THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF ENERGY

ENERGY AND WATER UTILITIES REGULATORY AUTHORITY (EWURA)

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Energy and Water Utilities Regulatory Authority
ISO 9001: 2015 Certified

ELECTRICITY SUB-SECTOR REGULATORY PERFORMANCE REPORT

FOR THE FINANCIAL YEAR 2020/21

MARCH 2022

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CHAIRMAN'S STATEMENT

On behalf of the Board of Directors of the Energy and Water Utilities Regulatory Authority (EWURA), I am pleased to provide highlights on overview of the Electricity Sub-Sector Regulatory Performance Report for the Financial Year 2020/2021.

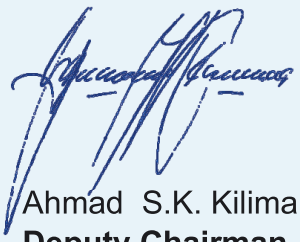
The report has been prepared to provide information to stakeholders on the performance of the Electricity Sub-Sector. EWURA strategic objective is to ensure improved and affordable regulated services including quality, availability and affordability of the electricity supply. The Authority objective is in line with the Tanzania Development Vision 2025 which includes industrialisation agenda among others. The Authority will continue to oversee the development of the Electricity Sub-Sector based on the applicable Policies and Legislations.

During the period under review, there were substantial changes in the electricity sub-sector including; adherence of licensees to applicable regulatory frameworks; improved provision of services by licensees to electricity consumers; reduction of consumers complaints; increase in electricity demand; increase in electricity infrastructure, increase in accessibility and connectivity level, increased in installed capacity, increase in number of licensees, and increase in energy dispatched.

The Authority appreciates the Government investments in rural electrification through the Rural Energy Agency (REA) which has facilitated increase in overall electricity access in the country up to 78.4% as of July 2020[1] as a result of this Government efforts, a total of 10,294 villages were connected to electricity as of June 2021, compared to 9,112 villages as of April 2020, an increase of 1,182 villages equivalent to 12.97%.

In addition, I am glad for the support from the Ministry of Energy, the Ministry of Water and all other stakeholders for their continued leadership, support and cooperation.

Finally, I would like to thank the Board of Directors, Management and Staff of EWURA for their continued cooperation.



Ahmad S.K. Kilima
Deputy Chairman, EWURA Board of Directors
March 2022

[1] 2019/20 Energy Access and Use Situation Survey II Report, Tanzania Mainland

FOREWORD

The Electricity Act, Cap 131 and EWURA Act, Cap 414 mandates EWURA to undertake technical and economic regulatory functions in the Electricity sub-sector. 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 performance of their functions.

Regulatory functions that are implemented by EWURA among others, are to monitor performance in relation to levels of investment, availability, quality and standard of services; the cost of services; and the efficiency of production and distribution of services.

The report presents performance of regulated activities under the Electricity Sub-Sector from 1st July 2020 to 30th June 2021, which aimed to ensure among others, reliability and security of electricity supply, electricity access and connectivity, efficiency of operations and quality of services provided to electricity consumers and investment in power infrastructure. Furthermore, the report highlights achievements made and challenges faced within the electricity sub- sector.

Achievements made include among others, adherence of licensees to applicable regulatory frameworks; improved provision of services by licensees to electricity consumers; and reduction of consumers complaints. Successful implementation of these activities has taken the electricity sub-sector steps forward as evidenced by the following among others; publication of two rules with regard to Electricity and Natural Gas Tariff Application and Rate Setting Rules as well as the Electricity (Development of Small Power Projects) Rules, increase in energy demand by 49.36MW, decrease in energy loss by 0.14%, increase in investment in electricity strategic generation projects (under construction) by 2,326.70MW, increase in electricity accessibility to 78.4%, increase in overall gross revenue of service providers by 3%, increase in electricity service providers by 957 licences, increase in transmission infrastructure by 243km, and increase in electricity distribution network by 9,451.38km.

It is my hope that this report will provide the required information to all stakeholders in the Electricity Sub- Sector.

Eng. Godfrey H. Chibulunje
Acting Director General
March 2022

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
ZECO	:	Zanzibar Electricity Corporation Limited

EXECUTIVE SUMMARY

This report presents Regulatory Performance of electricity sub-sector from 1st July 2020 to 30th June 2021, and is made under Section 30(7) that requires EWURA to publish reports on the performance of licensees including, but not limited to, quality, reliability and security of supply, progress of electrification, investment, efficiency of operations and other standard of customer services.

During the reporting period, EWURA developed, in accordance with Section 40 of EWURA Act, Cap 414 and Section 45 of the Electricity Act, Cap 131, The Energy and Water Utilities Regulatory Authority (Electricity and Natural Gas) (Tariff Application and Rate Setting) Rules, 2021 GN.396 which was published on 21st May 2021 and The Electricity (Development of Small Power Projects) Rules, 2020, GN. 491 which was published on 3rd July 2020.

Furthermore, as part of its Regulatory functions, EWURA issued 957 licences of which, two (2) were for electricity generation and 955 electrical installation Personnel. Additionally, 17 mini grid facilities with capacity below one megawatt were registered to provide electricity services to areas not connected to the main grid.

As of 30th June 2021, the country's total installed capacity for entities carrying out electricity activities for sale was 1,609.25MW, of which 1,574.45 (97.84%) was from main grid and 34.798 (2.16%) from off-grids. The generation mix in the national grid consisted of natural gas 60.55%, hydropower 39.12%, heavy fuel oil 0.15% and biomass 0.18%. The country's maximum demand was 1,201.02MW recorded on 2nd June 2021, which has increased by 49.36MW (4.11%) from that recorded in 2019/20.

During the period under review, ten licensed entities conducted electricity activities. TANESCO, being a vertically integrated utility, conducted generation, transmission, distribution, supply, and cross border trade. TANESCO also sales power to Zanzibar among others. Apart from TANESCO, eight entities conducted generation activities, namely; Songas Tanzania Limited (189.00MW from natural gas); Mwenga Hydropower Limited (MHL) (4.00MW from hydro and 2.40MW from wind); Tanzania Wattle Company (TANWAT) (1.50MW from Biomass); Tanganyika Planting Company Limited (TPC) (9.00MW from bagasse); Andoya Hydro Electric Power Company Limited (AHEPO) (1.00MW from hydro); Madope Company Hydro Limited (1.84MW from hydro); NextGen Solawazi Limited (5.00MW from Solar); and Tulila Hydro Electric Plant Company Limited (5.00MW, from hydro). In addition, Mwenga Power Services Limited conducted distribution activities apart from TANESCO.

During the period, there were 14 licenced entities which generated electricity for own use, namely; Lake Cement Limited (15.40MW from coal); Tanga Cement Public Limited Company (11.48MW from diesel); Kilombero Sugar Company Limited (12.55MW from hydro, bagasse and diesel); Kagera Sugar Limited (6.20MW from bagasse and diesel), Shanta Mine Company Limited (8.20MW from diesel), North Mara Goldmine Limited (18.00MW from Heavy Fuel Oil) and Bulyanhulu Goldmine Limited (39.10MW from Heavy Fuel Oil).

Others are Kilombero Plantation (1.692MW from bagasse, hydro and diesel); Geita Gold Mine Limited, (40.00MW from diesel); Tanzania Cigarette Public Company Limited (3.80MW from natural gas); Stamigold Company Limited (7.00MW from diesel); Dangote Cement Limited (50.00MW from natural gas) and ALAF Limited (11.00MW from natural gas).

During the same period, three registered entities generated electricity for sale in bulk to TANESCO, namely; Yovi Hydropower Company Limited (0.95MW from hydro); Matembwe Village Company Limited (0.59MW from hydro); and Darakuta Hydropower Development Company Limited (0.32MW from hydro). In addition, there were six registered entities which generated and sell electricity to customers, namely; Powercorner Tanzania Limited, 310.10kW from solar PV in 12 sites; Jumeme Rural Power Supply Limited, 1,231.00kW from solar PV in 22 sites and PowerGen Renewable Energy Limited, 437.24kW from solar PV in 20 sites.

Other entities were Watu na Umeme Limited, 48.00kW from solar PV in one site; Ruaha Energy Company Limited, 128.00kW from solar PV in one site; and E.O.N Off Grid Solution Gmbh 19.53kW from solar PV in 3 sites. However, the E.O.N Off Grid Solution Gmbh sites were decommissioned following arrival of National Grid electricity at three sites namely Kwamtoro in Chemba District, Malambo in Ngorongoro District and Itaswi in Kondoa District. Furthermore, two registered entities generated electricity for own use, namely; Nasra Estate Company Limited, 800.00kW from diesel; and Kiliflora Limited, 230.00kW from hydro. In addition, Unilever Tea Tanzania Limited was designated as eligible customer to purchase power from Mwenga Hydro Limited.

The transmission network comprised a total of 6,139km, indicating an increase of 243km equivalent to 3.96% as compared to previous year which was 5,896km. The distribution networks owned by licenced entities carrying electricity activities for sale comprised of 148,983.23km of which 148,544.23km were for TANESCO, 439km for Mwenga Power Services Limited. Expansion of the distribution networks for TANESCO have increased by 9,451.38km equivalent to 6.36% as compared to previous year which was 139,092.85km. In addition, expansion of the distribution networks for Mwenga Power Services Limited have increased by 2km equivalent to 0.46% as compared to previous year which was 437km. The increase has been attributed by support from the Government, TANESCO, EWURA, development partners, private sectors, and Rural Energy Agency (REA), among others.

The electricity energy losses for TANESCO were 15.16% of which 5.89% was for transmission system and 9.27% for distribution system which indicates improvement of 0.14% as compared to previous year which had a total loss of 15.30% of which 5.89% was from transmission and 9.41% from distribution. Also, Mwenga Power Services limited had a distribution loss of 5.5% indicating an increase of 0.77% as compared to previous year which had a loss of 4.73%.

During the period under review, electricity generation projects with a potential capacity of 2,326.70MW were under construction, namely, Julius Nyerere Hydro Power Project 2,115.00MW, Kinyerezi I Extension Gas Power Project 185.00MW and Rusumo Hydro Power Project 80.00MW. Also, electricity transmission infrastructure projects with a total length of 1,998km were under construction.

During the period under review, the financial performance analysis showed that, gross revenue generation increased by 3%. Also, during the year under review, TANESCO performance improved from the loss of TZS 3.8 billion recorded in FY 2019/20 to profit of TZS 38.96 billion in FY 2020/21. Further, the average unit cost of electricity sold decreased by 8% compared to a decrease of 1% recorded in FY 2019/20 that implied the improvement in operational efficiency during the year under review.

During the period under review, the Government investments in rural electrification through the Rural Energy Agency (REA) facilitated increase in overall electricity access in Tanzania Mainland to 78.4% as of July 2020[2] from 67.5% in 2016/17 as well as Electricity Connectivity of 37.7% as of July 2020 from 32.8% in 2016/17. This resulted to a total of 10,294 villages being connected to electricity as of June 2021, compared to 9,112 villages as of April 2020, indicating an increase of 1,182 villages equivalent to 12.97%.

Other achievements made during the period under review include increased level of compliance of licensees to regulatory frameworks, development of two regulatory tools (rules) to facilitate Electricity and Natural Gas Tariff Application and Rate Setting as well as to facilitate investment in small power projects; increased investment in electricity transmission infrastructure which facilitated increase in network by 3.96%, increased investment in distribution infrastructure which facilitated increase in network by 6.35%, increased investment in customer connection which facilitated connection of 425,930 new customers; reduced electricity losses by 0.14%; increased electricity accessibility and connectivity to 78.4% and 37.7% respectively.

