA enforced the regulated entities supplying electricity to implement a Customer Service Charter for monitoring service provision. TANESCO complied by 82% on the Customer Service Charter's requirements.

17.2 Compliance Monitoring

EWURA conducted compliance monitoring inspections to 29 TANESCO regions, Mwenga Power Services Limited, and Andoya Hydro Electric Power Limited to monitor the quality and reliability of the services provided. Further, the regulator carried out awareness seminars to the general public to enhance awareness of their rights and obligations on services provided by the service providers.

17.3 Performance Agreement

Further, on 14th June 2024, EWURA entered into a Performance Agreement with Key Performance Indicators (KPIs) with TANESCO to ensure the provision of reliable and quality services to the services consumers. EWURA will continue to monitor the implementation of the Performance Agreement.

18. FUTURE OUTLOOK OF THE ELECTRICITY SUPPLY INDUSTRY

The future outlook of electricity industry is encouraging. The following are some anticipated future outlooks of the sub-sector.,

18.1 Generation Mix

As of June 2024, the Tanzania Grid System comprised hydro, thermal, and biomass units owned by TANESCO and IPPs with a total capacity of 2,372.96 MW, out of which hydro was 1,071.27 MW (45.1%), natural gas was 1,198.82 MW (50.5%), liquid fuel was 92.35 MW (3.9%) and biomass was 10.50 MW (0.4%).

Based on the Power System Master Plan 2020, the generation plan indicates that the total installed capacity for the planning horizon (2020–2044) is 20,194 MW of which the overall generation mix is hydro (5,684 MW) 26.28%, natural gas (6,700MW) 36.50%, coal (5,300 MW) 24.55%, wind (800MW) 5.08%, solar (715 MW) 1.52%, and geothermal (995 MW) 6.06%. Further, it indicates that the total power supply capacity in the short term required is 3,966 MW, medium is 12,257MW and long term is 20,194 MW.

Achieving the balanced generation mix will require the implementation of the projects as per the timeline stipulated under PSMP, which requires the involvement of both private and public investments through competitive procurement. In collaboration with the government, EWURA will continue to promote investments and put in place conducive regulatory investment frameworks.

18.2 Generation Forecast

The trends show that there was an increase of 1,203.63 GWh (12.20%) in generated and imported energy, from 9,864.77 GWh in 2023/24 to 11,068.40 GWh in FY 2023/24. The energy generated was expected to continue increasing as per PSMP 2020 projections which indicate that energy generation of 15,271GWh in 2025, 28,663GWh in 2030, 51,496GWh in 2035, 78,657GWh in 2040, and 107,937GWh by 2044. To achieve the intended generation forecast, the private investors should be incentivized to participate in the development of the power projects.

18.3 Power Demand

The trends indicate that there was an increase of maximum demand by 174.73MW (11.88%) from 1,470.50MW in FY 2022/2023 to 1,645.23MW in FY 2023/2024. The electricity demand was expected to continue increasing as per PSMP 2020, whereby the demand is expected to grow at an average of 11.7%, resulting in a demand of 2,677MW in 2025, 4,878MW in 2030, 8,554MW in 2035, 12,854MW in 2040, and 17,611MW in 2044. To achieve that there should be incentives for both grid and off-grid extension investments to promote both private and public investments.

18.4 Electrification

The government through REA in fostering rural electrification in collaboration with TANESCO and private entities, has contributed to the increase of customers connected to the power supply by 559,595 (12.65%) from 4,422,664 in FY 2022/23 to 4,982,259 in FY 2023/24 as in **Figure 61.** Likewise, details of customers for registered entities are presented in **Figure 62.**

The trend indicates that 4,982,259 customers were connected to electricity, an increase of 559,595 (12.65%) from the previous year. Under the PSMP 2020, electricity connectivity is expected to grow to 36.2% in 2025, 48.5% in 2030, 75.7% in 2035, 86.3% in 2040, and 96.1% in 2044. To achieve that, it is imperative that incentives should continue to be provided to both public and private entities to promote increased electricity access and connection.

18.5 System Losses

The trend indicates that the system losses for FY 2023/24 were 14.61%, an increase of 0.04% from 14.57% in the previous year. To reduce the energy losses, the utility is undertaking several initiatives, including the construction of new and rehabilitation of the existing transmission and distribution infrastructure, as well as conducting operational campaigns against energy theft. In future, the system losses are expected to be 12.3% by 2025 to 12% by 2026 as per PSMP 2020 provided that investments are carried out as planned.

18.6 Energy Efficiency and Demand Side Management

To ensure the security of power supply to meet the demand in the sector based on the current growth and the need to preserve the environment, there should be a conducive setting that attracts public and private capital investments in energy efficiency and demand side management. Furthermore, such a conducive setting and incentives should encourage customers to participate in the energy efficiency and demand-side management frameworks. In collaboration with the government, EWURA will continue to create awareness, promote investments, and put in place conducive regulatory frameworks.

18.7 Electricity Market Trend

The country has witnessed several market trends requiring significant amounts of electricity. These include the development of the Liquefied Natural Gas Project; the ongoing adoption of electric mobility technology, the introduction of electric trains following the commencement of construction of the Standard Gauge Railway project (SGR), and country commitments to modern cooking technology, including electricity cooking (e-cooking) to reduce carbon emissions. Thus, EWURA, under the guidance of the government, and in collaboration with other stakeholders will continue to develop the regulatory framework for enhancing the smooth adoption of emerging issues in the electricity supply industry.

19. ACHIEVEMENTS AND CHALLENGES

19.1 Achievements

During the period under review, the positive regulatory environment in the country has led to achievements in the electricity sub-sector that include the following:-

a) Issuance of three (3) generation licenses with a capacity of 14.5MW upon its commissioning to enhance the security of electricity supply.

b) Issuance of 1,569 electrical installation licences to enhance electrical installations, particularly in rural areas.

c) Approval of 27 power purchase agreements for private entities to develop power plants that account for 332MW upon its commissioning, hence increasing the security of the electricity supply.

d) Compliance monitoring for ensuring the efficient operation of 30 entities licensed for electricity generation above one (1) megawatt, one (1) entity licensed for electricity transmission, two (2) entities lilicensed for electricity distribution, 13 entities registered for electricity below one (1) megawatt.

e) Approval of 27 Power Purchase Agreements (PPA) for private entities to develop power plants that account for 332MW upon its commissioning, hence ensuring the security of electricity supply.

f) Compliance monitoring to ensure the performance of fifty-nine (59) existing approved Power Purchase Agreements (PPAs) with a capacity of 629.125MW

g) Compliance monitoring to ensure the performance of tariff orders to Seven (7) entities selling electricity to customers. As well as to entities selling electricity in bulk to the main and off-grid through the Electricity (Standardized Small Power Projects Tariff) Order, 2019.

h) Resolving 146 complaints and disputes between regulated entities and respective customers.

i) Increased installed capacity by 499.87 MW (26.15%) from 1,911.46MW in FY2022/23 to 2,411.33MW in FY 2023/2024.

j) Increased maximum demand by 174.73MW from (11.88%) from 1,470.50MW in FY 2022/2023 to 1,645.23MW in FY 2023/2024.

k) Increase in energy generation and Imports by 1,203.63GWh (12.20%) from 9,864.77GWh in FY 2022/23 to 11,068.40 GWh in FY 2023/2024.

l) Increased transmission line by 674km (9.84%) from 6.7,524km in FY 2023/2024.

m) Increased grid substations by four (4) (6.35%) from 63 in to 67 in FY 2023/2024.

n) Increased distribution infrastructure by 24,521.67 km (14.98%) from 163,744.56 km in FY 2022/23 to 188,266.23 km in FY 2023/24.

o) Increased customer connection by 559,595 (12.65%) from 4,422,664 in FY 2022/23 to 4,982,259 in FY 2023/24.

p) Improvement in reliability of electricity supply where the SAIFI improved by 12 (47.7%) from 26 in FY 2022/23 to 14 in FY 2023/2024. Likewise, the SAIDI improved by 982 minutes (63.9%) from 1,536 in FY 2022/23 to 554 in FY 2023/24.

q) Increased investment whereby, for the public sector, there were four (4) Electricity Generation Infrastructures (2,235.5MW), 27 transmission lines (5,033km), and 39 grid substations (3,801MVA). Meanwhile, the private sector developed 39 electricity generation projects accounting for 179.59MW.

r) Promoting electricity for clean cooking to ensure that 80% of households use clean energy, including electricity for cooking by 2034.

19.2 Challenges

During the period under review, the sub-sector faced some challenges which include the following:

a) Poor hydrology in water catchment areas that affected the performance of hydropower plants; and

b) Inadequate private sector investments in the sub-sector.

20. CONCLUSION

Generally, there is no doubt that electricity demand is growing. To manage the demand, there is a need for more investment in the sub-sector. In this regard, EWURA, in collaboration with the government and other key stakeholders, will continue to regulate and promote more investments in the electricity sub-sector to meet the growing demand.

ANNEX 1: ROLES OF RESPECTIVE INSTITUTIONS IN THE ELECTRICITY SUPPLY INDUSTRY

The Electricity supply industry consists of various institutions. The institutions and their respective roles are provided hereunder.