Challenges faced during the period under review, include low electricity demand growth rate of 4.11% contrary to expected value of 10%-15% as per the Power System Master Plan of 2016 due to low connectivity rate; low power reliability caused by inadequately maintained power infrastructure and low private sector participation. To address these challenges, the Authority will continue to collaborate with the Government and other stakeholders to enhance sustainability of electricity supply industry. Moreover, EWURA will continue to enforce compliance to regulatory frameworks and increase awareness programs.

[2] 2019/20 Energy Access and Use Situation Survey II Report, Tanzania Mainland

1. INTRODUCTION

EWURA under the Electricity Act, Cap. 131 Section 5 and 6 of the Act is mandated to perform technical and economic regulation of the Electricity Supply Industry (ESI) in Mainland Tanzania. Electricity plays a vital role in the socio-economic development. Availability, affordability, reliability and access to electricity services are key ingredients towards achieving desired socio-economic development in Tanzania.

EWURA strategic objective is to ensure improved and affordable regulated services including quality, availability and affordability of the electricity supply. The Authority objective is in line with the Tanzania Development Vision 2025 which includes industrialisation agenda among others. The strategies for implementation of this objective included monitoring and enforcing quality of service standards; promotion of commercial viability of regulated suppliers; development and implementation of measures to protect consumer interests; licensing and registration of regulated suppliers; promotion of modern energy use; ensuring efficient procurement of regulated infrastructure; and facilitating investments for sustainable supply of electricity.

EWURA duties in relation to the electricity sub-sector include protecting consumers interests through the promotion of competition; promoting access to, and affordability of electricity services particularly in rural areas; promoting least-cost investment and the security of supply for the benefit of consumers; promoting improvement in the operational and economic efficiency of the electricity supply industry and efficiency use of electricity; promoting appropriate standards of quality, reliability and affordability of electricity supply; taking into account the effect of the activities of the electricity supply industry on the environment; protecting the public from dangers arising from the activities of the electricity supply industry; and promoting the health and safety of the persons employed in the electricity supply industry.

This report presents to stakeholders, electricity sub-sector regulatory performance during the financial year 2020/2021, particularly in generation, transmission, distribution, supply and cross border trade in electricity. In addition, the report, presents the overall performance of regulatory activities accomplished, achievements attained, challenges observed and mitigation measures. The Authority expects that this report will provide useful information and data to stakeholders as far as the electricity sub-sector is concerned.

2. REGULATORY TOOLS

During the period under review, EWURA developed, in accordance with Section 40 of EWURA Act, Cap 414 and Section 45 of the Electricity Act, Cap 131, two rules, namely; the Energy and Water Utilities Regulatory Authority (Electricity and Natural Gas) (Tariff Application and Rate Setting) Rules, 2021, which was published on 21st May 2021 with GN.396 in order to facilitate electricity and natural gas tariff application and rate setting. Also developed the Electricity (Development of Small Power Projects) Rules, 2020, which was published on 3rd July 2020 with GN. 491 in order to facilitate investment in small power project. Apart from the developed rule, the Authority, in performing its duties, continued to use the existing regulatory tools and standards as shown in **Annex 1**.

3. LICENSING AND REGISTRATION

Pursuant to Section 8 of the Electricity Act, Cap 131, any person undertaking or seeking to undertake generation, transmission, distribution, supply, system operation, cross-border trade in electricity, physical and financial trade in electricity, and electrical installation activities shall require a licence. Section 5 of the Electricity Act, Cap 131, gives mandates to the Authority to award licences to entities undertaking or seeking to undertake a licenced activity. However, Section 18 of the Electricity Act, Cap 131, mandates the Authority to exempt any person from application of licence as required by Section 8.

Subsequent to this, Rule 37 of the Electricity (Development of Small Power Projects) Rules, 2020, Government Notice No. 491, published on 3rd July 2020 provide guidance on the mandatory registration requirements for generation projects below 1MW for commercial operation, and Rule 11(4) of the Electricity (Generation, Transmission and Distribution Activities) Rules, 2019, GN. 287 published on 12th April 2019 provide guidance on mandatory registration for generation and distribution services for a person exempted from Section 8 of the Act.

3.1 Licensing

During the period under review, 957 licences were issued out of which, 955 were for electricity installations and two were for electricity generation with a total potential generation capacity of 7.40MW as per **Annex 2.** The total number of licences issued with their respective installed capacity from 2017/18 to 2020/21 is depicted in **Table 1**. Also, a list of all active licensed entities in the electricity supply industry is shown in **Annex 3.**

Table 1: Electricity Generation Licence Issued from 2017/18 to 2020/2021

Financial Year	Number of Licence Issued	Capacity (MW)	Status
2020/21	2	7.40	Generating
2019/20	5	12.10	Generating
2018/19	8	153.89	Generating
2017/18	7	97.30	Generating
Total	**22**	**270.69**	

Source: *EWURA Licence Data Base*

The performance in Electrical Installations Licences issuance in FY2020/2021 indicates a decrease of 0.83% as compared to FY 2019/2020. The decrease of licence issuance has been attributed by the extension of the licence tenure from two (02) to three (03) years. Licences issued from financial year 2016/17 up to 2020/21 is shown in **Table 2**, and **Figure 1**. Also, a complete list of electrical installation licensees is accessible through the Authority's website "www.ewura.go.tz".

Table 2: Electrical Installation Licences Issued from Financial Year (FY) 2016/17 - 2019/2020

FY	Licences Issued	Male Licensees	Female Licensees
2020/21	955	942	13
2019/20	963	951	12
2018/19	654	639	15
2017/18	600	590	10
2016/17	634	621	13
Total	**3806**	**2,801**	**50**

Source: *EWURA Licence Data Base*

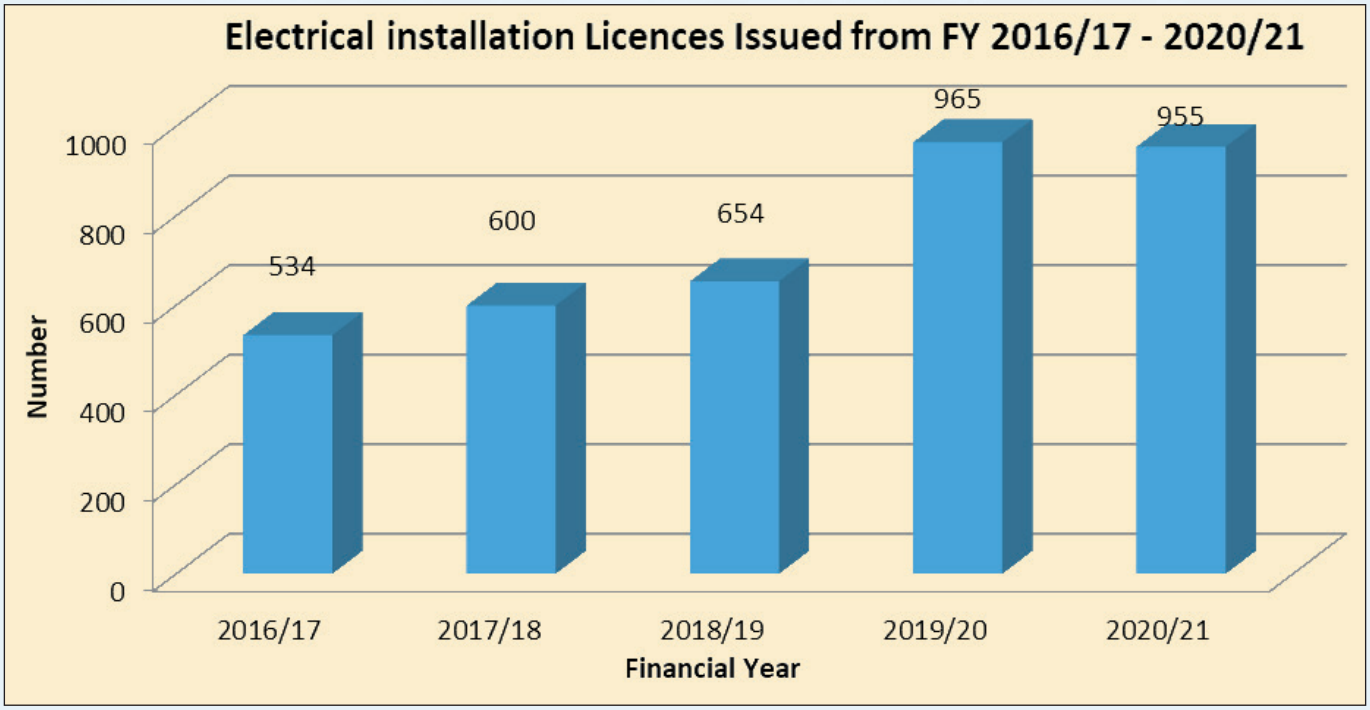


Figure 1: Trend of Electrical Installation Licences Issued from 2016/17-2020/2021

3.2 Registration

During the year under review, the Authority registered 14 mini grids (very small power projects (VSPP)) to generate and distribute electricity below 1MW in off-grid areas with total installed capacity of 737.48kW from solar and serving 5,996 customers as per **Annex 4**. As of June 2021, VSPP contributed in the off-grid 3,648.01kW serving 16,661 customers as per **Annex 5.** In addition, **Table 3** depicts the number of registered entities with their respective installed capacity from financial year 2016/17 to 2020/21. The actual number, capacity and customers of operating VSPP are as shown in **Annex 5**.

Table 3: Registered off-grid Entities from 2016/17 to 2020/21

Financial Year	Registered Mini Grids	Capacity (kW)
2020/21	14	737.481
2019/20	23	902.78
2018/19	20	1,390.40
2017/18	4	453.03
2016/17	3	905.60
Total	**64**	**5,089.29**

Source: *EWURA Licence Data Base*

4. REGULATORY APPROVALS

Pursuant to Section 5 of the Electricity Act, Cap 131, EWURA is mandated to approve and enforce tariffs and fees charged by licensees and approve the initiation of procurement of new installation of the electricity supply. Also, pursuant to Section 25 of the Electricity Act, the Authority has a mandate to approve Power Purchase Agreements (PPAs) and Section 7 of EWURA Act, Cap. 414, mandates the Authority to facilitate resolution of complaints and disputes between service providers and their customers.

4.1 Initiation of Procurement of New Electricity Supply Installations

During the period under review, the Authority did not receive any application for approval of Initiation of Procurement of new electricity supply installations. However, as part of its regulatory functions, it continued to monitor implementation of previous approved power projects with total potential installed capacity of 364MW, namely; Kikagati Power Company Limited (KPCL) for development of a 14MW hydropower project located at the border townships of Kikagati in Uganda and Murongo in Kyerwa District of Tanzania and Combined Cycle Gas Power Project (200-350MW) to be implemented through PPP at Somanga Fungu in Kilwa District.

4.2 Power Purchase Agreements

The Authority did not receive any application for approval of Power Purchase Agreement, however, it continued to monitor implementation of previously approved PPAs between power producers and TANESCO as an off taker as shown in **Table 4.**

Table 4: PPA and SPPA for 2020/21 for operating Power Plant

S/N	Name of Power Producer	Capacity (MW)	Source of Energy	Location	Status
1.	Songas Tanzania Limited	189.00	Natural gas	Dar es Salaam	Operating
2.	Darakuta Hydropower Development Company Limited	0.32	Hydro	Magugu – Babati	Operating
3.	Matembwe Village Community Company Limited	0.49	Hydro	Njombe	Operating
4.	Mwenga Hydro Limited	4.00	Hydro	Mufindi	Operating
5.	Tulila Hydro Electric Plant Company Limited	5.00	Hydro	Songea	Operating
6.	Andoya Hydro Electric Power Company Limited	1.00	Hydro	Mbinga	Operating
7.	Ngombeni Power Limited	1.40	Biomass	Mafia	Not Operating
8.	Tanganyika Planting Company Limited	9.00	Biomass	Moshi	Operating
9.	Tanganyika Wattle Company Limited	1.50	Biomass	Njombe	Under Rehabilitation
10.	NextGen Solawazi Limited	5.00	Solar	Kigoma	Operating
	Total	**216.71**			

Source: *EWURA Data Base*

4.3 Rates and Charges

During the period under review, the Authority approved Tariff Adjustment (Amendment) for TANESCO with Government Notice No.1020 which was published on 4th December 2020. The approved adjustment amendment order, 2020 shall be read as one with the Tanzania Electric Supply Company Limited ("TANESCO") Tariff Adjustment Order, 2016 which is the principal Order.

In the case of the Electricity Standardized Small Power Projects Tariff, the Authority continue to use the Electricity (Standardized Small Power Projects Tariff) Order 2019 with Government Notice No. 464 which was published on 21st June 2019. This tariff guides SPPs selling power to the main and mini grid based on avoided cost which entered SPPA with TANESCO before May 2015. It also guides technology specific tariffs (hydro, biomass, solar and wind technology) for SPPs which entered SPPA with TANESCO after May 2015 as per **Annex 6**. Also, the Authority continued to monitor implementation of the existing approved tariff for TANESCO as per **Annex 7**, and Mwenga Hydro Limited as per **Annex 8**. The history of the approved electricity tariff is as listed as per **Annex 9.**

4.4 Complaints and Dispute Resolutions

The Authority attended to complaints against suppliers of regulated goods or services in relation to any matter connected with the supply, possible supply or proposed supply of goods or services. During the Financial Year 2020/2021, the Authority received 121 complaints in the electricity sub-sector and resolved 72 complaints which is equivalent to 60% as per **Table 5**. The nature of complaints disputes included electricity billings, quality of power, connection, disconnection, rates and charges, trespass, damage of property/Injury, customer service and Healthy and Safety (HSE).

Table 5: Status of Electricity Complaints for 2020/2021

Zones	Received	Resolved	In progress
Southern Highlands Zone	10	8	2
Central Zone	8	7	1
Lake Zone	30	18	12
Eastern Zone	28	15	13
Northern Zone	45	24	21
Total	**121**	**72**	**49**

Source: *EWURA*

The Authority will continue to raise awareness to service providers on the importance of providing satisfactory services to their customers including resolving disputes before they are reported to the Authority by their customers. Also, the Authority will continue to raise awareness to customers of regulated services to report to the Authority on any disputes related to unsatisfactory provision of services that has been reported but not resolved by their respective service providers.

5. TECHNICAL PERFORMANCE MONITORING

This report highlights technical performance of the electricity supply industry in respect to electricity generation, transmission, distribution, supply and cross-border trading.

5.1 Electricity Generation Performance

Performance in electricity generation is analysed with respect to installed capacity, maximum demand, generation mix, plant availability, plants utilization and energy dispatched.

5.1.1 Installed Capacity

As of June 2021, total installed capacity for entities carrying out electricity activities for sale was 1,609.25MW, where 1,574.45 (97.84%) are connected to the main-grid, and 34.798 (2.16%) are connected to off-grids as per **Annex 10** and **Table 6**.

Table 6: Details of Total Installed Capacity

Description	General Capacity (MW)	Specific capacity (MW)	Owner
Main Grid	1,574.45 (97.84%)	1,362.96MW (86.57%)	TANESCO
		189MW (12.00%)	IPP, namely SONGAS only
		22.49MW (1.43%)	SPP owned by private entities
Off-Grid	34.798 (2.16%)	32.622 MW (93.75%)	TANESCO
		0 (0%) MW	SPP owned by private entities.
		2.176 MW (6.25%)	VSPP owned by private entities.
Total	**1,609.25**	1,395.58 (86.72%)	TANESCO
		189 (11.74%)	IPP (SONGAS)
		22.49 (1.40%)	SPP (all private entities)
		2.176 (0.14%)	VSPP (all private entities)

Source: *EWURA Licence Data Base & Daily System Operation Reports from TANESCO*

TANESCO contributes a total of 1,395.58 (86.72%) of the total installed capacity, IPP (SONGAS) 189 (11.74%), and SPP owned by private entities 22.49 (1.40%), and VSPP owned by private entities 2.176 (0.14%).

For grid connected power plants, TANESCO has an installed capacity of 1,362.96MW (86.57%), IPP (SONGAS) 189MW (12.00%), SPP owned by private entities 22.49MW (1.43%), and none from VSPP. Furthermore, in the off-grid, TANESCO owns 32.622 MW (93.75%), and VSPP owned by private entities 2.176 MW (6.25%) for VSPP.

5.1.2 Power Plants Currently Under Development

The Government through TANESCO is currently developing power plants which are at various stages of implementation with a total potential installed capacity of 2,327.70MW. The construction of Julius Nyerere Hydropower Project (JNHPP) is progressing well in time. The commissioning of the JNHPP will facilitate the country to have enough reserve capacity to cater for current and forecasted increase demand in the country due to industrialization and rural electrification. Furthermore, the excess generation capacity will enable the country to trade across the Eastern African Power Pool (EAPP) and Southern African Power Pool (SAPP). Details of the projects are as per **Table 7**.

Table 7: Power Plant Projects Currently Under Development

Name of Project	Capacity (MW)	Energy Source	Expected COD	Region	Status
Julius Nyerere Hydro Power Project	2,115.00	Hydro	2022	Coast	ongoing
Kinyerezi I Extension Gas Power Project	185.00	Natural Gas	2021	DSM	ongoing
Rusumo Hydro Power Project[1]	26.70	Hydro	2021	Kagera	ongoing
Total	**2,326.70**				

***Source**: TANESCO and Rusumo Hydro Power Project*

5.1.3 Maximum Demand

During the period under review, the MD reached 1,201.02MW on 2nd June 2021 which indicates an increase by 49.36MW (4.11%) compared to the year ended June 2020 which was 1,151.66MW as recorded on 27th February 2020. The increase in MD is attributed to the country's achievement to increase electricity accessibility and connectivity to 78.4% and 37.7% as of July 2020 compared to 67.5% and 32.8% as of June 2017, respectively. Details are in **Table 8.**

Table 8: Maximum Demand (MD) and Date

Description	2019/20	2020/21	Change (MW)	%±
MD (MW)	1,151.66	1,201.02	49.36	4.11%
Date	27th February 2020	2nd June 2021		

***Source:** Daily System Operation Reports from TANESCO*

5.1.4 Electricity Generation Mix

Electricity generation mix refers to a group of different primary energy sources (e.g. hydro, gas, coal, renewables etc.) from which secondary energy (electricity) is produced. During the period under review, generation mix consisted of natural gas (60.55%), hydropower (39.12%), liquid fuel – Heavy Fuel Oil (HFO)/Industrial Diesel Oil(IDO)/Gas Oil(GO) (0.15%) and biomass (0.18%) as depicted in **Table 9.**

In comparison to the year which ended June 2020, the percentage share of energy resources for power generation mix indicates an overall increase of 1.73% in hydro, a decrease of 1.86% in natural gas, an increase of 0.15% in liquid fuel and decrease of 0.02% in biomass. The increase in hydro was contributed by improved hydrology which resulted into increased water reserves in dams for generating electricity.

Table 9: Generation Mix from 2019/20 to 2020/21

Technology	Year 2019/20	Year 2020/21	Change
Natural Gas	62.41%	60.55%	-1.86%
Hydro	37.39%	39.12%	1.73%
Liquid Fuel	0.00%	0.15%	0.15%
Biomass	0.20%	0.18%	-0.02%
Total	**100%**	**100%**	

Source: *Daily System Operation Reports from TANESCO*

5.1.5 Energy Generated and Imports [GWh]

Energy generated and imported for entities carrying out electricity activities for sale was 8,177.66GWh where 7,973.30GWh (97.50%) was generated from the main-grid, 78.86GWh (0.96%) from off-grid, and 125.50GWh (1.53%) were imported through cross border trade as depicted in **Table 10**.

Table 10: Electricity Generation and Imports (GWh) for 2020/21

Description	GWh	Remarks
Main Grid	7,973.30 GWh (97.50%)	6,629.79GWh (83.15%) - TANESCO
		1,264.62GWh (15.86%) – IPP (Songas)
		78.89GWh (0.99%) - SPP owned by private entities
Off-Grid	78.86 GWh (0.96%)	74.48GWh (94.45%) -TANESCO
		4.38GWh (5.55%) - SPP Off-Grid (2.176 MW*8760hours*23% SPP capacity factor for solar).
Cross Boarder Imports	125.50 GWh (1.53%)	0.00GWh (0.00%) – Kenya
		88.79GWh (70.75%) – Uganda
		36.71GWh (29.25%) – Zambia
Total	**8,177.66 GWh**	6,710.43GWh (81.98%) - TANESCO
		1,264.62 GWh (15.46% %) – IPP (Songas)
		77.14GWh (1.02%) - SPP & VSPP owned by private entities
		125.50GWh (1.53%) Cross Border Imports

Source: *TANESCO Daily System Operation Reports & Other Licensees Annual Reports*

TANESCO accounted for 6,710.43GWh (81.98%) out of the total energy generated and imported, IPP (Songas) 1,264.62 GWh (15.46% %), SPP and VSPP owned by private entities 77.14GWh (1.02%), and Cross Boarder Imports 125.50GWh (1.53%) Cross Border Imports.

As compared to the previous financial year, the contribution of IPP (Songas) was 1,366.71GWh (17.55%) and SPPs owned by private investors was 77.14GWh (0.94%) which shows the contribution of IPP (Songas) decreased and SPPs increased.[3]

5.1.6 Availability of Power Plants

In this report, the plant availability recorded when the power system attained its maximum peak (as per the daily operation system reports) has been assumed to be the daily availability of the power plant.

[3] *TANESCO*

During the year 2020/21, Main grid power plants availability in main grid was 70.71%, hydro power plants was 81.62%, Gas Fired Power Plants 81.00%, and Liquid Fuel Power Plant 49.510% as per **Table 11** and **Annex 11**.

Comparing to previous year which ended June 2020, average availability has decreased by 13.50%. In particular, natural gas power plants increased by 6.19%, liquid fuel power plants decreased by 42.51%, and hydro power plants decreased by 1.48%. The Authority continues to monitor licensees to ensure improvements towards a minimum of 95% availability.

Table 11: Main Grid Power Plant Availability (%) from 2019/20 to 2020/21

Plants Name	2018/19	2019/20	2020/21	±%
Hydro Power Plants	86	82.85	81.62	-1.48
Natural Gas Fired Power Plants	67	76.28	81.00	6.19
Liquid Fuel Power Plants	21	86.12	49.51	-42.51
Average	**58**	**81.75**	**70.71**	**-13.50**

Source: *TANESCO's Daily System Operation Reports*

Also, off-grid power plant availability was 80.31% as per **Annex 11** and **Table 12**. This indicates an increase of 2.36% as compared to previous year where the availability was 78.46%.

Table 12: Main Grid Power Plant Availability (%) from 2018/19 to 2020/21

Plants Name	2018/19	2019/20	2020/21	±%
Off-grid power plant	80.01	78.46	80.31	2.36

Source: *TANESCO's Daily System Operation Reports*

5.1.7 Power Generation Plants Utilization

In this report, energy generated for each plant has been used to calculate utilisation of the plant as reported in the daily system report by TANESCO.