A. The Ministry of Energy

S/N	Description in line with the Electricity Act, Cap. 131	Sections
1)	Develop and review Government policies in the electricity supply industry	4(10)(a)
2)	prepare, publish, and revise policies, plans, and strategies for the development of the electricity supply industry	4(10)(b)
3)	take all measures necessary to reorganize and restructure the electricity supply industry to attract private sector and other participation, in such parts of the industry, phases, or timeframes as he deems proper	4(10)(c)
4)	through the Rural Energy Agency, prepare, revise, and publish the Rural Electrification Plan and Strategy	4(10)(d)
5)	promote the development of the electricity sub-sector, including the development of Indigenous energy resources	4(10)(e)
6)	take measures to support and promote rural electrification per the Rural Energy Act, including the provision of funding for the Rural Energy Fund;	4(10)(f)
7)	formulate a policy by which electricity may be imported or exported	4(10)(g)
8)	cause to conduct inquiries into accidents or disasters caused by electricity	4(10)(i)

B. The Energy and Water Utilities Regulatory Authority

S/N	Description in line with the Electricity Act, Cap. 131	Sections
1)	award licenses to entities undertaking or seeking to undertake a licensed activity	5(a)
2)	approve and enforce tariffs and fees charged by licensees	5(b)
3)	approve licensees' terms and conditions of electricity supply	5(c)
4)	approve the initiation of the procurement of new electricity supply installations	5(d)
5)	protect customer's interests through the promotion of competition	6(1)(a)
6)	promote access to, and affordability of, electricity services particularly in the rural area	6(1)(b)
7)	promote least-cost investment and the security of supply for the benefit of customers	6(1)(c)
8)	promote improvements in the operational and economic efficiency of the electricity supply industry and efficiency in the use of electricity	6(1)(d)
9)	promote appropriate standards of quality, reliability, and affordability of electricity supply	6(1)(e)
10)	take into account the effect of the activities of the electricity supply industry on the environment	6(1)(f)
11)	protect the public from dangers arising from the activities of the electricity supply industry	6(1)(g)

12)	promote the health and safety of persons in the working environment employed in the electricity supply industry	6(1)(h)
13)	monitor and measure a licensee's performance and compliance with the Electricity Act, Cap. 131	30(1)
14)	Approve power purchase agreement	25(3)
15)	Concluding a performance agreement with Licensees	14(5)(d)

C. Tanzania Electricity Supply Company Limited

S/N	Description in line with the Electricity Act, Cap. 131	Sections
1)	Electricity Generation	8(1)(a)
2)	Electricity Transmission	8(1)(b)
3)	Electricity Distribution	8(1)(c)
4)	Electricity Supply	8(1)(d)
5)	Cross-Border Trade in Electricity	8(1)(e)

D. Private Regulated Entities

S/N	Description in line with the Electricity Act, Cap. 131	Sections
1)	Electricity Generation	8(1)(a)
2)	Electricity Distribution	8(1)(c)
3)	Electricity Supply	8(1)(d)

ANNEX 2: REGULATORY TOOLS AND STANDARDS

The regulatory tools consist of plans, strategies, acts, regulations, rules, and standards. The same are described under respective sub-sections.

A. Policies, Plans, and Strategies

S/N	Description
1)	The National Energy Policy, 2015
2)	National Five-Year Development Plan 2021/22 - 2025/26
3)	Electricity Supply Industry Reform Strategy and Roadmap
4)	The Power System Master Plan 2020
5)	National Clean Cooking Strategy (2024-2034)

B. Acts

S/N	Description
1)	The Electricity Act, Cap.131
2)	The Energy and Water Utilities Regulatory Authority Act, Cap. 414
3)	The Tanzania Extractive Industries (Transparency and Accountability) Act, 2015

C. Regulations

S/N	Description
1)	The Electricity (General) Regulations, 2020
2)	The Electricity (Market Re-Organization and Promotion of Competition) Regulations, 2016
3)	The EWURA (Compounding of Offences) Regulations, 2020

D. Rules

S/N	Description
1)	The Electricity (Generation Transmission and Distribution Activities) Rules, 2023
2)	The Electricity (Electrical Installations Services) Rules, 2022
3)	The Electricity (Licensing and Registration Fees) Rules, 2022
4)	The Electricity and Natural Gas (Tariff Application and Rate Setting) Rules, 2021
5)	The EWURA Consumer Complaints Settlement Rules, 2020
6)	The Electricity (Development of Small Power Projects) Rules, 2020
7)	The Electricity (Procurement of Power Projects and Approval of Power Purchase Agreement) Rules 2019
8)	The Electricity (Supply Services) Rules 2019 and its amendments of 2023
9)	The Electricity (Grid and Distribution Codes) Rules 2017
10)	The Electricity (Grid and Distribution Codes) Rules 2017
11)	The Electricity System Operations Services Rules 2016
12)	Electricity Market Operations Services Rules 2016

E. Standards

S/N	Description
1)	TZS 1373:2011 – Power Quality - Quality of supply
2)	TZS 1374:2011 – Power Quality - Quality of service and reliability.

ANNEX 3: ACTIVE LICENCES AS OF JUNE 2023

(a). Electricity Generation License for Sale as of June 2024

S/N	Name of Licensee	Project Area	Energy Source	Capacity (MW)	Capacity for Sale (MW)	Duration (Years)	License No.	Date of Issue	Date of Expiry
1	Songas	Ubungo	Natural Gas	189	189	33	-	11-Oct-2001	10-Oct-2034
2	TANESCO	Mainland Tanzania	Hydro, Natural Gas, HFO & Diesel	2189.64	2189.64	20	EGL-2013-001	3-Jan-2013	28-Feb-2033
3	TPC Ltd	Moshi	Biomass	20.00	9.00	13	EGL-2012-006	18-Jun-2012	17-Jun-2025
4	Tanganyika Wattle Company Ltd	Njombe	Biomass	2.75	1.50	13	EGL-2012-005	18-Jun-2012	17-Jun-2025
5	Mwenga Hydro Limited	Mufindi	Hydro	4.00	4.00	15	EGL-2013-001	3-Jan-2013	28-Feb-2028
6	Tulila Hydro Electric Plant Co. Ltd	Songea	Hydro	7.50	5.00	20	EGL-2016-001	8-Mar-2016	8-Feb-2030
7	Andoya Hydro Electric Power Co. Ltd	Mbinga	Hydro	1.00	1.00	15	EGL-2016-002	22-Aug-2016	21-Aug-2031
8	Ngombeni Power Limited	Mafia	Biomass	1.40	1.40	15	EGL-2016-003	9-Jul-2016	9-Jun-1931
9	Luponde Hydro Limited	Njombe	Hydro	1.06	0.90	15	EGL-2020-001	30-Jun-2020	29-Jun-2035
10	Madope Hydro Company Ltd.	Ludewa	Hydro	1.84	1.70	15	EGL-2020-002	30-Jun-2020	29-Jun-2035
11	Mwenga Hydro Limited	Mufindi	Wind	2.40	0	15	EGL-2020-003	29-Dec-2020	28-Dec-2035
12	NextGen Solawazi Ltd.	Kigoma	Solar	5.00	5.00	20	EGL–2021 - 002	31-May-2020	30-May-2041
	Total			**46.95 2,425.59**	**29.5 2,408.14**				

(b). Electricity Generation Licence for Own Use as of June 2024

S/N	Name of Licensee	Project Area	Energy Source	Capacity (MW)	Duration (Years)	License No.	Date of Issue	Date of Expiry
1	Ashanti Goldfields T Ltd	Geita	Diesel	31	25	P/G 1134	12-Mar-1999	12-Feb-2024
2	Lake Cement Limited	Kimbiji Village, Temeke	Coal	15.4	15	BEGL-2016-001	29-Mar-2016	28-Mar-2031
3	Tanga Cement Public Limited Co.	Tanga	Diesel	11.48	15	SEGL-2016-001	10-Apr-2016	10-Mar-2031
4	Kilombero Sugar Company Ltd.	Kidatu - Morogoro	Biomass	12.552	15	BEGL-2017-001	18-Apr-2017	17-Apr-2032
5	Kagera Sugar Limited	Misenyi - Kagera	Biomass	6.2	15	BEGL-2017-002	18-Apr-2017	17-Apr-2032
6	Shanta Mine Co. Ltd	Songwe	Diesel	8.2	15	BEGL-2018-001	2-Feb-2018	2-Jan-2033
7	Kilombero Plantations Limited	Morogoro	Biomass	1.692	15	EGL-2018-001	30/2/2018	29-Aug-2033
8	Geita Gold Mining Limited	Geita	Diesel	40	25	BEGL-2018-002	12-Mar-1999	12-Feb-2024
9	Tanzania Cigarette Public Ltd. Co.	Dar es Salaam	Natural Gas	3.8	5	BEGL-2019-001	22-Mar-2019	21-Mar-2024
10	Stamigold Co. Ltd.	Biharamulo	Diesel	7	15	BEGL-2019-002	22-Mar-2019	21-Mar-2034
11	Dangote Cement Ltd.	Mtwara	Natural Gas	45	5	BEGL-2019-003	30-Mar-2019	29-Apr-2024
12	ALAF Ltd.	Dar es Salaam	Natural Gas	4	5	BEGL-2020-001	30-Jan-2020	29-Jan-2025
13	North Mara Goldmine Ltd	Tarime	Heavy Fuel Oil	18	5	EGOWL-2020-001	27-Nov-2020	26-Nov-2025
14	Bulyanhulu Goldmine Ltd	Kahama	Heavy Fuel Oil	39.1	5	EGOWL-2020-002	27-Nov-2020	26-Nov-2025
15	Dangote Cement Limited	Mtwara	Natural Gas	50	5	EGOWL-2021-001	28-Jun-2020	27-Jun-2026
16	Maweni Limestone Ltd.	Tanga	Coal	7.5	5	EGOWL-2022-002	29-Sep-2022	28-Sep-2027
17	Bagamoyo Sugar Ltd.	Bagamoyo	Biomass	5	5	EGOWL-2022-001	9-Sep-2022	8-Sep-2027
18	Kagera Sugar Ltd.	Kagera	Diesel, Bio-mass	27.5	15	EGOWL-2022-003	18-Apr-2017	17-Apr-2032
	Total			**333.424**				

(c). Electricity Transmission Licence as of June 2024

S/N	Name of Licensee	Project Area	Capacity (km)	Duration (Years)	License Number	Date of Issue	Date of Expiry
1	TANESCO	Mainland Tanzania	6110.28	20	ETL-2021-001	1-Mar-2013	28-Feb-2033

(d). Electricity Cross Boarder Trade Licence as of June 2024

S/N	Name of Licensee	Project Area	Duration (Years)	License Number	Date of Issue	Date of Expiry
1	TANESCO	Mainland Tanzania	20	ECBTL-2021-001	1-Mar-2013	28-Feb-1933

(e). Electricity Distribution Licences as of June 2024

S/N	Name of Licensee	Project Area	Length (km)	Customers	Duration (Years)	License Number	Date of Issue	Date of Expiry
1	TANESCO	Mainland Tanzania	163,296.06	4,400,070	20	ESL-2013-001	1-Mar-2013	28-Feb-2033
2	Mwenga Power Services Ltd.	Mufindi & Njombe	495.10	5,636	15	EDL-2013-005	30-Apr-2013	29-Apr-2028
	Total		**163,791.16**					