During the financial year 2020/2021, average utilisation of all hydro power generation plants was 64.87%, Gas Fired Power Plants 51.32 %, and Liquid Fuel Power Plant 1.13% as shown in **Annex 11** and **Table 13**.

Table 13: Main Grid Power Plant Utilisation (%) from 2018/19 to 2020/2021

Plants Name	2018/2019	2019/20	2020/21	±%
Hydro Power Plants	86	68.92	64.87	-5.88
Natural Gas Fired Power Plants	67	59.91	51.32	-14.34
Liquid Fuel Power Plants	21	16.55	1.13	-93.17
Average	**58.00**	**48.46**	**37.67**	**-22.27**

Source: *TANESCO's Daily System Operation Reports*

Comparing to the previous year which ended June 2020, average utilisation of all power plants has decreased by 22.27%, hydro power plants has decreased by 5.88%, natural gas power plants has decreased by 14.34%, and Liquid Fuel Power Plants has decreased by 93.17%. The Authority will continue to monitor utilisation of power plants to ensure that all plants operate to their maximum in accordance with their availability without disrupting dispatch merit order.

Also, off-grid power plant availability was 29.56% as per **Annex 11 and Table 14**. This indicates an increase 2.36% as compared to previous year where the availability was 78.46%.

Table 14: Off-Grid Power Plant Utilisation (%) from 2018/19 to 2020/21

Plants Name	2018/19	2019/20	2020/21	±%
Off-grid power plant	80.01	30.34	29.56	2.36

Source: *TANESCO's Daily System Operation Reports*

5.1.8 Private Sector Participation in Generation Segment

Private entities which participate in electricity generation for sale contributes a total of 211.36MW in the main grid and 2.19MW in off-grid as per **Table 15**.

Table 15: Installed Capacity of Private Entities Generating for Sale

Grid	Installed Capacity (MW)	Entities Contribution
Main-grid	211.36	Songas Tanzania Limited (189.00MW), Mwenga Hydro Limited (4.00MW), Andoya Hydro Electric Power Limited (1.00), Tulila Hydro Electric (5.00MW), Matembwe Village Company Limited (0.59), Yovi Hydropower Company Limited (0.995MW), Darakuta Hydropower Development Company Limited (0.32MW), TPC (9.00MW), & TANNWAT (1.5MW)
Off-grid	2.18	Powercorner Tanzania Limited, 12 site, Solar PV, 310.10kW; Jumeme Rural Power Supply Limited, 22 sites, solar PV, 1,231.00kW; PowerGen Renewable Energy Limited, 20 sites, Solar PV, 438.88kW; Watu na Umeme Limited, 1 site, Solar PV, 48kW; Ruaha Energy Company Limited, 1 site, Solar PV, 128kW; and EON Off-Grid Solution Gmbh, 2 sites, 19.53kW
Total	**213.54**	

Source: *EWURA Data Base & TANESCO's Daily System Operation Reports*

5.2 Electricity Transmission Performance

Electricity transmission performance is assessed with respect to line length, substations, number of customers, System Average Interruption Frequency Index at Connection point (SAIFI-CP) and Outages. TANESCO is the only entity licensed to carry out electricity transmission activities. It operates transmission lines in voltage levels of 66kV, 132kV, 220kV and 400kV. However, the 400kV transmission lines were operating at 220kV since at the substation side installations are on-going.

5.2.1 Electricity Transmission Infrastructure

As of 30th June 2021, transmission network comprised of 6,110.28km of transmission lines and 59 grid substations with a total capacity of 5,116MVA (including generation substations which were not included in the previous Financial Year report) as per **Annex 12**, **Table 16** and **Table 17.** This increase in capacity of substations was due to energization of new Dege Substation and expansion of Zuzu and Singida substations while increase in length of transmission lines was due to energization of SGR1/Morogoro (159km), Bulyanhulu/Geita (55km) and energization of Mbagala/Dege (28km).

Table 16: Electricity Transmission Line Infrastructure from 2018/19 to 2020/21

Voltage (KV)	Line Length				
	2018/19	2019/2020	2020/21	Change (km)	Change (%)
66	543	543	543	0	0.00%
132	1,673	1,673	1701	28	1.65%
220	3,011	3,011	3225	214	6.64%
400	670	670	670	0	0.00%
Total	**5,896**	**5,896**	**6,139**	**243**	**3.96%**

Source: *TANESCO Annual Report*

Table 17: Electricity Transmission Substation Infrastructure from 2018/19 to 2020/21

Voltage (KV)	Number of Substations				Capacity (MVA)			
	2018/19	2019/20	2020/21	Change (%)	2018/19	2019/20	2020/21	Change (%)
66	7	7	7	0	89	91.6	98.6	7
132	27	29	30	3	1,599	1,674.9	1,710.9	2
220	21	22	22	0	2,668	2,012.5	3,306.5	39
400	0	0	0	0	0	0	0	0
Total	**55**	**58**	**59**	**3**	**4,356**	**3,779**	**5,116**	**48**

Source: *TANESCO Annual Report*

5.2.2 Transmission Projects Currently Under Development

The Government through TANESCO is implementing electricity transmission projects which are at various stages of implementation. The projects which were under construction have a total length of 1926 km for the transmission line and substations capacity of 1110 MVA. Details and Status of implementation of the projects are indicated in **Table 18** and **Table 19** respectively.

Table 18:Transmission Line Projects Currently Under Development

Name of Transmission Line	Voltage (kv)	km	Original COD	Revised COD	Status
Bulyanhulu - Geita	220	55	2020	NA	Completed
Geita – Nyakanazi	220	144	2021	2021	Ongoing
Nyakanazi – Rusumo	220	94	2021	2021	ongoing
Singida – Arusha – Namanga	400	114	2021	2021	ongoing
Dar es Salaam (Kinyerezi) – Morogoro (Msamvu) SGR – Lot 1	220	159	2020	2021	Completed
Morogoro (Msamvu) – Dodoma (Ihumwa) SGR – Lot 2	220	234	2021	2021	Ongoing
Dodoma (Ihumwa) – Singida (Makutopola) SGR – Lot 2	220	176	2021	2021	Ongoing
Kibada - Dege	132	14	2020	2021	Completed
Tabora – Kigoma	132	381	2021	2022	Ongoing
Tabora – Katavi	132	395	2021	2022	Ongoing
Julius Nyerere Hydro Power Project (JNHPP) – Chalinze	400	160	2022	2022	Ongoing
Total		**1926**			

Source: TANESCO

Table 19: Transmission Substations Projects Currently Under Development

Name of Substation	MVA	COD	Status of Implementation
Dodoma	250	2021	ongoing
Singida	250	2021	ongoing
Lemugur	250	2021	ongoing
Urambo	35	2023	ongoing
Nguruka	15	2023	ongoing
Ipole	15	2023	ongoing
Inyonga	15	2023	ongoing
Mpanda	35	2023	ongoing
Luguruni	180	2021	ongoing
Kunduchi	65	2021	ongoing
Total	**1110**		

Source: TANESCO

5.2.3 Customers Connected to Transmission Infrastructure

As of June 2021, five customers were connected to the transmission network, where one is metered at 220kV and the remaining four are metered at 132kV as described in **Table 20**.

Table 20: Customers connected in the Transmission Line Infrastructure

Voltage (kV)	Customer Name	Max Demand (MW)
220	Bulyanhulu Gold Mine	28.78
132 (metered at 132kV)	ZECO	85.4
	Tanganyika Portland Cement	23
	Tanga Cement	25
	Rhino Cement	14

Source: *TANESCO*

5.2.4 Power System Reliability in Transmission Infrastructure

Power system reliability is analysed using System Average Interruption Frequency Index at Connection Point (SAIFI-CP) which is calculated as a ratio of total number of interrupted connection points (due to fault) to total number of connection points in the grid network (in this case 135 connection point). In addition, system reliability at each voltage level is analysed based on outage hours and frequency.

TANESCO being the only licensee in electricity transmission activity has set a Key Performance Indicator (KPI) for SAIFI-CP of less than or equal to 12 per annum. During the period under review, SAIFI-CP was 6.36, which is within set KPI as per **Annex 12** and **Table 21**.

Table 21: Reliability Indices for Transmission Network

SAIFI-CP	Year 2018/19	Year 2019/20	Year 2020/21	±%
Standard SAIFI-CP (set target)	12.00	12.00	12.00	**0.00**
Recorded SAIFI-CP	14.62	6.27	6.36	**1.42**

Source: *TANESCO Annual Report*

Total outage hours were 2,374 as per **Annex 12** and **Table 22**. This is an increase of 48% as compared to the previous year. However, this increment is highly caused by outage of Singida/Shinyanga line, which had a defective circuit breaker, as an alternative the customers were fed through 400kV Singida/Shinyanga line. During the reporting period, total planned outage hours were 1,647 while total unplanned outage hours were 725 causing an increase by 28% and 93% compared to the previous year.

Table 22: Transmission Line Outage Hours

Voltage(kv)	Outage	2018/19	2019/20	2020/21	±%
220	Planned	558	868.87	978	11
	Unplanned	191	17.19	493	97
	Total	**749**	**886.06**	**1471**	**40**
132	Planned	911	248.61	434	43
	Unplanned	112	30.37	160	81
	Total	**1,023**	**278.98**	**594**	**53**
66	Planned	181	63.24	235	73
	Unplanned	252	0.53	72	99
	Total	**433**	**63.77**	**307**	**79**
Total	**Total Planned**	**1650**	**1180.72**	**1647**	**28**
	Total Unplanned	**555**	**48.09**	**725**	**93**
	Grand Total	**2,205**	**1,228.81**	**2,372**	**48**

Source: *TANESCO Annual Reports*

In addition, total outage frequency during the reporting period was 384 as shown in **Table 23**. This is an increase of 11% as compared to the previous year, which ended in June 2020.

Table 23: Transmission Line Outage Frequency

Voltage(kv)	Outage	2018/19	2019/20	2020/21	±%
220	Planned	110	112	105	-7
	Unplanned	148	65	59	-10
	Total	**258**	**177**	**164**	**-8**
132	Planned	87	41	57	28
	Unplanned	113	108	126	14
	Total	**200**	**149**	**183**	**19**
66	Planned	16	11	26	58
	Unplanned	22	5	11	55
	Total	**38**	**16**	**37**	**57**
Total		**496**	**342**	**384**	**11**

Source: *TANESCO Annual Reports*

Furthermore, the total grid failure occurred twice for a duration of 3.38 hours. This indicates a decrease of 1.18% in hours and 50% in events as compared to the previous year, which ended June 2020 as per **Table 24**. Although the grid outage event has increased by 50% compared to the previous year, grid outage duration has decreased by 1.18%.

Table 24: Total Grid Failure from year 2017/18 to 2020/21

Description	2018/19	2019/20	2020/21	±%
Hours	12.47	3.42	3.38	-1.18
Event	4	1	2	50

Source: *TANESCO Annual Reports*

5.3 Electricity Distribution Performance

In this report, electricity distribution performance was assessed with respect to status of infrastructure, number of customers supplied, System losses, Distribution transformer failures; supply reliability, as well as outage hours and frequencies. The System reliability was analyzed by establishing some of the indices used for reliability measurements. The established indices include System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI), and Customer Average Interruption Duration Index (CAIDI). Records of outage durations and frequency was used to calculate the above indices.

During the period under review, two Distribution Network Operators were licenced, and other seven Min grid Operators with capacity less than 1MW, were registered to carry out electricity distribution activities as per **Table 25**.

Table 25: Entities Licensed and Registered to Carry Out Electricity Dist. Activities in 2020/2021

Description	Name of Entity
Licensed Entities (Above/equal 1MW)	1. Tanzania Electric Supply Company (TANESCO)
	2. Mwenga Power Services Limited,
Registered Entities (Below 1MW)	1. Powercorner Tanzania Limited, 12 site, Solar PV, 310.10kW
	2. Jumeme Rural Power Supply Limited, 22 sites, solar PV, 1,231.00kW
	3. PowerGen Renewable Energy Limited, 20 sites, Solar PV, 438.88kW
	4. Watu na Umeme Limited, 1 site, Solar PV, 48kW
	5. Ruaha Energy Company Limited, 1 site, Solar PV, 128kW
	6. EON Off-Grid Solution Gmbh, 3 sites, 29.03kW

Source: *EWURA Data Base*

5.3.1 Electricity Distribution Infrastructure

As of 30thJune 2021 the distribution network length from licensed entities carrying out electricity distribution activities, totalled 148,983.23km. Out of these, TANESCO owned 148,544.23 km, while 439 km is owned by Mwenga Power Services Limited as depicted in **Table 26**. When compared to the year ended on 30th June 2020, there is an increase of distribution networks of 7.25 %, whereby TANESCO had 6.80% and Mwenga had 0.46%. The expansion of distribution network for TANESCO has been significantly contributed by the rural electrification initiatives by Rural Energy Agency (REA), among others.

Table 26: Electricity Distribution Network Route Length for Licensed Entities in 2019/20-2020/21

Licensee	Voltage (kV)	2019/20	2020/21	Change (km)	±% Deviation
TANESCO	33	43,891.60	47,487.88	3,596.28	7.57
	11	11,044.40	12,486.11	1,441.71	11.55
	0.23 and 0.4	84,156.85	88,570.24	4,413.39	4.98
	Total	139,092.86	148,544.23	9,451.38	6.36
Mwenga	33	277	277	0.00	0.00
	0.23 and 0.4	160	162	2.00	1.23
	Total	437	439	2.00	0.46
Grand Total		**139,529.85**	**148,983.23**	**9,453.38**	**6.35**

Source: *TANESCO and MWENGA*

There were also **596.34km** from min grid operators registered to carry out electricity distribution activities below one megawatt, where 24.8km belongs to Andoya, 152km owned by Powercorner, 46.2km by EON Off - Grid solutions, 215.45km by Jumeme, 150.19km by PowerGen, 7.75km for Watu na Umeme as per **Table 27**. When compared to the year ended on 30th June 2020, there is an overall increase of 25.02%.

Table 27: Electricity Distribution Line Length for Registered Entities

Licensee	Voltage (kv)	2019/20 Length (km)	2020/21 Length (km)	Difference Length (km)	±%
Andoya	11	10.5	10.5	0	0.00
	0.23 and 0.4	14.3	14.3	0	0.00
	Total	**24.8**	**24.8**	**0**	**0.00**
Powercorner Tanzania Limited	0.23 and 0.4	**152**	**152**	0	0.00
EON Off-Grid Solution Gmbh	0.23 and 0.4	**46.2**	**46.2**	0	0.00
Jumeme Rural Power Supply Limited	11	18.91	29.12	10.21	35.06
	0.23 and 0.4	85.16	186.35	101.19	54.30
	Total	**104.7**	**215.47**	**110.77**	**51.41**
PowerGen Renewable Energy Limited	0.23 and 0.4	112.9	150.19	37.29	24.83
Watu na Umeme Limited	0.23 and 0.4	**7.75**	**7.75**	0	0.00
Grand Total	**11**	**28.37**	**39.62**	**11.25**	**28.39**
	0.23 & 0.4	**418.31**	**556.79**	**138.48**	**24.87**
	Total	**446.68**	**596.41**	**149.73**	**25.11**

Source: *EWURA Data Base & Licensees*

5.3.2 Rural Electrification

The Government through REA under rural electrification program electrified 8,276 villages which making the total electrified villages 10, 294 as of June, 2021 as compared to 9,112 villages electrified as of April 2020. This is an increase of 1,182 villages equivalent to 12.97%. This resulted into increase in overall electricity access in the country from 67.8% in year 2016 to 78.4% in July 2020. These achievements have also been contributed by the Government initiative to connect the rural customers at a reduced rate of TZS: 27,000. The reduced connection charges from TZS 177,000 to TZS 27,0000 are generally affordable to people. Meanwhile, there are still some people who cannot afford to pay for electricity at the current rate attributed by wiring installation costs in their households.

5.3.3 Customers

As of 30th June 2021, licensed entities carrying out electricity distribution activities, comprised a total of 3,296,036 customers, of which 3,290,490 were for TANESCO and 5,105 for Mwenga Power Services Limited as per **Annex 13** and **Table 28**. Out of 3,296,490 TANESCO customers, 1,032,461 Customers which is 31.4% of all Customers, are under Tariff-D1. This group is the one which pay low tariff charges compared to other remaining categories. Category T1 group has 2,253,726 Customers making 68.5% of all Customers. The remaining 0.1% of TANESCO Customers comprise of T2 and T3.

Comparing to the year ended on 30th June 2020, TANESCO had an increase of 425,930 equivalent to (14.9%) customers, while Mwenga an increase of 514 equivalent to (11.2%). The increase of electricity access and connectivity has been significantly contributed by the rural electrification initiatives by Rural Energy Agency (REA).

Table 28: Electricity Distribution Licensees' Customer for 2019/20 and 2020/21

Licensee	Description	2019/20	2020/21	Difference	±%
TANESCO	Domestic Use (D1)	924,074	1,032,461	108,387	11.73
	General Use (T1)	1,936,490	2,253,726	317,236	16.38
	Low Voltage Supply (T2)	3,165	3,403	238	7.52
	High Voltage Supply (T3)	829	900	71	8.56
	Total	**2,864,560**	**3,290,490**	**425,930**	**14.9**
Mwenga	Domestic (D1)	2666	2691	25	0.94
	General Use (T1)	1925	2414	489	25.40
	Total	**4,591**	**5,105**	**514**	**11.2**
Grand Total		**2,869,634**	**3,296,036**	**426,402**	**14.9**

Source: *TANESCO and Mwenga Power Services*

In this review, entities registered to carry out electricity distribution activities below one Megawatt had 16,979 customers, as per **Table 29**. This indicates an overall increase of 34.02% compared to 29.33% of previous year.

Table 29: Customers of Registered Entities for 2019/20 and 2020/21

Entity Registered	Description	2019/20	2020/21	±%
Powercorner Tanzania Limited	General Use	3,011	3013	0.00
Jumeme Rural Power Supply Limited	General Use	4,874	9860	50.57
PowerGen Renewable Energy Limited	General Use	2,177	3227	32.54
Watu na Umeme Limited	General Use	256	256	0.00
EON Off-Grid Solution Gmbh	General Use	476	476	0.00
Total		**11,199**	**16,979**	**34.02**

Source: *EWURA Data Base & Registered Entities*

5.3.4 Power System Reliability in Distribution Infrastructure

Power system reliability indices was assessed based on Tanzania Standard TZS 1374:2011 (Power quality–Quality of service and reliability). In this report the Indices calculated were System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI) and Customer Average Interruption Duration Index (CAIDI). SAIFI measures average number of supply interruptions per customer per year, while SAIDI measures average duration (in minutes) of supply interruptions per customer and CAIDI is the ratio between SAIDI and SAIFI which measures average duration of each supply interruptions per customer per year.

According to Tanzania Standard, TZS 1374:2011, Section 7, requires the annual SAIFI to be less than 3 interruptions per customer per year, while the annual SAIDI should be less than 650 minutes per customer per year, and the annual CAIDI should be less than 4 minutes per interruption event per year.

During the period under review, TANESCO recorded 1,342.88 hrs of outage, Mwenga Power Services Limited had 336.15 hrs equals to an increase of 6.96% and 0.65% respectively, while Andoya Hydro Electric Power Limited had 150hrs of outage equals to decrease of 3.22% compared to previous year as per **Table 30**.

Table 30: Electricity Distribution Outage Hours for 2019/20 and 2020/21

Licensee	Outages Hours	2018/19	2019/2020	2020/2021	Difference	±%
TANESCO	Planned	677.97	674.61	698.99	24.38	3.61
	Unplanned	732.8	580.93	643.89	62.96	10.84
	Total	**1,410.77**	**1,255.54**	**1,342.88**	**87.34**	**6.96**
Mwenga	Planned	221.7	96.37	126.15	29.78	30.90
	Unplanned	19.02	237.62	210	-27.62	-11.62
	Total	**240.72**	**333.99**	**336.15**	**2.16**	**0.65**
Andoya	Planned	2.37	20	35	15	75
	Unplanned	1.93	135	115	-20	14.81
	Total	**4.3**	**155**	**150**	**-5**	**-3.22**

Source: *TANESCO, Mwenga and Andoya Reports*

The total outage frequency was **1, 044** for TANESCO, 306 for Mwenga Power Services Limited, and 41 for Andoya Hydro Electric Power Company Limited. This indicates a decrease of 4.1 % for TANESCO, an increase of 46.2 % for Mwenga, and an increase of 17.14% for Andoya as per **Table 31**.

Table 31: Electricity Distribution Outage Frequency for 2019/20 and 2020/21

Licensee	Number of Outages	2018/19	2019/20	2020/21	Difference	±%
TANESCO	Planned	853	653	306	-347	-53.14
	Unplanned	888	435	738	303	69.7
	Total	**1,741**	**1,088**	**1044**	**-44**	**-4.04**
Mwenga	Planned	32	88	71	-17	-19.3
	Unplanned	1,141	159	290	131	82.4
	Total	**1,173**	**247**	**361**	**114**	**46.2**
Andoya	Planned	11	25	26	1	4.0
	Unplanned	116	10	15	5	50.0
	Total	**127**	**35**	**41**	**6**	**17.14**

Source: *TANESCO, Mwenga and Andoya Annual Reports*

For the period under review, reliability indices for utilities were calculated as per **Table 32**.

Table 32: Power Reliability Indices for 2020/2021

Licensee	Index	Standard index	Recorded index (2019/20)	Recorded index (2020/21)
TANESCO	**SAIFI** (Frequency per customer)	**3**	218	48
	SAIDI (Hours per Customer)	**10.8**	176	373
	CAIDI (hours per interruptions)	**0.067**	1.24	8
Mwenga	**SAIFI** (Frequency per customer)	**3**	35.93	28
	SAIDI (Hours per Customer)	**10.8**	26.17	30.8
	CAIDI (hours per interruptions)	**0.067**	1	1.1
Andoya	**SAIFI** (Frequency per customer)	**3**	1.024	1
	SAIDI (Hours per Customer)	**10.8**	1.1	0.14
	CAIDI (hours per interruptions)	**0.067**	1.074	0.14

Source: *TANESCO, Mwenga and Andoya Annual Reports*

5.3.5 New Connections to Power Supply

According to TANESCO's Customer Service Charter, a customer must be connected within 30 working days if the customer is within 30 meters from the existing supply line, 60 working days if within 30-100 meters, and 90 working days for a customer connection which need a distribution networks extension. As for Mwenga Power, analysis was done according to her Customer Service Charter's Requirement.

During the period under review, TANESCO connected 425,930 new customers equivalent to 142% out of annual target to connect 300,000 customers per annum. However, TANESCO achieved to connect 62.21% of its total application received. In addition, Mwenga Power Services Limited and Andoya Hydro Electric Power Company Limited connected 88.93% and 150% respectively, of its customers who applied for the power connection as per **Table 33.**

Table 33: Electricity Distribution Customer Connection

Licensee	Target	Connections	% Achievement	Applications	New Connections	% Achievement
TANESCO	300,000	425,930	142	684,655	425,930	62.21
Mwenga	NA	NA	NA	578	514	88.93
Andoya	NA	NA	NA	0	0	0.00
NB: 1. NA= Not Applicable 2. TANESCO Connections included connections done by REA.						