(f). Electricity Supply Licence as of June 2024

S/N	Name of Licensee	Project Area	Customer	Duration (Years)	License Number	Date of Issue	Date of Expiry
1	TANESCO	Mainland Tanzania	4,400,070	20	ESL-2021-001	1-Mar-2013	28-Feb-1933

(g). Provisional Electricity Generation Licenses as of June 2024

S/N	Licensee	Project Area	Energy Source	Capacity (MW)	Duration (Years)	License Number	Date of Issue	Date of Expiry
1	SSI Energy (T) Limited	Kahama	Solar	10	3	PEGL-2022-001	29 April 2022	28 April 2025
2	Suma Hydro Limited	Rungwe	Hydro	4	3	PEGL-2023-001	18 February 2023	17 February 2026

ANNEX 4: TOTAL REGISTERED ENTITIES SELLING ELECTRICITY AS OF JUNE 2023

No.	Project Area Mini Grid	Generation Capacity (KW)	Registration No.	Duration (Years)	Date of Issue	Date of Expiry	Customer served	Line Length (km)	
								0.23/0.4kV	11/33kV
A.	**Darakuta Hydropower Development Co. Limited (Generating using Hydro, located in the Main Grid and sells to TANESCO)**								
1.	Magugu – Babati District, Manyara Region	450	NA	10	03-Jul-13	02-Jul-23	1	0	0
	Sub-Total	**450**					**1**	**0**	**0**
B.	**Yovi Hydropower Company Limited (Generating using Hydro, located in the Main Grid and sells to TANESCO)**								
1.	Msolwa - Kilosa District, Morogoro Region	995	CRG - 2019 - 009	10	16-Apr-19	15-Apr-29	1	0	0
	Sub-Total	**995**					**1**	**0**	**0**
C.	**PowerCorner Tanzania Limited (generating and distributing using solar, located in off-grid and sells to customers)**								
1	Orkejuloongishu Village, Ketumbeine Ward, Longido District,	15.6	CRG-2016-001 & CRD-2016-001	10	6 October 2016	5 October 2026	81	2	0
2	Mbaya Village, Liwale District, Lindi Region	30	CRG-2018-005 & CRD-2018-005	10	31 October 2018	30 October 2028	270	13.3	0
3	Nakopi Village, Nanyumbu District, Lindi Region	30	CRG-2018-006 & CRD-2018-006	10	31 October 2018	30 October 2028	250	9.8	0
4	Barikiwa Village, Liwale District, Lindi Region	30	CRG-2018-007 & CRD-2018-007	10	31 October 2018	30 October 2028	272	16.5	0
5	Mwenge Village, Sikonge District, Tabora Region	28	CRG-2019-014 & CRD-2019-014	10	1 July 2019	30 June 2029	362	16.9	0
6	Mgambo Village, Sikonge District, Tabora Region	20	CRG-2019-015 & CRD-2019-015	10	1 July 2019	30 June 2029	222	9.7	0
7	Kiegei Village, Nachingwea District, Lindi Region	16	CRG-2019-016 & CRD-2019-016	10	18 December 2019	17 December 2029	256	12.8	0
8	Matekwe Village, Nachingwea District, Lindi Region	12	CRG-2019-017 & CRD-2019-017	10	18 December 2019	17 December 2029	161	9.8	0
9	Lukumbule Village, Nachingwea District, Lindi Region	40.5	CRG-2019-018 & CRD-2019-018	10	18 December 2019	17 December 2029	257	16.3	0
10	Kagerankanda Village, Kasulu District, Kigoma Region	44	CRG-2019-019 & CRD-2019-019	10	18 December 2019	17 December 2029	442	17.6	0
11	Kalya Village, Uvinza District, Kagoma Region	28	CRG-2019-020 & CRD-2019-020	10	18 December 2019	17 December 2029	314	19.7	0
12	Hola Village, Nanyumbu District, Mtwara	16	CRG-2019-021 & CRD-2019-021	10	27 December 2019	26 December 2029	126	7.6	0
	Sub-Total	**310.1**					**3013**	**152.00**	**0**
D.	**Watu na Umeme Limited (generating and distributing using solar, located in the off-grid and sells to customers)**								

1	Mpale, Korogwe District, Tanga Region	48	CRG-2018-001& CRD-2018-001	10	23 April 2018	22 April 2028	256	7.75	0
	Sub-Total	**48**					**256**	**7.75**	**0**
G.	**Power Gen Renewable Energy Limited (generating and distributing using solar, located in the off-grid and sells to customers)**								
1	London Village, Manyoni District, Singida Region.	16	CRG-2018-003 & CRD-2018-003	10	20 August 2018	19 August 2028	210	13	0
2	Ighombwe Village, Ikungi District, Singida Region.	3	CRG-2018-004 & CRD-2018-004	10	20 August 2018	19 August 2028	50	7.1	0
3	Bugalama Village, Ngara District, Kagera Region.	3.18	CRG-2019-001 & CRD-2019-001	10	11 January 2019	10 January 2029	52	2.4	0
4	Murusagamba Village, Ngara District, Kagera Region.	17.16	CRG-2019-002 & CRD-2019-002	10	11 January 2019	10 January 2029	177	8.8	0
5	Kalenge Village, Biharamulo District, Kagera Region.	16.18	CRG-2019-003 & CRD-2019-003	10	11 January 2019	10 January 2029	178	11.4	0
6	Nyantakara Village, Biharamulo District, Kagera Region.	17.18	CRG-2019-004 & CRD-2019-004	10	11 January 2019	10 January 2029	95	7	0
7	Mavota Village, Biharamulo District, Kagera Region.	17.18	CRG-2019-005 & CRD-2019-005	10	11 January 2019	10 January 2029	134	8.1	0
8	Nemba Village, Biharamulo District, Kagera Region.	23.52	CRG-2019-006 & CRD-2019-006	10	11 January 2019	10 January 2029	182	0	0
9	Leshata Village, Gairo District, Morogoro Region.	15.36	CRG-2019-007 & CRD-2019-007	10	28 March 2019	27 March 2029	145	7.5	0
10	Kitaita & Songambele Village, Gairo District, Morogoro Region.	15.36	CRG-2019-008 & CRD-2019-008	10	28 March 2019	27 March 2029	103	3.9	0
11	Itabagumba Village, Ziragula Island, Buchosa District, Mwanza Region	30.32	CRG-2019-010 & CRD-2019-010	10	1 July 2019	30 June 2029	218	9.3	0
12	Busenge Village, Yozu Island, Buchosa District, Mwanza Region	28.68	CRG-2019-011 & CRD-2019-011	10	1 July 2019	30 June 2029	181	10.1	0
13	Kanyara Village, Kasalazi island, Buchosa District, Mwanza Region	30.32	CRG-2019-012 & CRD-2019-012	10	1 July 2019	30 June 2029	251	12.2	0
14	Iglansoni Village, Ikungi District, Mwanza Region	23.96	CRG-2019-013 & CRD-2019-013	10	1 July 2019	30 June 2029	201	12.1	0
15	Lyegoba Island, Ukerewe District, Mwanza Region	30.32	CRG-2020-013 & CRD-2020-013	10	7 December 2020	6 December 1930	180	2.91	0
16	Bezi Island, Ilemela District, Mwanza Region	42.6	CRG-2020-014 & CRD-2020-014	10	7 December 2020	6 December 1930	340	3.59	0
17	Juma Island, Sengerema District, Mwanza Region	42.6	CRG-2020-015 & CRD-2020-015	10	7 December 2020	6 December 1930	180	7.64	0
18	Chembaya Island, Buchosa District, Mwanza Region	29.8	CRG-2020-016 & CRD-2020-016	10	7 December 2020	6 December 1930	155	2.55	0
19	Sozia Island, Bunda District, Mara Region	29.8	CRG-2020-017 & CRD-2020-017	10	7 December 2020	6 December 1930	130	15.1	0
20	Raranya Village, Rorya District, Mara region	6.36	CRG-2020-018 & CRD-2020-018	10	7 December 2020	6 December 1930	65	5.5	0
	Sub-Total	**438.88**					**3227**	**150.19**	**0**

H.	Jumeme Rural Power Supply Ltd (generating and distributing using solar, located in the off-grid and sells to customers)								
1	Bwisya - Ukara Island	90		10	8 April 2016	7 April 2026	682	16.096	5.798
2	Kibumba village, Muleba District	10	CRG-2020-001 & CRD-2020-001	10	14 May 2020	13 May 2030	70	1.572	0
3	Kasenyi village, Muleba District	20	CRG-2020-002 & CRD-2020-002	10	14 May 2020	13 May 2030	334	3.022	0
4	Nabweko village, Ukerewe District	100	CRG-2020-003 & CRD-2020-003	10	14 May 2020	13 May 2030	557	25.388	3.276
5	Kerebe village, Muleba District	35	CRG-2020-004 & CRD-2020-004	10	14 May 2020	13 May 2030	279	2.503	0
6	Goziba village, Muleba District	45	CRG-2020-005 & CRD-2020-005	10	14 May 2020	13 May 2030	379	3.635	0
7	Lukuba village, Musoma District	10	CRG-2020-006 & CRD-2020-006	10	14 May 2020	13 May 2030	155	4.732	0
8	Kanoni village, Buchosa District	100	CRG-2020-007 & CRD-2020-007	10	14 May 2020	13 May 2030	666	18.457	7.05
9	Bunyozi village, Muleba District	45	CRG-2020-008 & CRD-2020-008	10	14 May 2020	13 May 2030	417	7.004	0
10	Mahaiga village, Muleba District	20	CRG-2020-009 & CRD-2020-009	10	14 May 2020	13 May 2030	210	1.418	0
11	Bukiko village, Ukerewe District	100	CRG-2020-010 & CRD-2020-010	10	14 May 2020	13 May 2030	708	20.836	7.61
12	Chifule village, Ukerewe District	100	CRG-2020-011 & CRD-2020-011	10	14 May 2020	13 May 2030	544	18.538	5.49
13	Herembe village, Uvinza District	56	CRG-2021-001 & CRD-2021-001	10	1 June 2021	31 May 2031	323	8.56	0.87
14	Igalula village, Uvinza District	56	CRG-2021-002 & CRD-2021-002	10	1 June 2021	31 May 2031	712	10.18	2.17
15	Kashagulu village, Uvinza District	102	CRG-2021-003 & CRD-2021-003	10	1 June 2021	31 May 2031	831	9.3	0
16	Katumbi village, Uvinza District	20	CRG-2021-004 & CRD-2021-004	10	1 June 2021	31 May 2031	367	4.06	0
17	Lubengela village, Uvinza District	20	CRG-2021-005 & CRD-2021-005	10	1 June 2021	31 May 2031	337	3.73	0
18	Mgambo village, Uvinza District	72	CRG-2021-006 & CRD-2021-006	10	1 June 2021	31 May 2031	513	8.27	1.67
19	Nkona village, Uvinza District	36	CRG-2021-007 & CRD-2021-007	10	1 June 2021	31 May 2031	280	5.45	0
20	Rukoma village, Uvinza District	46	CRG-2021-008 & CRD-2021-008	10	1 June 2021	31 May 2031	641	13.14	0
21	Sibwesa village, Uvinza District	92	CRG-2021-009 & CRD-2021-009	10	1 June 2021	31 May 2031	682	8.71	0
22	Sigunga village, Uvinza District	56	CRG-2021-010 & CRD-2021-010	10	1 June 2021	31 May 2031	773	13.83	4.75
	Sub-Total	**1231**					**10460**	**208.431**	**38.684**
	Total	**3472.98**					**16958**	**518.371**	**38.684**

GENERAL SUMMARY FOR ALL COMPANIES						
A	**Generation Capacity (kW)**	**2020/21**	**2021/22**	**2022/23**	**%±**	**Description**
1	Total VSPP (kW)_Hydro + Solar	3,620.51	3,620.51	3472.98	23%	All registered entities
2	Total_VSPP_solar_Main Grid	0	0	0	0%	No registered entity in this category
3	Total_VSPP_Solar_Off Grid	2,175.50	2,175.50	2027.98	33%	PowerCorner (310.10kW) + Watu na Umeme (48.00kW) + Powergen (438.88kW) + Jumeme (1,231.00kW).
4	Total_VSPP_Hydro_Main Grid	1,315.00	1,315.00	1445	0%	Darakuta (450kW) +Yovi (995kW)
5	Total_VSPP_Hydro_Off Grid	0	0	0	0%	No registered entity in this category
6	Total_VSPP_Main-Grid (2+4)	1,315.00	1,315.00	1445	0%	Darakuta (450kW) +Yovi (995kW)
7	Total_VSPP_Off-Grid (3+5)	2,175.50	2,175.50	2027.98	33%	PowerCorner (310.10kW) + Watu na Umeme (48.00kW) + Powergen (438.88kW) + Jumeme (1,231.00kW).
B	**Number of Customer**	**2020/21**	**2021/22**	**2022/23**	**%±**	
8	Total VSPP _Hydro + Solar	16,661	16,661	16958	34%	All registered entities
9	Total_VSPP_solar_Main Grid	0	0	0	0%	No registered entity in this category
10	Total_VSPP_Solar_Off Grid	16,661	16,661	16956	91%	PowerCorner (3,013) + Watu na Umeme (256) + Powergen (3,227) + Jumeme (10,460).
11	Total_VSPP_Hydro_Main Grid	2	2	2	0%	Darakuta (1) +Yovi (1) – all sell to TANESCO
12	Total_VSPP_Hydro_Off Grid	0	0	0	0%	No registered entity in this category
13	Total_VSPP_Main-Grid (9+11)	2	2	2	0%	Darakuta (1) +Yovi (1) – all sell to TANESCO
14	Total_VSPP off-Grid (10+12)	16,659	16,659	16956	34%	PowerCorner (3,013) + Watu na Umeme (256) + Powergen (3,227) + Jumeme (10,460).
C	**Infrastructure Line length (km)**	**2020/21**	**2021/22**	**2022/23**		
15	Total VSPP _Hydro + Solar	544.91	544.91	557.055	34%	All registered entities
16	Total_VSPP_solar_Main Grid	0	0	0	0%	No registered entity in this category
17	Total_VSPP_Solar_Off Grid	544.91	544.91	557.055	91%	PowerCorner (152) + Watu na Umeme (7.75) + Powergen (150) + Jumeme (247.115)
18	Total_VSPP_Hydro_Main Grid	0	0	0	0%	Darakuta (0) +Yovi (0) – all are generating only
19	Total_VSPP_Hydro_Off Grid	0	0	0	0%	No registered entity in this category
20	Total_VSPP_Main-Grid	0	0	0	0%	Darakuta (0) +Yovi (0) – all are generating only
21	Total_VSPP off-Grid	544.91	544.91	557.055	34%	PowerCorner (152) + Watu na Umeme (7.75) + Powergen (150) + Jumeme (247.115).

ANNEX 5: POWER PURCHASE AGREEMENT

S/N	Name of Developer	Capacity (MW)	Energy Source	Location	Expected COD	Expire Date	Status
1	Songas Tanzania Ltd.	189.00	Gas	Dar es Salaam	01-Aug-04	31-Jul-24	Operational
2	Darakuta Hydropower Development Co. Ltd.	0.32	Hydro	Magugu – Babati	01-Apr-16	31-Mar-31	Operational
3	Matembwe Village Community Co. Ltd.	0.49	Hydro	Njombe	01-Nov-16	31-Oct-31	Operational
4	Mwenga Hydro Limited	3.60	Hydro	Mufindi	27-Sep-12	26-Sep-27	Operational
5	Tulila Hydro Electric Plant Co. Ltd.	5.00	Hydro	Songea	01-Sep-15	30-Aug-30	Operational
6	Andoya Hydro Electric Power Co. Ltd.	1.00	Hydro	Mbinga	20-Mar-15	19-Mar-30	Operational
7	Ngombeni Power Limited	1.40	Biomass	Mafia	01-Feb-14	31-Jan-29	Operational
8	Tanganyika Planting Co. Ltd.	9.00	Biomass	Moshi	16-Sep-15	15-Sep-25	Operational
9	Tanganyika Wattle Co. Ltd.	1.50	Biomass	Njombe	15-Jun-10	14-Jun-25	Operational
10	NextGen Solawazi Ltd.	5.00	Solar	Kigoma	29-May-21	28-May-41	Operational
11	Yovi Hydro Power Plant	1.00	Hydro	Morogoro	14-Nov-16	13-Nov-31	Operational
12	Luponde Hydro Power Plant	0.90	Hydro	Njombe	28-Feb-21	27-Feb-41	Operational
13	Madope Hydro Power Plant	0.70	Hydro	Njombe	28-Mar-23	27-Mar-43	Operational
14	Bagamoyo Sugar Ltd.	1.50	Biomass	Bagamoyo, Pwani	01-Jun-23	31-May-43	Operational
15	ZECO	145.00	Export	Zanzibar	07-Nov-23	06-Nov-53	Operational
16	Rusumo Power Co. Ltd	26.67	Hydro	Ngara, Kagera	30-Sep-23	29-Sep-73	Operational
17	Uganda Electricity Transmission Co. Ltd	7.00	Import	Uganda	02-Feb-22	01-Feb-42	Operational
18	Uganda Electricity Transmission Co. Ltd	30.00	Import	Uganda	17-Aug-23	16-Aug-26	Operational
19	Nishati Lutheran (DKK) Investment Ltd.	0.36	Hydro	Makete, Njombe	12-Sep-23	11-Sep-43	Operational
20	Zambia Electricity Supply Co. Ltd (ZESCO)	20.00	Import	Zambia	01-Sep-17	31-Aug-27	Operational
21	FGS Ecoenergy Ltd.	10.00	Solar	Msalala, Shinyanga	27-Jun-24	27-Dec-25	Construction not commenced
22	FGS Ecoenergy Ltd.	5.00	Solar	Newala, Mtwara	27-Jun-24	27-Dec-25	Construction not commenced
23	Maximum Power Tanzania Ltd.	7.00	Solar	Nsimbo, Katavi	27-Jun-24	27-Dec-25	Construction not commenced
24	Oreon Renewables Ltd.	5.00	Solar	Kaliua, Tabora	27-Jun-24	27-Dec-25	Construction not commenced
25	Oreon Renewables Ltd.	5.00	Solar	Mbozi, Songwe	27-Jun-24	27-Dec-25	Construction not commenced
26	Hareketpower Co. Ltd.	5.00	Solar	Kongwa, Dodoma	27-Jun-24	27-Dec-25	Construction not commenced
27	Hareketpower Co. Ltd.	5.00	Solar	Igunga, Tabora	27-Jun-24	27-Dec-25	Construction not commenced
28	Hareketpower Co. Ltd.	6.00	Solar	Mbarali, Mbeya	27-Jun-24	27-Dec-25	Construction not commenced
29	Mwenga Hydro Ltd.	4.00	Hybrid	Mufindi, Iringa	30-Apr-24	30-Oct-26	Construction not commenced
30	Africa Power Investment	8.00	Hydro	Hai, Kilimanjaro	29-Feb-24	01-Mar-27	Construction not commenced
31	Lilondi Hydro Power	4.50	Hydro	Madaba , Ruvuma	29-Feb-24	01-Mar-27	Construction not commenced
32	LUCSEC Company Limited	3.00	Hydro	Ludewa, Njombe	29-Feb-24	01-Mar-27	Construction not commenced
33	Maximum Power Tanzania Ltd.	5.00	Solar	Nkasi, Rukwa	29-Feb-24	29-Aug-25	Construction not commenced
34	BXC Tanzania Ltd.	5.00	Solar	Kahama, Shinyanga	29-Feb-24	29-Aug-25	Construction not commenced