Source: *TANESCO, RPDL, AHEPO Reports*

5.4 Energy Losses

During the period under review, Analysis of energy losses was performed for three utilities which are TANESCO, Mwenga and Andoya.

In accordance with the ESI-RSR, 2014 Section 6.2 to 6.4, the desired total losses in the electricity supply industry are supposed to be 12% by 2025. The ESI-RSR sets the trajectory for loss reduction in the tune of 16%-14% from July 2018 to June 2021. However, the desired targets do not allocate the portion for distribution segment.

TANESCO had a total energy loss of 15.16% of which, distribution loss was 9.27% and transmission loss was 5.89%. The total energy losses have decreased by 0.14% compared to the previous year due investments in the transmission and distribution networks. The energy loss is within the desired trajectory for energy loss reduction under the ESI-RSR requirement **Table 34** and **35**.

Mwenga Power Services Limited had a distribution loss of 5.5 % which is within the recommended value, but slightly higher than that of previous years, whereby losses were 4.73%. Andoya had a distribution loss of 4.3% indicating continuous improvement compared to the previous year where the losses were 5.44% as per **Table 37.**

The Authority will ensure that utilities comply to best practices in reducing losses including; compliance to standards of constructing infrastructure, use of prepaid meters, installation of pre-paid meters, and avoiding energy theft.

Table 34: Transmission Energy Losses

Description	2018/2019	2019/2020	2020/2021
Energy Received in Transmission System (GWh)	7,413.95	7,531.11	7,891.33
Energy Received for Distribution (GWh)	6,975.21	7,085.79	7,426.87
Losses (GWh)	435.55	442.92	**464.46**
Losses (%)	**5.87**	**5.89**	**5.89**

Source: *TANESCO Reports*

Table 35: Electricity Distribution Losses

Licensee	Year	Energy Distributed (GWh)	Energy Sales (GWh)	Losses (GWh)	Losses (%)
TANESCO	**2020/21**	7,622.27	6,898.49	723.78	9.27%
	2019/20	7,257.64	6,574.70	682.94	9.41
	2018/19	7,314.14	6,557.13	757.01	10.35
Mwenga	**2020/21**	**25.28**	**23.891**	**1.389**	**5.5**
	2019/20	20.680	19.701	0.979	4.73
	2018/19	15.86	15.182	0.673	4.24
Andoya	**2020/21**	**4.0405**	**3.865**	**0.18**	**4.3**
	2019/20	2.792	2.640	0.156	5.44
	2018/19	2.742	2.584	0.1576	5.75

Source: *TANESCO, Mwenga and Andoya Reports*

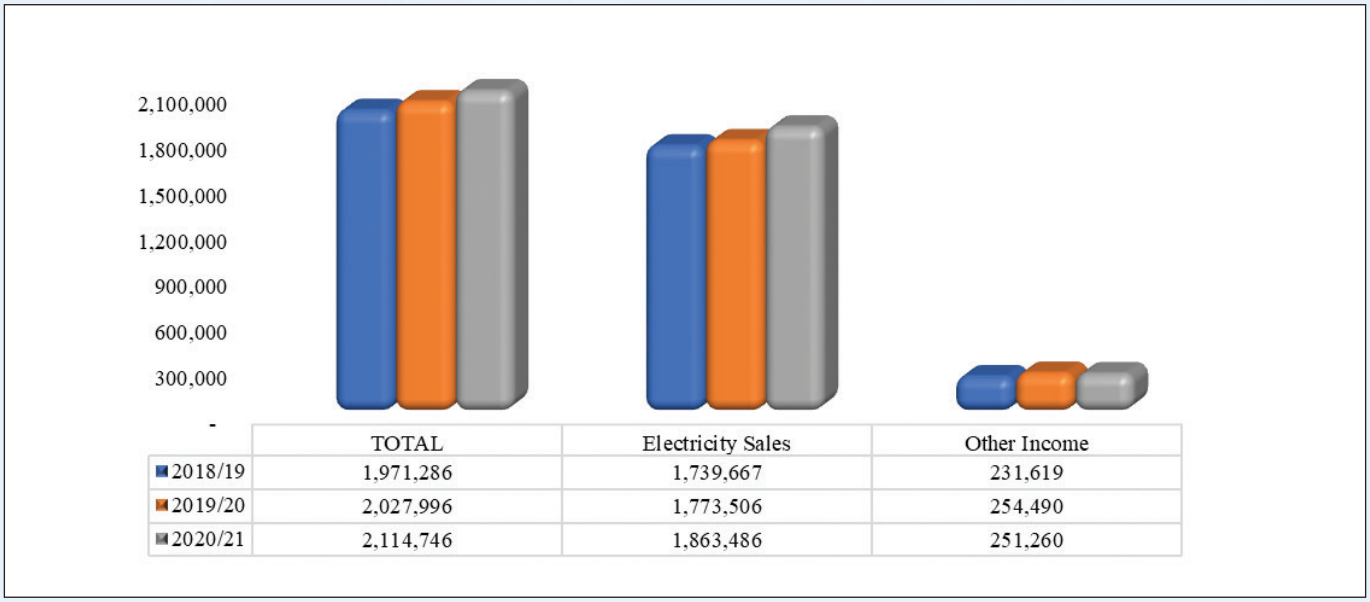
6. FINANCIAL PERFORMANCE

This section briefly describes the financial performance of six utilities from FY 2018/19 to 2020/21. These utilities are TANESCO, a national vertically integrated utility carrying out generation, transmission and distribution activities. Andoya Hydroelectric Power Company Limited, a utility carrying out generation and distribution activities, Mwenga Power Services Limited, a utility carrying out distribution activities only and three licensed electricity generation utilities namely Songas, Mwenga Hydro Limited and Tulila Hydro Electric Plant Company Limited. Further, Songas generates electricity and sells to TANESCO under a long term PPA whereas Mwenga Hydro and Tulila generate electricity and sell to TANESCO under SPPAs.

Moreover, Songas, Tulila and Andoya report financial performance based on calendar year and others use the fiscal year, hence, for calendar year 2018 to 2020 referred as FY 2018/19 to 2020/21, respectively. Thus, the financial performance analysis either based on the draft Financial Statements of FY 2020/21 or audited financial statements of the Calendar Year 2020 and other data obtained from the utilities. Furthermore, since TANESCO and Andoya are vertically bundled the financial reports shows the performance of the utility as a whole and not for separate segment

6.1 Revenue Generation

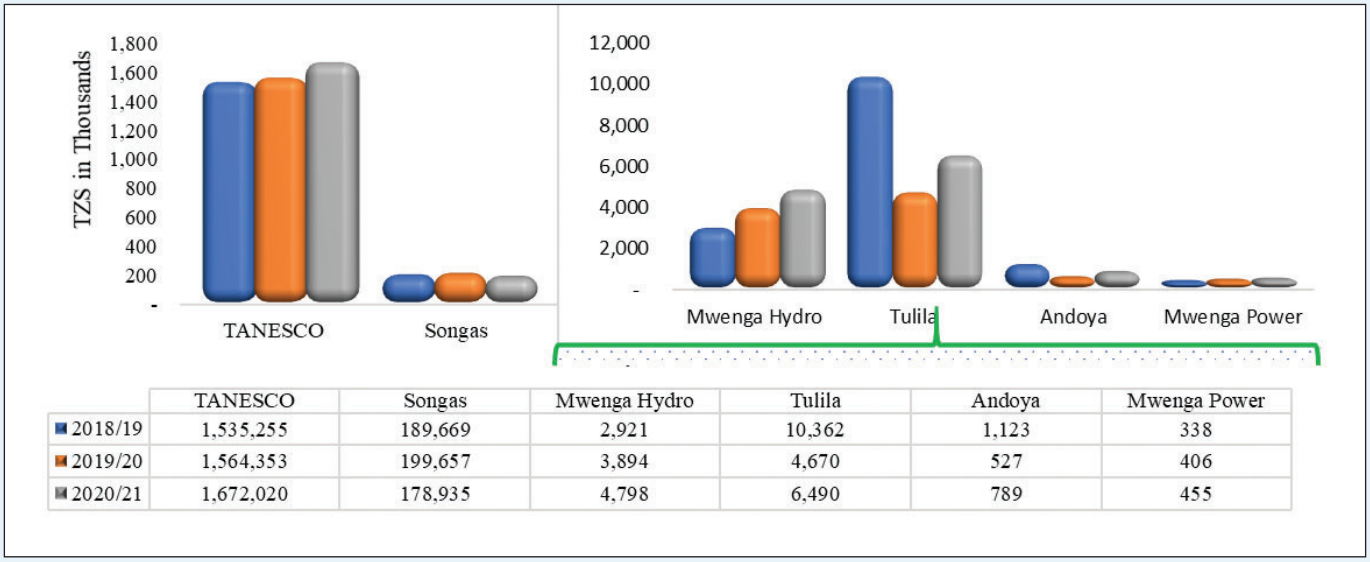
In FY 2020/21, gross revenue increased by 4% compared to an increase of 3% recorded in FY 2019/20. The revenue from sale of electricity increased by 5% from 2% recorded in previous FY, However, other revenue decreased by 1%. In addition to that, 88% of revenue were generated from sale of electricity and 12% from other sources. *Figure 2* shows the three-year trend of revenues from sale of electricity and other income and detailed in **Annex 14**.



	TOTAL	Electricity Sales	Other Income
2018/19	1,971,286	1,739,667	231,619
2019/20	2,027,996	1,773,506	254,490
2020/21	2,114,746	1,863,486	251,260

Figure 2: Total Revenue by Source (TZS in million)

During the FY 2020/21, revenue generated from sale of electricity increased by 50% for Andoya, 39% for Tulila, 23% for Mwenga Hydro, 12% for Mwenga Power and 7% for TANESCO. Whilst, Songas recorded drop of 10%. The main reason for drop of energy revenue being lower generation as the results of reduced demand due to COVID 19 pandemic. Revenue generated by each utility presented in ***Figure 3*** and detailed in **Annex 14**.

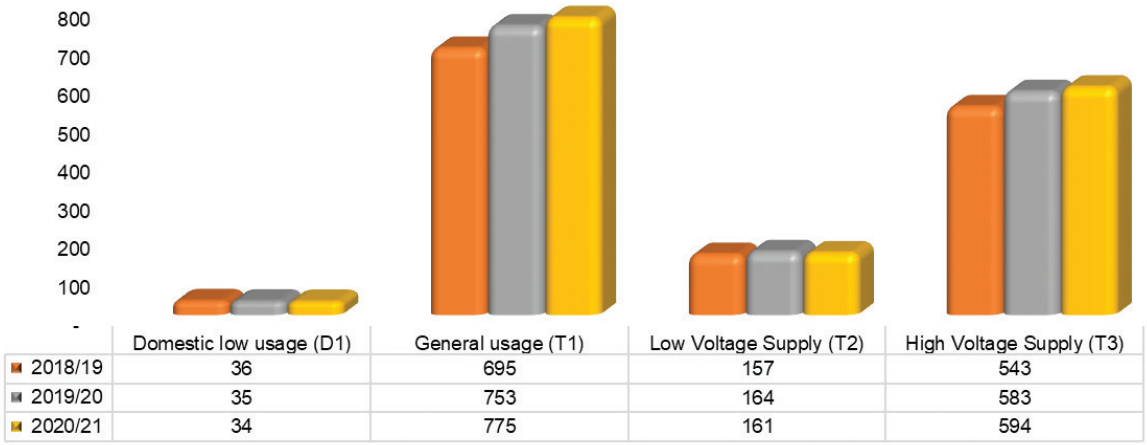


	TANESCO	Songas	Mwenga Hydro	Tulila	Andoya	Mwenga Power
2018/19	1,535,255	189,669	2,921	10,362	1,123	338
2019/20	1,564,353	199,657	3,894	4,670	527	406
2020/21	1,672,020	178,935	4,798	6,490	789	455

Figure 3: Total Revenue by Utility

Being a national utility, TANESCO generates most of its revenue from sales of electricity. The sales made to general Usage Customers (T1) contributed to 50%, High Voltage supply customers (T3) account for an average of 38%, whilst, Low Voltage Supply (T2) and Domestic Low Usage (D1) customers amounted to 10% and 2% of the total electricity sales revenue respectively.