35	BXC Tanzania Ltd.	5.00	Solar	Bukombe, Geita	29-Feb-24	29-Aug-25	Construction not commenced
36	FGS Ecoenergy Ltd.	6.00	Hydro	Kigoma Rural, Kigoma	29-Feb-24	01-Mar-27	Construction not commenced
37	FGS Ecoenergy Ltd.	5.00	Hydro	Muleba, Kagera	29-Feb-24	01-Mar-27	Construction not commenced
38	CESNE Energy Ltd.	5.80	Solar	Uyui, Tabora	29-Feb-24	29-Aug-25	Construction not commenced
39	SSI Energy	10.00	Solar	Kahama , Shinyanga	28-Dec-23	28-Jun-25	Construction on progress
40	Ninety-Two Limited	1.90	Hydro	Ngorongoro, Arusha	30-Nov-23	30-Nov-26	Construction not commenced
41	ZBS Investment Limited	8.00	Solar	Rorya, Mara	04-Aug-23	04-Feb-25	Construction not commenced
42	ZBS Investment Limited	6.00	Solar	Kiteto, Manyara	04-Aug-23	04-Feb-25	Construction not commenced
43	Convivium Investment	5.00	Solar	Misungwi, Mwanza	04-Aug-23	04-Feb-25	Construction not commenced
44	Suma Hydro Power Ltd	4.00	Hydro	Rungwe, Mbeya	24-Apr-23	24-Apr-26	Construction on progress
45	Mofajusi Investment Ltd	3.00	Hydro	Tanganyika, Katavi	24-Apr-23	24-Apr-26	Construction not commenced
46	Franciscan Sisters of Charity	1.00	Hydro	Kilombero, Morogoro	24-Apr-23	24-Apr-26	Construction on progress
47	Infinite Power Resources Ltd	5.00	Solar	Songwe, Songwe	30-Mar-23	30-Sep-24	Construction not commenced
48	Infinite Power Resources Ltd	8.00	Solar	Chunya, Mbeya	30-Mar-23	30-Sep-24	Construction not commenced
49	Ruaha Energy	2.00	Solar	Mpwapwa, Dodoma	23-Mar-23	23-Sep-24	Construction not commenced
50	Ruaha Energy	0.56	Hydro	Tukuyu, Mbeya	23-Mar-23	23-Mar-26	Construction not commenced
51	Tuliani Hydro Power Co. Ltd.	5.00	Hydro	Mvomero, Morogoro	28-Jan-23	28-Jan-26	Construction not commenced
52	Bugando Natural Energy Ltd.	5.00	Solar	Magu, Mwanza	29-Dec-22	29-Jun-24	Construction not commenced
53	Lung'ali Natural Resources Co. Ltd.	1.28	Hydro	Kilolo, Iringa	24-Nov-22	24-Nov-25	Construction on progress
54	Rukwa Generating Co. Ltd	0.95	Hydro	Sumbawanga, Rukwa	16-Aug-22	16-Aug-25	Construction on progress
55	Bwelui Co. Ltd.	4.70	Hydro	Ileje, Songwe	16-Aug-22	16-Aug-25	Construction not commenced
56	Tangulf Nakakuta Energy Co. Ltd.	5.00	Hydro	Songea, Ruvuma	16-Aug-22	16-Aug-25	Construction not commenced
57	Luponde Hydro Ltd.	2.00	Hydro	Njombe, Njombe	16-Aug-22	16-Aug-25	Construction on progress
58	JUMEME Rural Power Supply	1.00	Solar	Sumbawanga, Rukwa	29-Apr-22	29-Oct-23	Construction not commenced
59	JUMEME Rural Power Supply	1.00	Solar	Mpanda, Katavi	29-Apr-22	29-Oct-23	Construction not commenced
	Total	**629.125**					

ANNEX 6: PUBLISHED TARIFFS FOR REGISTERED ENTITIES SELLING ELECTRICITY TO CUSTOMERS

S/N	Description	Technology	Customer Category	Period	Unit	Approved Tariff			Effective Date
						2022	2023	2024	
1	The Electricity Powercorner Tanzania Limited ("Powercorner") (Tariff) Order, 2022	Solar	Small	Anytime	TZS/kWh	1,140	1,200	1,100	26 Aug 2022
			Medium		TZS/kWh	1,080	1,140	1,050	
			Large		TZS/kWh	940	990	910	
			Productive use		TZS/kWh	920	1,040	1,020	
2	The Electricity PowerGen Renewable Energy Limited ("PowerGen") (Tariff) Order, 2022	Solar	Residential	Anytime	TZS/kWh	1,500	1,500	1,500	26 Aug 2022
			Business		TZS/kWh	1,500	1,500	1,500	
			Productive Use		TZS/kWh	1,300	1,300	1,300	
			Public Institution		TZS/kWh	1,200	1,200	1,200	
3	Electricity (Watu na Umeme Tanzania Limited) (Watu na Umeme) (Tariff Adjustment for Electricity Service) Order, 2022	Solar	Basic Household	Anytime	TZS/kWh	1,306	1,306	1,306	18 Nov 2022
			Medium Household		TZS/kWh	1,086	1,086	1,086	
			Small Business/ Public Institutions		TZS/kWh	941	941	941	
			Productive user		TZS/kWh	801	801	801	
4	The Electricity Jumeme Rural Power Supply ("Jumeme") (Tariff) Order, 2022	Solar	Residential Users	Day	TZS/kWh	1,470	1,690	1,710	26 Aug 2022
				Night	TZS/kWh	1,470	1,690	1,710	
			Commercial Users	Day	TZS/kWh	1,340	1,540	1,560	
				Night	TZS/kWh	1,440	1,650	1,670	
			Productive Users	Day	TZS/kWh	1,130	1,300	1,310	
				Night	TZS/kWh	1,350	1,550	1,570	
5	The Electricity (Husk Power System Limited) (Husk Power) (Tariff Adjustment for Electricity Service) Order, 2022	Solar	Basic Residential	Day	TZS/kWh	1,300	1,300	1,300	18 Nov 2022
				Night	TZS/kWh	1,300	1,300	1,300	
			Commercial	Day	TZS/kWh	1,300	1,300	1,300	
				Night	TZS/kWh	1,300	1,300	1,300	

ANNEX 7: THE ELECTRICITY STANDARDIZED SMALL POWER PROJECTS TARIFF

Note: *It was published on 21st June 2019, GN 464*

a) Tariff for SPPs Selling Electricity to the Grid Based on Specific Technology

Capacity	Mini hydro	Wind	Solar	Biomass	Bagasse
	USc[1]/kWh	USc/kWh	USc/kWh	USc/kWh	USc/kWh
0.1 - 0.5MW	10.65	10.82	10.54	10.15	9.71
0.51 - 1 MW	9.90	9.95	9.84	9.34	9.09
1.01 - 5MW	8.95	9.42	9.24	8.64	8.56
5.01 - 10MW	7.83	8.88	8.34	7.60	7.55

b) Tariffs for Main Grid Connection under the First Generation SPP Framework (Avoided Cost)

Description		Approved Tariff effective 1st May 2019 (TZS/kWh)
Standardized Small Power Purchase Tariff		203.11
Seasonally adjusted Standardized SPPT Payable in	Dry season	243.73
	Wet season	182.80

c) Entities in First Generation (Avoided Operational Cost-Based) Tariff

S/N	Name of Power Producer	Capacity (MW)	Source	Location
1.	TANWAT	1.50	Biomass	Njombe
2.	TPC Ltd	9.0	Biomass	Kilimanjaro
3.	Mwenga HPP	4.0	Hydro	Iringa
4.	Andoya HPP	1.0	Hydro	Ruvuma
5.	Matembwe HPP	0.4	Hydro	Njombe
6.	Tulila HPP	5.0	Hydro	Ruvuma
7.	Darakuta HPP	0.36	Hydro	Manyara
8.	Yovi HPP	1.0	Hydro	Morogoro
	Total	**22.26**		

ANNEX 8: TANZANIA ELECTRIC SUPPLY COMPANY LIMITED (TANESCO) TARIFF

a) Approved TANESCO Tariff from 1st April 2016

Customer Category	Component	Unit	Approved Tariff
D1	Service charge	TZS/Month	0
	Energy charge (0-75kWh)	TZS/kWh	100
	Energy charge above 75kWh	TZS/kWh	350
T1	Service charge /month	TZS/Month	0
	Energy charge	TZS/kWh	292
	Maximum Demand charge	TZS/kVA/Month	0
T2	Service charge	TZS/Month	14,233
	Energy charge	TZS/kWh	195
	Maximum Demand Charge	TZS/kVA/Month	15,004
T3-MV	Service charge	TZS/Month	16,769
	Energy charge	TZS/kWh	157
	Maximum Demand Charge	TZS/kVA/Month	13,200
T3-HV	Service charge	TZS/Month	0
	Energy charge	TZS/kWh	152
	Maximum Demand Charge	TZS/kVA/Month	16,550
Key			
D1: Low usage Tariff for Domestic Customers who on average consume less than 75kWh per month. Any unit exceeding 75kWh is charged a high rate of TZS 350 per kWh. Under this category, power is supplied at a low-voltage single phase (230V).			
T1:General Usage Tariff for customers including residential, small commercial and light industrial use, Public lighting and billboards. Power is supplied at low voltage single phase (230V) as well as three phase (400V).			
T2: Applicable to general use customers where power is metered at 400V and average consumption is more than 7,500kWh per meter reading period and demand does not exceed 500kVA per meter reading period.			
T3-MV: Applicable customers connected to Medium Voltage			
T3-HV: Applicable customers connected to High Voltage including ZECO, Bulyanhulu and Twiga cement.			

b) Approved TANESCO Charges

i. Single Phase Charges

Service line	Approved Connection Charge (TZS)	
	Urban rate (VAT exclusive)	Rural rate (VAT inclusive)
Within 30 Meters	272,000	27,000
Within 70 Meters (one pole)	436,964	27,000
Within 120 Meters (two poles)	590,398	27,000

ii. Three Phase Charges for Urban and Rural Area

Service line	Meter Type	Approved Connection Charge (TZS)	
		Urban rate (VAT exclusive)	Rural rate (VAT exclusive)
Within 30 Meters (Cable 16mm^2)	LUKU	772,893	772,893
Within 30 Meters (Cable 16mm^2)	AMR		
Within 30 Meters (Cable 35mm^2)	LUKU		
Within 30 Meters (Cable 35mm^2)	AMR		
Within 70 Meters (one pole)	LUKU	1,058,801	1,058,801
Within 70 Meters (one pole)	AMR		
Within 120 Meters (two poles)	LUKU	1,389,115	1,389,115
Within 120 Meters (two poles)	AMR		

iii. Service line application fee

Tariff category	Approved Fee (TZS)
All customers	Nil

iv. Charges for Installation of Meter in Case of Damage Due to Meter Tempering/ Broken

Customer category	Description	Approved Charges TZS (VAT exclusive)
D1&T1	LUKU (Single Phase	60,000
	LUKU (Three Phase)	200,000
	AMR (Three Phase)	300,000
T2	CT – Operated Meters	1,200,000
T3	CT/CV- Operated Meters	1,200,000

v. Testing and Inspection of Installation Fee

Customer category	Approved charges in TZS (VAT exclusive)
D1	20,000
T1	20,000
T2	30,000
T3	50,000

vi. Temporary power supply charges

Customer Category	Description	Approved Charges in TZS (VAT exclusive)
T2	Connection Fee	Full cost plus 10%
T3		Full cost plus 10%
T2	Meter Deposit	200,000
T3		500,000

vii. Energy Deposit for Pos- Paid Meters

Customer category	Description	Approved Charges in TZS (VAT exclusive)
D1	Single Phase	30,000
T1	Single Phase	30,000
T1	Three Phase	150,000
T2	Three Phase	200,000
T3	Three Phase	500,000

ANNEX 9: MWENGA HYDRO LIMITED TARIFF

a) Approved Tariffs

Customer Category		Component	Approved Rates
D1		Basic Charge	0.00
	Domestic Low Usage	Energy Charge (0-50kWh/ Month)	60.00
	High-Cost Unit Penalty – High Usage	Energy Charge (50+ kWh/ Month	273.04
T1	All other customers inclusive of domestic users averaging more than 50 kWh/Month	Energy Charge (inclusive of average fixed monthly service fee component)	234.04
Source: EWURA			

b) Approved Service Line Connection Charges

Description	After the First 2600 Connections (TZS)	The First 2600 connections (subsidized) (TZS)
Application fees	5,000	5,000
(a) Overhead Service Line - Single Phase (30m)		
D1 with LUKU meter	385,682	180,000
T1 with LUKU meter	385,682	180,000
(b) Overhead Service Line - Three Phase (30m)		
T1 with LUKU meter (16mm2 cable)	772,893	380,000
T1 with LUKU meter (36mm2 cable)	913,202	450,000
(c) Single Phase 70m Route		
Single phase 70m route length - including 1 pole (LUKU)	1,145,664	850,000
(d) Three Phase 70m Route		
Three phase 70m route length - including 1 pole (LUKU)	1,799,062	1,300,000
Source: *EWURA*		

ANNEX 10: ENERGY LOSSES

TANESCO

Transmission Energy Losses for TANESCO

Description	2017/18	2018/19	2019/20	2020/212	2021/223	2022/23	2023/24
Energy Received in Transmission System (GWh)	6,742.41	7,413.95	7,531.11	7,891.33	8,821.89	9,505.20	10,451.33
Energy Sent for Distribution (GWh)	6,341.68	6,975.21	7,085.79	7,424.12	8,232.26	8,943.69	9,835.924
Energy for Auxiliaries	3.56	3.17	2.41	2.76	70.37	2.92	2.79
Losses (GWh)	397.16	435.55	442.92	464.46	519.26	558.60	612.61
Losses (%)	5.89	5.87	5.89	5.89	5.89	5.88	5.86

Source: TANESCO

Electricity Distribution Losses for TANESCO

Year	Energy Distributed (GWh)4	Energy Sales (GWh)5	Losses (GWh)	Losses (%)
2023/24				
2022/23	8,403.65	7,673.69	729.96	8.69
2021/22	7,854.39	7,167.31	687.09	8.75
2020/21	7,622.27	6,898.49	723.78	9.50
2019/20	7,257.64	6,574.70	682.94	9.41
2018/19	7,314.14	6,557.13	757.01	10.35
2017/18	6,642.67	6,341.68	300.99	4.53

Source: TANESCO

(a) Mwenga Power Services Ltd

Year	Energy Distributed (GWh)	Energy Sales (GWh)	Losses (GWh)	Losses (%)
2923/24				
2022/23	21.55	20.26	1.29	5.99
2021/22	30.00	29.00	1.8	6.00
2020/21	25.28	23.891	1.389	5.49
2019/20	20.68	19.701	0.979	4.73
2018/19	15.86	15.182	0.673	4.24
2017/18	19.18	18.473	0.707	3.69

Source: *Mwenga Power Services Ltd*

(b) Andoya Hydro Electric Power Co. Ltd

Year	Energy Distributed (GWh)	Energy Sales (GWh)	Losses (GWh)	Losses (%)
2023/24				
2022/23	0.602	0.594	0.008	1.330
2021/22	3.013	2.893	0.120	3.980
2020/21	4.041	3.865	0.180	4.340
2019/20	2.792	2.640	0.156	5.590
2018/19	2.742	2.584	0.158	5.750
2017/18	2.995	2.773	0.222	7.410

Source: *Andoya Hydro Electric Power Co. Ltd*

ANNEX 11: INSTALLED CAPACITY

(a) Grid and Off-Grid installed capacity by Power Plant

Part I: Main Grid Power Plants	No. of Units	Energy Source	Installed Capacity (MW)
(a) Power Plant Owned by TANESCO			
Hydro Power Plants			
1. JNHPP	2	Hydro	470
2. Kidatu	4	Hydro	204
3. Kihansi	3	Hydro	180
4. Mtera	2	Hydro	80
5. New Pangani Falls	2	Hydro	68
6. Rusumo			
7. Hale	2	Hydro	21
8. Nyumba ya Mungu	2	Hydro	8
9. Uwemba	3	Hydro	0.84
Sub-Total Hydro			***1,058.51***
Natural Gas			
1. Ubungo I	12	Natural Gas	102
2. Ubungo II	3	Natural Gas	129
3. Ubungo III	5	Natural Gas	112.5
4. Tegeta	5	Natural Gas	45
5. Kinyerezi I	4	Natural Gas	150
6. Kinyerezi I Ext	4	Natural Gas	185
7. Kinyerezi II	6	Natural Gas	248.22
8. Mtwara	9	Natural Gas	30.6
9. Somanga	3	Natural Gas	7.5
Sub-Total Natural Gas			***1,009.82***
Liquid Fuels			
1. Zuzu (Tanesco)	3	HFO	7.444
2. Nyakato Plant	10	HFO	63.000
3. Biharamulo (Tanesco)	4	GO	2.722
4. Songea	3	GO	5.736
5. Liwale	2	GO	0.848
6. Tunduru	2	GO	1.048
7. Ludewa	3	GO	1.270
8. Mbinga	1	GO	1.000
9. Loliondo	1	GO	1.000
10. Ngara (Tanesco)	1	GO	1.250
11. Kasulu	4	GO	4.550
12. Kibondo	2	GO	2.500
13. Kigoma	7	GO	8.750
Sub-Total HFO/GO			***101.12***
Sub-Total Main Grid Power Plant Owned by TANESCO			***2,160.70***

(b) Power Plant owned by Independent Power Producer (IPP)			
1. Songas	6	Natural Gas	189
Sub-Total Main Grid Power Plant owned by IPP			***189***
(c) Small Power Producers (SPP) owned by Private Entity			
1. TANWAT	1	Biomass	1.5
2. TPC	1	Biomass	9
3. Mwenga Hydro Limited	1	Hydro	4
4. Andoya	1	Hydro	1
5. Tulila	2	Hydro	5
6. Yovi	1	Hydro	0.95
7. Darakuta	1	Hydro	0.45
8. Matembwe	1	Hydro	0.59
9. Luponde	1	Hydro	0.9
Sub-Total Main Grid Small Power Producers (SPP)			**23.26**
Total Main Grid Installed Capacity			***2,372.96***
Part II: Off-Grid Power Plant			
(a) Off-Grid Power Plant owned by TANESCO			
1. Kigoma	7	GO	8.75
2. Mpanda	5	GO	6.25
3. Mafia	5	GO	3.2
4. Sumbawanga	4	GO	5
5. Inyonga	3	GO	1.932
6. Bukoba	4	GO	2.56
Sub-Total Off-Grid Power Plant owned by TANESCO			**28.942**
(b) **Power Plant owned by Small Power Producers (SPP)**			
1. Mwenga Hydro Limited	3	Wind	2.4
2. NextGen Solawazi	16,160	Solar	5
Sub-Total Off-Grid Power Plant owned by SPP			**7.4**
(c) Sub-Total Off-Grid Power Plant owned by Private Entities - Refer Annex 5			**2.03**
Total Off-Grid Installed Capacity			**38.372**
National System Total (Main Grid and Off-Grid)			**2,411.33**
Source: Daily Operation Report from TANESCO and EWURA Licensee Data Base			

(b) Grid and Off-Grid installed capacity by Technology

S/N	Power Plant Name	Location	Installed Capacity (MW)	Energy Source
1.	Kidatu	Morogoro	204.00	Hydro
2.	Kihansi	Morogoro	180.00	Hydro
3.	Mtera	Iringa	80.00	Hydro
4.	N/P Falls	Tanga	68.00	Hydro
5.	Hale	Tanga	21.00	Hydro
6.	Nyumba ya Mungu	Kilimanjaro	8.00	Hydro
7.	Uwemba	Njombe	0.84	Hydro
8.	Mwenga	Njombe	4.00	Hydro
9.	Matembwe	Njombe	0.59	Hydro
10.	Yovi	Morogoro	0.95	Hydro
11.	Andoya	Ruvuma	1.00	Hydro
12.	Tulila	Ruvuma	5.00	Hydro
13.	Darakuta	Manyara	0.32	Hydro
14.	Luponde	Njombe	0.90	Hydro
15.	Songas	Dar es Salaam	189.00	Natural Gas
16.	Ubungo I	Dar es Salaam	102.00	Natural Gas
17.	Ubungo II	Dar es Salaam	129.00	Natural Gas
18.	Ubungo III	Dar es Salaam	120.00	Natural Gas
19.	Tegeta	Dar es Salaam	45.00	Natural Gas
20.	Kinyerezi I	Dar es Salaam	150.00	Natural Gas
21.	Kinyerezi II	Dar es Salaam	248.22	Natural Gas
22.	Mtwara	Mtwara	30.60	Natural Gas
23.	Somanga	Lindi	7.50	Natural Gas
24.	Liwale	Lindi	0.85	Diesel
25.	Zuzu	Dodoma	7.40	Diesel
26.	Nyakato	Mwanza	63.00	Diesel
27.	Bihalamulo	Kagera	4.14	Diesel
28.	Songea	Ruvuma	5.77	Diesel
29.	Tunduru	Ruvuma	1.72	Diesel
30.	Mbinga	Ruvuma	1.00	Diesel
31.	Madaba	Ruvuma	0.48	Diesel
32.	Ludewa	Njombe	1.27	Diesel
33.	Ngara	Kagera	2.50	Diesel
34.	Kigoma	Kigoma	6.25	Diesel
35.	Mpanda	Katavi	5.05	Diesel
36.	Mafia	Coast	3.20	Diesel
37.	Sumbawanga	Rukwa	6.25	Diesel
38.	Kasulu	Kigoma	2.50	Diesel
39.	Kibondo	Kigoma	2.50	Diesel
40.	Loliondo	Manyara	3.50	Diesel
41.	Inyonga	Njombe	0.82	Diesel
42.	Bukoba	Kagera	2.56	Diesel
43.	PowerCorner	Manyara, Lindi, Mtwara, Tabora	0.31	Solar
44.	E.O. N	Dodoma	0.03	Solar
45.	Ruaha Energy	Morogoro	0.13	Solar
46.	Watu na Umeme	Tanga	0.05	Solar
47.	PowerGen	Singida, Kagera, Morogoro, Mwanza, Mara	0.44	Solar
48.	Jumeme	Mwanza and Kagera	1.23	Solar