During FY 2020/21, TANESCO recorded the general increase of sales from electricity by 2% that was higher compared to an increase of 1% recorder in previous FY. The increase was associated increase in new connections by 425,930 customers and increase of consumption by an average of 4%, that, from Domestic Low Usage (7%), General Usage (5%), High Voltage Supply (4%) and Low Voltage Supply (1%). Figure 3 shows three years TANESCO revenue by customer category and detailed in **Annex 15**.



	Domestic low usage (D1)	General usage (T1)	Low Voltage Supply (T2)	High Voltage Supply (T3)
2018/19	36	695	157	543
2019/20	35	753	164	583
2020/21	34	775	161	594

Figure 4: TANESCO Revenue by Customer Category (TZS Billions)

6.2 TANESCO Cost Structure

Cost structure for TANESCO was main donated by generation and transmission cost that covered 31% of operational costs, 22% was depreciation, 16% distribution, 14% purchase of electricity and other costs amounted to 17%. In addition, during the FY 2020/21, operational costs including depreciation increased by 4% from TZS 1.79 trillion in FY 2019/20 to TZS 1.86 trillion. ***Figure 5*** shows the TANESCO's composition of cost structure.

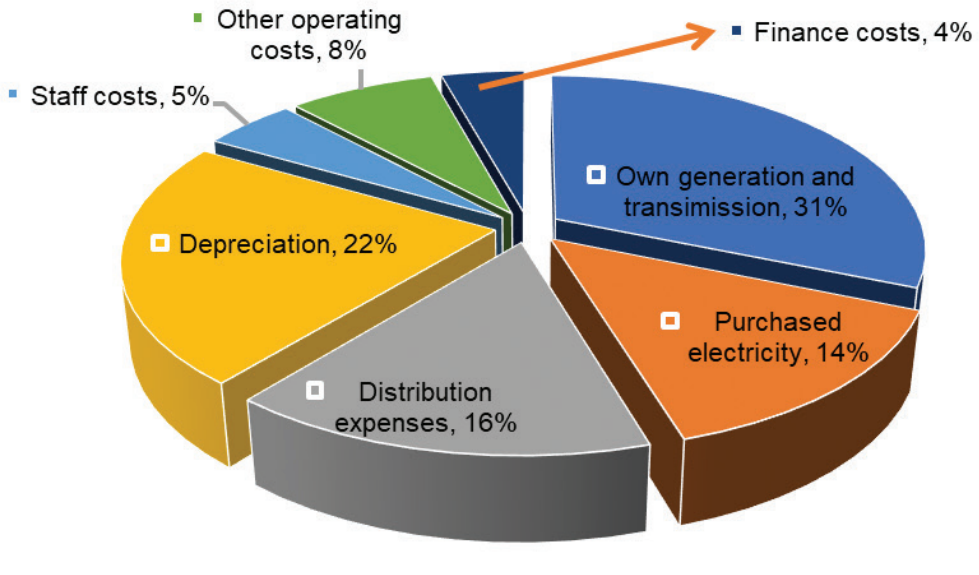
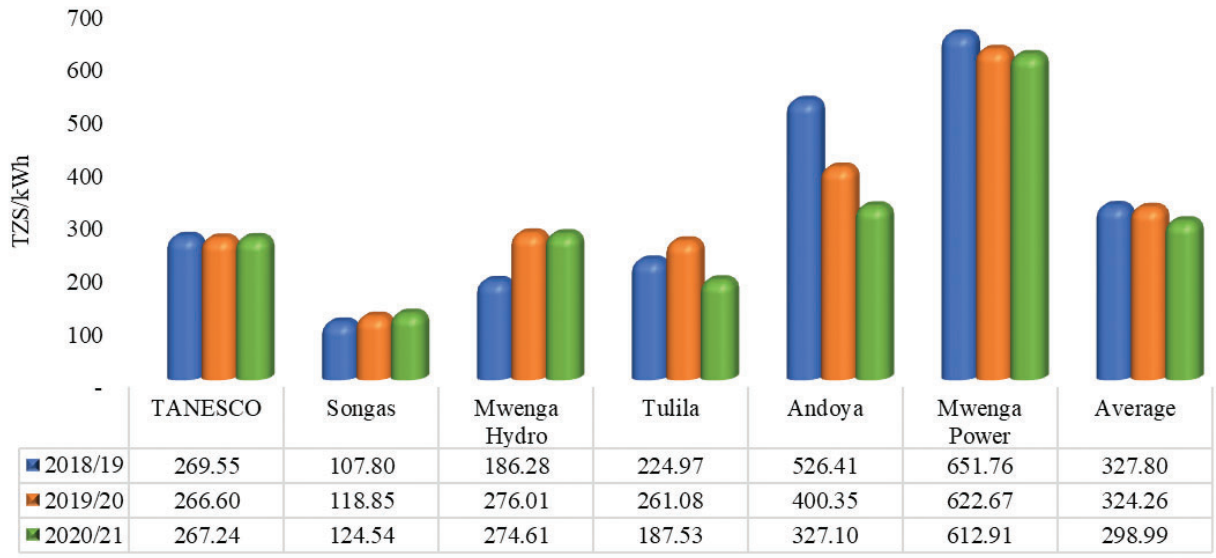


Figure 5: TANESCO's cost structure

6.3 Cost per Unit Sold

In FY 2020/21, the average unit cost of electricity sold decreased by 8% compared to a decrease of 1% recorded in FY 2019/20 that implied the improvement in operational efficiency during the year under review. The operational efficiency improvement resulted to decrease of unit cost of Tulila by 28%, Andoya by 18%, Mwenga Power by 2% and Mwenga Hydro by 1%. However, Songas and TANESCO's unit cost increased by 5% and 0.2% respectively.

Further, compared to other utilities, the highest cost per unit sold of TZS 613/kWh was recorded by Mwenga Power, whilst, the lowest was recorded by Songas as TZS 125/kWh. ***Figure 6*** indicates trend of unit costs for three FYs.



	TANESCO	Songas	Mwenga Hydro	Tulila	Andoya	Mwenga Power	Average
2018/19	269.55	107.80	186.28	224.97	526.41	651.76	327.80
2019/20	266.60	118.85	276.01	261.08	400.35	622.67	324.26
2020/21	267.24	124.54	274.61	187.53	327.10	612.91	298.99

Figure 6: Total cost per unit sold

7. ACHIEVEMENTS, CHALLENGES, AND WAYFORWARD

7.1 Achievements

The achievements made in the electricity sub-sector during the reporting period include the following:

a) Issuance of two operational generation licences with a potential to increase generation capacity by 7.40MW;
b) Decrease of TANESCO's total energy loss by 0.14% from 15.30% to 15.16% due to investments in the transmission and distribution networks;
c) Connecting 425,930 new customers equivalent to 142% out of annual target to connect 300,000 customers per annum; and
d) Connecting a total of 10,294 villages to electricity as of June 2021, compared to 9,112 villages connected as of April 2020 which is an increase of 1,182 villages equivalent to 12.97%.
e) Improved performance of TANESCO from the loss of TZS 3.8 billion recorded in FY 2019/20 to profit of TZS 38.96 billion in FY 2020/21.

7.2 Challenges and Way Forward

During the reporting period, the electricity sub-sector faced a number of challenges which include the following:

a) Low energy demand growth – energy demand growth rate of 4.11% which is in contrary with expected value of 10%-15% as per the Power System Master Plan of 2020. The Authority will continue to ensure continuous investment in electricity infrastructure that will result into increase in connectivity rates and hence increase in demand.

b) Power Reliability-Low power reliability caused by inadequately maintained power infrastructure as compared to the Power quality – Quality of service and reliability standard TZS 1374:2011 established by Tanzania Bureau of Standard. The Authority will continue to ensure that utilities comply to best practice and standards in constructing, operating and maintaining infrastructure.

c) Low Private Sector Participation - Private sector investments in the electricity sub sector continued to be inadequate. To address this, the Authority in collaboration with other stakeholders will continue regular review of the existing regulatory tools and development of new ones when deemed necessary.

8. CONCLUSION

Despite of the challenges the electricity sub-sector has faced, there has been a significant investment which has contributed towards improvement of availing stable and reliable power supply to the community. The Authority in collaboration with other stakeholders under the guidance of the Government will continue to regulate and promote more investments in the electricity sub-sector in order to meet the ongoing energy demand growth and increase energy consumption per capita from 138kWh to at least 500kWh which is the requirement for the middle-income countries.

ANNEXES

Annex 1: Regulatory Tools and Standards

(a) Regulatory Tools

(i). EWURA Act, 2001.
(ii). The Electricity Act, 2008.
(iii). National Energy Policy, 2015.
(iv). The Electricity (General) Regulations 2020 GN 945.
(v). Model Power Purchase Agreements for seven technologies (i.e., Hydro, Natural Gas, Oil, Coal, Geothermal, Solar and Wind).
(vi). The Electricity (Licensing Fees) Rules, 2016. GN 287.
(vii). The Energy and Water Utilities Regulatory Authority (Electricity and Natural Gas) (Tariff Application and Rate Setting) Rules, 2021. GN.396.
(viii). The Energy and Water Utilities Regulatory Authority (Fees and Levies Collection Procedure) Rules, 2021. GN. 420.
(ix). Electricity Inspection Manual of March, 2019.
(x). Electricity System Operations Cooperation (Establishment Order), 2016.
(xi). Electricity (System Operations Services) Rules, 2016.
(xii). Electricity (Market Operation Services) Rules, 2016.
(xiii). Standardized Power Purchase Agreement of 2020.
(xiv). The Electricity (Grid and Distribution Codes) Rules, 2017, GN. 451.
(xv). The Electricity (Net Metering) Rules, 2018, GN. 76.
(xvi). The Electricity (Procurement of Power Projects and Approval of Power Purchase Agreement) Rules 2019, GN. 453.
(xvii). The Electricity (Development of Small Power Projects) Rules, 2020, GN. 491.
(xviii).The Electricity (Supply Services) Rules 2019, GN. 387.
(xix). The Electricity (Electrical Installation Services) Rules, 2019, GN 382.
(xx). The Electricity (Generation, Transmission and Distribution Activities) Rules, 2019, GN. 462.
(xxi). The Electricity (Standardized Small Power Projects Tariff) Order 2019, GN. 464.

(b) Standards

(i). TZS 1373:2011 – Power Quality - Quality of supply.
(ii). TZS 1374:2011 – Power Quality - Quality of service and reliability.
(iii). TZS 1375:2011 – Electromagnetic Compatibility (EMC) – Limits for voltage change, voltage fluctuation and flickers in public low voltage supply system for equipment with rated current ≤ 16A per phase and not subject to conditional connection.
(iv). TZS 1376:2011 – Electromagnetic Compatibility (EMC) – Limits for voltage change, voltage fluctuation and flickers in public low voltage supply system for equipment with rated current ≤ 75A per phase and subject to conditional connection.
(v). TZS 1377:2011 Electromagnetic compatibility (EMC) – Limits for harmonic current emissions for equipment with input current ≤ 16 A per phase.