ANNEX 12: POWER PLANTS OPERATION PERFORMANCE DATA

(a). Main Grid Power Plants Utilization for FY 2023/24

Plants Name	Energy Source	Installed Capacity (MW)	Unit to be Generated (kWh)	Units Generated (kWh)	Plant Utilization (%)
Part A: Hydro Power Plants					
Kidatu	Hydro	204	1,787,040,000	1,208,393,550	67.62%
Kihansi	Hydro	180	1,576,800,000	600,556,749	38.09%
Mtera	Hydro	80	700,800,000	520,828,000	74.32%
Hale	Hydro	21	183,960,000	27,719,993	15.07%
New Pangani Falls	Hydro	68	595,680,000	146,755,460	24.64%
Nyumba ya Mungu	Hydro	8	70,080,000	19,729,720	28.15%
Hydro Plant Utilization		**561**	**4,914,360,000**	**2,523,983,472**	**51.36%**
Part B: Natural Gas Power Plants					
Songas	Natural Gas	189.0	1,655,640,000	1,411,495,406	85.25%
UGP1	Natural Gas	102.5	897,900,000	454,782,000	50.65%
UGP2	Natural Gas	129.0	1,130,040,000	1,034,709,000	91.56%
UGP3	Natural Gas	112.5	985,500,000	739,787,801	75.07%
TGP	Natural Gas	43.7	382,812,000	268,068,000	70.03%
Kinyerezi I	Natural Gas	150.0	1,314,000,000	1,192,210,480	90.73%
Kinyerezi II	Natural Gas	248.2	2,174,232,000	1,791,281,890	82.39%
Mtwara	Natural Gas	30.4	266,304,000	122,173,585	45.88%
Somanga	Natural Gas	7.5	65,700,000	9,335,000	14.21%
Natural Gas Plant Utilization		**1,013**	**8,872,128,000**	**7,023,843,162**	**79.17%**
Part C: Liquid Fuel Power Plants					
TANESCO Diesel (Zuzu)	HFO&Diesel	7.44	65,174,400	1,622,780	2.49%
Nyakato	HFO&Diesel	63.00	551,880,000	10,936,986	1.98%
Biharamulo	Diesel	1.25	10,950,000	237,440	2.17%
Ngara	Diesel	1.25	10,950,000	847,131	7.74%
Loliondo	Diesel	1.00	8,760,000	-	-
Kasulu	Diesel	3.75	32,850,000	4,534,665	13.80%
Kibondo	Diesel	2.50	21,900,000	2,098,265	9.58%
Liquid Fuel Plant Utilization		**80.19**	**702,464,400**	**20,277,267**	**2.89%**
TOTAL MAIN GRID			**14,488,952,400**	**9,568,103,901**	**66.04%**

(b). Off-Grid Power Plants Operation Performance for FY 2023/24

Plants Name	Energy Source	Installed Capacity (kW)	Plant Availability (%)	Plant Utilization (%)
Kigoma	Diesel	8750	99.00	46.00
Mpanda	Diesel	6250	90.32	48.95
Mafia	Diesel	3200	89.87	28.42
Sumbawanga	Diesel	5000	97.74	38.50
Bukoba	Diesel	2460	94.61	45.25
Inyonga	Diesel	1932	48.48	23.09
Average			**86.67**	**38.37**

ANNEX 13: DETAILS OF TRANSMISSION LINE INFRASTRUCUTURE

S/N	Name of Transmission Line	Voltage Level (kV)	Route (km)	Capacity (MW)	Peak Load Demand (MW)	Demand to Capacity Ratio (%)
1	400kV Iringa-Dodoma 1	400	225	329	226.1	69%
2	400kV Dodoma-Singida 1	400	164	411	277	67%
3	400kV Singida-Shinyanga 1	400	282	274	149.33	55%
4	400kV Singida-Lemugur	400		1000	124.54	12%
5	400kV Lemugur -Isinya	400	414	1000		0%
6	400kV JNHPP -New CH1	400	159.75	1247.04	340.15	27%
7	220kV Ubungo-Luguruni	220	15	274	164.22	60%
8	220kV Ubungo-Kinyerezi	220	15	274	204	74%
9	220kV Luguruni-New Chalinze	220	62	274	186.53	68%
10	220kV Kinyerezi-New Chalinze	220	95	274	123.29	45%
11	220kV Morogoro-New Chalinze 1	220	89	274	227.01	83%
12	220kV Morogoro-New Chalinze 2	220	89	274	233.25	85%
13	220kV Morogoro-Kidatu 1	220	128	274	163.62	60%
14	220kV Morogoro-Kidatu 2	220	130	274	164.61	60%
15	220kV Kidatu-Iringa	220	160	274	231	84%
16	220kV Kidatu-Ifakara	220		274	124	45%
17	220kV Ifakara-Kihansi	220	180	274	130	47%
18	220kV Kihansi-Iringa	220	96.9	274	233.2	85%
19	220kV Iringa-Mufindi	220	130	154	135.1	88%
20	220kV Iringa-Mtera	220	107	206	98.87	48%
21	220kV Mtera-Dodoma	220	130	206	124	60%
22	220kV Dodoma-Singida old	220	210	206	198	96%
23	220kV Singida/Shinyanga old	220	200	206	109.09	53%
24	220kV Shinyanga-Mwanza	220	140	154	139.5	91%
25	220kV Shinyanga-Bulyanhulu	220	129.46	102.88	89.95	87%
26	220kV Mufindi-Makambako	220	38.9	154	120	78%
27	220kV Makabako-Madaba	220	110	109	29.12	27%
28	220kV Makambako-Mbeya	220	181.1	109	86.83	80%
29	220kV Madaba-Songea	220	140	109	20	19%
30	220kV Singida-Babati	220	150	206	84.12	41%
31	220kV Babati-Lemugur	220	146	206	51	25%
32	220kV Lemugur-Njiro	220	16	154	95.56	62%
33	220kV Shinyanga-Buzwagi	220	108	57	17	30%
34	220kV-Bulyanhuru-Geita	220	55	301.8	60.06	20%
35	220kV-Geita-Nyakanazi	220	143.16	329.2	21.73	7%
36	220kV-Nyakanazi-Rusumo	220	94.1	342.9	21.28	6%
37	220kv-SGR Dar - Moro	220	159	274	171	62%
38	220kv-SGR Moro-Dodoma	220	415	274	237	86%
39	132kV Ubungo-New Chalinze	220	87	133.75	65.96	49%
40	132kV New Chalinze/Old Chalinze	132	5	164	151.44	92%
41	132kV Morogoro-Chalinze	132	82	82.3	29	35%
42	132kV Chalinze-Hale	132	175	133.75	91	68%
43	132kV Ilala-Jangwani(OHL)	132	1.3	123.46	73.8	60%
44	132kV Jangwani-NCC(UNDERGROUND)	132	1.8	113	73.8	65%
45	132kV Ubungo-Ilala 1ST	132	9.5	205.76	95	46%
46	132kV Ubungo-Ilala 2ND	132	9.5	205.76	95	46%
47	132kV Ubungo-Kunduchi 1ST	132	12	92.59	80	86%
48	132kV Ubungo-Kunduchi 2ND	132	12	102.88	121	118%

S/N	Name of Transmission Line	Voltage Level (kV)	Route (km)	Capacity (MW)	Peak Load Demand (MW)	Demand to Capacity Ratio (%)
49	132kV Ubungo-Makumbusho	132	7	133.75	118	88%
50	132kV Kunduchi-Zanzibar 1	132	64	41.15	28.3	69%
51	132kV Kunduchi-Zanzibar 2	132	63.6	102.88	94	91%
52	132kV Mwanza-Musoma	132	210	82.3	55.1	67%
53	132kV Musoma-Nyamongo	132	90	41.15	30	73%
54	132kV Shinyanga-Tabora	132	203	30.86	25.8	84%
55	132kV Kiyungi-Kia 1ST	132	35	90.54	16.96	19%
56	132kV Kiyungi-Kia 2ND	132	35	90.54	24.26	27%
57	132kV Kia-Njiro 1ST	132	36.6	90.54	30.74	34%
58	132kV Kia-Njiro 2ND	132	35	90.54	31.08	34%
59	132kV Makumbusho-NCC	132	6.67	154	40	26%
60	132kV Gongo la Mboto-Kinyerezi	132	3	82.3	41	50%
61	132kV Ubungo-Kipawa	132	11	197.73	196	99%
62	132kV Kipawa-Mbagala	132	7.4	98.77	98.8	100%
64	132kV-Mbagala-Dege	132	28	98.77	67	68%
65	132kV-Dege-Kurasini	132	22	98.77	30	30%
67	132kV Rhino-Tanga	132	8.5	61.73	28.62	46%
68	132kV Hale-Rhino	132	60	61.73	35.2	57%
69	132kV Pangani-Tanga	132	63.5	61.73	13.68	22%
69	132kV Hale-NPF	132	13.5	61.73	52	84%
70	132kV-Mtukula-Kyaka	132	30	49.38	28.95	59%
71	132kV Kyaka-Bukoba	132	54	41.15	13	30%
72	132kV Hale-Kiyungi	132	275	98.77	31.89	32%
73	132kV Mtwara-Mahumbika	132	80	65.84	16	24%
74	66kV Kiyungi-Nyumba ya Mungu	66	53	10	7.47	75%
75	66kV Kiyungi-Arusha	66	78	10	-	
76	66kV Kiyungi-Makuyuni	66	34	20	15.31	77%
77	66kV Babati-Kondoa	66	85	15	9.3	62%
78	66kV Babati-Mbulu	66	85	34	13.8	41%
79	66kV Mbulu-Karatu	66	65	15	9.48	63%
80	66kV-Mbala-Sumbawanga	66	120		14.5	
81	66KV Bunda-Kibara	66	60	15	3.8	25%
	Total		7,524			

ANNEX 14: PRIVATE ENTITIES WITH SMALL POWER PURCHASE AGREEMENTS (SPPA) FOR GENERATING ELECTRICITY

S/N	Name of Developer	Capacity (MW)	Energy Source	Location	Approval Date	Tentative COD
1	FGS Ecoenergy Ltd.	10.00	Solar	Msalala, Shinyanga	27-Jun-24	27-Dec-25
2	FGS Ecoenergy Ltd.	5.00	Solar	Newala, Mtwara	27-Jun-24	27-Dec-25
3	Maximum Power Tanzania Ltd.	7.00	Solar	Nsimbo, Katavi	27-Jun-24	27-Dec-25
4	Oreon Renewables Ltd.	5.00	Solar	Kaliua, Tabora	27-Jun-24	27-Dec-25
5	Oreon Renewables Ltd.	5.00	Solar	Mbozi, Songwe	27-Jun-24	27-Dec-25
6	Hareketpower Co. Ltd.	5.00	Solar	Kongwa, Dodoma	27-Jun-24	27-Dec-25
7	Hareketpower Co. Ltd.	5.00	Solar	Igunga, Tabora	27-Jun-24	27-Dec-25
8	Hareketpower Co. Ltd.	6.00	Solar	Mbarali, Mbeya	27-Jun-24	27-Dec-25
9	Mwenga Hydro Ltd.	4.00	Hybrid	Mufindi, Iringa	30-Apr-24	30-Oct-26
10	Africa Power Investment	8.00	Hydro	Hai, kilimanjaro	29-Feb-24	01-Mar-27
11	Lilondi Hydro Power	4.50	Hydro	Madaba, Ruvuma	29-Feb-24	01-Mar-27
12	LUCSEC Company Limited	3.00	Hydro	Ludewa, Njombe	29-Feb-24	01-Mar-27
13	Maximum Power Tanzania Ltd.	5.00	Solar	Nkasi, Rukwa	29-Feb-24	29-Aug-25
14	BXC Tanzania Ltd.	5.00	Solar	Kahama, Shinyanga	29-Feb-24	29-Aug-25
15	BXC Tanzania Ltd.	5.00	Solar	Bukombe, Geita	29-Feb-24	29-Aug-25
16	FGS Ecoenergy Ltd.	6.00	Hydro	Kigoma Rural, Kigoma	29-Feb-24	01-Mar-27
17	FGS Ecoenergy Ltd.	5.00	Hydro	Muleba, Kagera	29-Feb-24	01-Mar-27
18	CESNE Energy Ltd.	5.80	Solar	Uyui, Tabora	29-Feb-24	29-Aug-25
19	SSI Energy	10.00	Solar	Kahama , Shinyanga	28-Dec-23	28-Jun-25
20	Ninety-Two Limited	1.90	Hydro	Ngorongoro, Arusha	30-Nov-23	30-Nov-26
21	ZBS Investment Limited	8.00	Solar	Rorya, Mara	04-Aug-23	04-Feb-25
22	ZBS Investment Limited	6.00	Solar	Kiteto, Manyara	04-Aug-23	04-Feb-25
23	Convivium Investment	5.00	Solar	Misungwi, Mwanza	04-Aug-23	04-Feb-25
24	Suma Hydro Power Ltd	3.90	Hydro	Rungwe, Mbeya	24-Apr-23	24-Apr-26
25	Mofajusi Investment Ltd	3.00	Hydro	Tanganyika, Katavi	24-Apr-23	24-Apr-26
26	Franciscan Sisters of Charity	1.00	Hydro	Kilombero, Morogoro	24-Apr-23	24-Apr-26
27	Infinite Power Resources Ltd	5.00	Solar	Songwe, Songwe	30-Mar-23	30-Sep-24
28	Infinite Power Resources Ltd	8.00	Solar	Chunya, Mbeya	30-Mar-23	30-Sep-24
29	Ruaha Energy	2.00	Solar	Mpwapwa, Dodoma	23-Mar-23	23-Sep-24
30	Ruaha Energy	0.56	Hydro	Tukuyu, Mbeya	23-Mar-23	23-Mar-26
31	Tuliani Hydro Power Co. Ltd.	5.00	Hydro	Mvomero, Morogoro	28-Jan-23	28-Jan-26
32	Bugando Natural Energy Ltd.	5.00	Solar	Magu, Mwanza	29-Dec-22	29-Jun-24
33	Lung'ali Natural Resources Co. Ltd.	1.28	Hydro	Kilolo, Iringa	24-Nov-22	24-Nov-25

S/N	Name of Developer	Capacity (MW)	Energy Source	Location	Approval Date	Tentative COD
34	Rukwa Generating Co. Ltd	0.95	Hydro	Sumbawanga, Rukwa	16-Aug-22	16-Aug-25
35	Bwelui Co. Ltd.	4.70	Hydro	Ileje, Songwe	16-Aug-22	16-Aug-25
36	Tangulf Nakakuta Energy Co. Ltd.	5.00	Hydro	Songea, Ruvuma	16-Aug-22	16-Aug-25
37	Luponde Hydro Ltd.	2.00	Hydro	Njombe, Njombe	16-Aug-22	16-Aug-25
38	JUMEME Rural Power Supply	1.00	Solar	Sumbawanga, Rukwa	29-Apr-22	29-Oct-23
39	JUMEME Rural Power Supply	1.00	Solar	Mpanda, Katavi	29-Apr-22	29-Oct-23
	Total	**179.59**				

ANNEX 15: TOTAL REVENUE (TZS IN MILLIONS)

Description	Electricity Sales (Million TZS)			Other Income (Million TZS)			TOTAL (Million TZS)		
FY	**2020/21**	**2021/22**	**2022/23**	**2020/21**	**2021/22**	**2022/23**	**2020/21**	**2021/22**	**2022/23**
TANESCO	1,641,019	1,821,113	1,932,810	224,187	344,636	265,174	1,865,206	2,165,749	2,197,984
Songas	230,285	275,452	255,675	25,270	9,093	-	255,555	284,545	255,675
Mwenga Hydro	4,798	4,353	3,919	1,657	1,749	2,194	6,455	6,102	6,113
Tulila	6,490	4,512	6,247	104	104	-	6,594	4,616	6,247
Mwenga Power	399	517	687	9	78	64	407	596	751
Andoya	789	388	109	34	0	-	823	388	109
TPC	3,265	3,069	2,234	-	-	-	3,265	3,069	2,234
TANWAT	547	486	445	-	-	-	547	486	445
Yovi	760	1,329	1,009	-	-	-	760	1,329	1,009
Matembwe	110	77	14	-	-	-	110	77	14
Luponde	-	857	928	-	-	-	-	857	928
Nextgen	-	1,025	1,544	-	-	-	-	1,025	1,544
Darakuta	464	448	310	-	-	-	464	448	310
TOTAL	**1,888,927**	**2,113,626**	**2,205,932**	**251,260**	**355,661**	**267,433**	**2,140,187**	**2,469,287**	**2,473,365**

ANNEX 16: PERCENTAGE CHANGE OF TOTAL REVENUE

Description	Electricity Sales			Other Income			TOTAL		
FY	2020/21	2021/22	2022/23	2020/21	2021/22	2022/23	2020/21	2021/22	2022/23
TANESCO	11%	11%	6%	54%	54%	-23%	16%	16%	1%
Songas	3%	20%	-7%	-64%	-64%	-100%	-6%	11%	-10%
Mwenga Hydro	-10%	-9%	-10%	6%	6%	25%	-6%	-5%	0%
Tulila	-30%	-30%	38%	0%	0%	-100%	-30%	-30%	35%
Mwenga Power	10%	30%	33%	820%	820%	-18%	25%	46%	26%
Andoya	-51%	-51%	-72%	-99%	-99%	-100%	-53%	-53%	-72%
TPC		-6%	-27%					-6%	-27%
TANWAT		-11%	-8%					-11%	-8%
Yovi		75%	-24%					75%	-24%
Matembwe		-30%	-82%					-30%	-82%
Luponde			8%						8%
Nextgen			51%						51%
Darakuta		-4%	-31%					-4%	-31%
TOTAL	**5%**	**12%**	**4%**	**-5%**	**42%**	**-25%**	**3%**	**15%**	**0.2%**

ANNEX 17: TANESCO SALES PER CUSTOMER CATEGORY

Customer Category	Sales (TZS Billions)				Sales (MWh)			
FY	2019/20	2020/21	2021/22	2022/23	2019/20	2020/21	2021/22	2022/23
Domestic low usage (D1)	34	37	38	43	314	337	351	393
General usage (T1)	775	817	899	958	2633	2773	3063	3313
Low Voltage Supply (T2)	161	164	180	191	614	623	684	691
High Voltage Supply (T3)	594	624	704	742	3055	3269	3667	3884
TOTAL	1,564	1,641	1,821	1,933	6,616	7,002	7,765	8,281

Percentage Contribution

FY	2019/20	2020/21	2021/22	2022/23	2019/20	2020/21	2021/22	2022/23
Domestic low usage (D1)	2%	2%	2%	2%	5%	5%	5%	5%
General usage (T1)	50%	50%	49%	50%	40%	40%	39%	40%
Low Voltage Supply (T2)	10%	10%	10%	10%	9%	9%	9%	8%
High Voltage Supply (T3)	38%	38%	39%	38%	46%	47%	47%	47%

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