(vi). TZS 1378:2011 Electromagnetic compatibility (EMC) – Limits for harmonic current emissions for equipment with input current > 16 A per phase.

(vii). TZS 1379:2011 Electromagnetic compatibility (EMC) – Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems.

(viii). TZS1380:2011 Electromagnetic compatibility (EMC) – Compatibility levels for low frequency conducted disturbances and signaling in public medium voltage power supply systems.

(ix). TZS 1381:2011 Electromagnetic compatibility (EMC) – Compatibility levels in industrial plant for low-frequency conducted disturbances.

(x). TZS1382:2011 Electromagnetic compatibility (EMC) – Power quality measurement methods.

Annex 2: Electricity Generation Licence Issued for FY 2020/21

S/N	Name of Licensee	Project Area	Capacity (MW)	Type of Licence	Duration (Years)	Licence No.	Date of issue	Date of Expiry	Source
1.	Mwenga Hydro Limited	Mufindi	2.40	Generation (Operational Licence)	15	EGL-2020-003	29/Dec/20	28/ Dec/2035	Wind
2.	NextGen Solawazi Limited	Kigoma	5.00	Generation (Operational Licence)	20	EGL – 2021 - 002	31/May/2021	30/May/41	Solar
Total Generation Capacity			**7.40**						

Annex 3: Active Licences as of June 2021

S/N	Licensee	Project Area	Energy Source	Capacity (MW)	Duration (Years)	Licence No.	Date of Issue	Date of Expiry
(a)	**Electricity Generation Licence – Sale**							
1.	Songas	Ubungo	Natural Gas	189.00	33	-	11/Oct/01	10/Oct/34
2.	TANESCO	Mainland TZ	Hydro, Natural Gas, HFO & Diesel	-	20	EGL-2013-001	1/Mar/13	28/Feb/33
3.	TPC Ltd	Moshi	Biomass	20.00	13	EGL-2012-006	18/Jun/12	17/Jun/25
4.	Tanganyika Wattle Company Ltd	Njombe	Biomass	2.75	13	EGL-2012-005	18/Jun/12	17/Jun/25
5.	Mwenga Hydro Ltd	Mufindi	Hydro	3.36	15	EGL-2013-001	1/Mar/13	28/Feb/28
6.	Tulila Hydro Electric Plant Co. Ltd	Songea	Hydro	7.50	20	EGL-2016-001	3/Aug/16	2/Aug/30
7.	Andoya Hydro Electric Power Co. Ltd	Mbinga	Hydro	1.00	15	EGL-2016-002	22/Aug/16	21/Aug/31
8.	Ngombeni Power Limited	Mafia	Biomass	1.40	15	EGL-2016-003	7/Sep/16	6/Sep/31
9.	Luponde Hydro Limited	Njombe	Hydro	1.06	15	EGL-2020-001	30/Jun/20	29/Jun/35
10.	Madope Hydro Company Limited	Ludewa	Hydro	1.84	15	EGL-2020-002	30/Jun/20	29/Jun/35
11.	Mwenga Hydro Limited	Mufindi	Wind	2.40	15	EGL-2020-003	29/Dec/20	28/Dec/35
12.	NextGen Solawazi Limited	Kigoma	Solar	5.00	20	EGL – 2021 - 002	31/May/20	30/May/41

(b)	Electricity Generation – Own Use							
1.	Ashanti Goldfields T Ltd	Geita	Diesel	31.00	25	P/G 1134	3/Dec/99	2/Dec/24
2.	Shanta Mine Co. Ltd	Chunya	Diesel	4.20	15	BEGL-2013-001	6/Sep/13	5/Sep/28
3.	Lake Cement Limited	Kimbiji Village, Temeke	Coal	15.40	15	BEGL-2016-001	29/Mar/16	28/Mar/31
4.	Tanga Cement Public Limited Company	Tanga	Diesel	11.48	15	SEGL-2016-001	4/Oct/16	3/Oct/31
5.	Kilombero Sugar Company Limited	Kidatu - Morogoro	Biomass	12.552	15	BEGL-2017-001	18/Apr/17	17/Apr/32
6.	Kagera Sugar Limited	Misenyi - Kagera	Biomass	6.20	15	BEGL-2017-002	18/Apr/17	17/Apr/32
7.	Shanta Mine Co. Ltd	Songwe	Diesel	8.20	15	BEGL-2018-001	2/Feb/18	1/Feb/33
8.	Kilombero Plantations Limited	Morogoro	Biomass	1.692	15	EGL-2018-001	30/Aug/18	29/Aug/33
9.	Geita Gold Mining Limited	Geita	Diesel	40.00	25	BEGL-2018-002	3/Dec/99	2/Dec/24
10.	Tanzania Cigarette Public Limited Company	Dar es Salaam	Natural Gas	3.8	5	BEGL-2019-001	22/Mar/19	21/Mar/24
11.	Stamigold Company Limited	Biharamulo	Diesel	7.00	15	BEGL-2019-002	22/Mar/19	21/Mar/34
12.	Dangote Cement Limited	Mtwara	Natural Gas	45.00	5	BEGL-2019-003	30/Apr/19	29/Apr/24
13.	ALAF Limited	Dar es Salaam	Natural Gas	4.00	5	BEGL-2020-001	30/Jan/20	29/Jan/25
14.	North Mara Goldmine Ltd	Tarime	Heavy Fuel Oil	18.00	5	EGOWL-2020-001	27/Nov/20	26/Nov/25
15.	Bulyanhulu Goldmine Ltd	Kahama	Heavy Fuel Oil	39.10	5	EGOWL-2020-002	27/Nov/20	26/Nov/25
16.	Dangote Cement Limited	Mtwara	Natural Gas	50.00	5	EGOWL-2021-001	28/Jun/20	27/Jun/26

(c)	**Electricity Distribution, Supply, Transmission and Cross Border Trade**							
1.	TANESCO	Mainland Tanzania	Supply	-	20	ESL-2013-001	1/Mar/13	28/Feb/33
2.	TANESCO	Mainland Tanzania	Transmission and Cross Border Trade	-	20	ETSOC - 2013-001	1/Mar/13	28/Feb/33
3.	TANESCO	Mainland Tanzania	EDCBTL	-	20	PEL-2013-002	1/Mar/13	28/Feb/33
4.	Mwenga Power System Limited	Mufindi	Distribution	4	15	EDL-2013-005	30/ Apr/13	29/Apr/28
(d)	**Provisional Electricity Generation Licences**							
1.	Mwenga Hydro Limited	Mufindi	Wind	2.4	3	PEGL-2018-003	29/Nov/18	28/Nov/21
2.	ALAF Limited	Dar es Salaam	Natural Gas	4.0	3	PEGL-2018-004	21/Dec/18	20/Dec/21
3.	Mwenga Hydro Limited	Mafinga	Hydro	2.5	3	PEGL-2019-003	26/Nov/19	25/Nov/22
4.	Jacana Resources Tanzania Ltd	Dar es Salaam	Diesel	2.7	3	PEGL-2020-001	30/Jan/20	29/Jan/23

Annex 4: Registered off-Grid Entities for Year 2020/21

No.	Project Area	Capacity (KW)	Registration No.	Duration (Years)	Date of Issue	Date of Expiry	Customer Serviced
A.	**Power Gen Renewable Energy Limited (generating and distributing using solar, located in the off-grid & sales to customers)**						
1.	Lyegoba Island, Ukerewe District, Mwanza Region	30.32	CRG-2020-013 & CRD-2020-013	10	07-Dec-20	06-Dec-30	180
2.	Bezi Island, Ilemela District, Mwanza Region	42.6	CRG-2020-014 & CRD-2020-014	10	07-Dec-20	06-Dec-30	340
3.	Juma Island, Sengerema District, Mwanza Region	42.6	CRG-2020-015 & CRD-2020-015	10	07-Dec-20	06-Dec-30	180
4.	Chembaya Island, Buchosa District, Mwanza Region	29.8	CRG-2020-016 & CRD-2020-016	10	07-Dec-20	06-Dec-30	155
5.	Sozia Island, Bunda District, Mara Region	29.8	CRG-2020-017 & CRD-2020-017	10	07-Dec-20	06-Dec-30	130
6.	Raranya Village, Rorya District, Mara region	6.36	CRG-2020-018 & CRD-2020-018	10	07-Dec-20	06-Dec-30	65
	Sub-Total	181.48					1,050

No.	Project Area	Capacity (KW)	Registration No.	Duration (Years)	Date of Issue	Date of Expiry	Customer Serviced
B.	**Jumeme Rural Power Supply Ltd (generating and distributing using solar, located in the off-grid & sales to customers)**						
1.	Herembe village, Uvinza District, Kigoma Region	56	CRG–2021–001 & CRD–2021-001	10	01-Jun-21	31-May-31	238
2.	Igalula village, Uvinza District, Kigoma Region	56	CRG–2021–002 & CRD–2021-002	10	01-Jun-21	31-May-31	638
3.	Kashagulu village, Uvinza District, Kigoma Region	102	CRG–2021–003 & CRD–2021-003	10	01-Jun-21	31-May-31	740
4.	Katumbi village, Uvinza District, Kigoma Region	20	CRG–2021–004 & CRD–2021–004	10	01-Jun-21	31-May-31	342
5.	Lubengela village, Uvinza District, Kigoma Region	20	CRG–2021–005 & CRD–2021-005	10	01-Jun-21	31-May-31	315
6.	Mgambo village, Uvinza District, Kigoma Region	72	CRG–2021–006 & CRD–2021-006	10	01-Jun-21	31-May-31	470
7.	Nkonkwa village, Uvinza District, Kigoma Region	36	CRG–2021–007 & CRD–2021-007	10	01-Jun-21	31-May-31	256
8.	Rukoma village, Uvinza District, Kigoma Region	46	CRG–2021–008 & CRD–2021-008	10	01-Jun-21	31-May-31	644
9.	Sibwesa village, Uvinza District, Kigoma Region	92	CRG–2021–009 & CRD–2021-009	10	01-Jun-21	31-May-31	601
10.	Sigunga Village, Uvinza District, Kigoma Region	56	CRG–2021–010 & CRD–2021-010	10	01-Jun-21	31-May-31	702
	Sub-Total	556					4,946
	Total	**737.48**					**5996**

Source : EWURA Licence Data Base, FY 2020/2021

Annex 5: Total List of Registered Entities Selling Electricity as of June 2021

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 & sales to TANESCO)**								
1.	Magugu – Babati District, Manyara Region	450	NA	10	03-Jul-13	02-Jul-23	1	0	0
B.	**Yovi Hydropower Company Limited (generating using hydro, located in the main-grid & sales to TANESCO)**								
1.	Msolwa - Kilosa District, Morogoro Region	995	CRG - 2019 - 009	10	16-Apr-19	15-Apr-29	1	0	0
C.	**PowerCorner Tanzania Limited (generating and distributing using solar, located in the off-grid & sales to customers)**								
1.	Orkejuloongishu Village, Ketumbeine Ward, Longido District,	15.6	CRG-2016-001 & CRD-2016-001	10	06-Oct-16	05-Oct-26	81	2	0
2.	Mbaya Village, Liwale District, Lindi Region	30	CRG-2018-005 & CRD-2018-005	10	31-Oct-18	30-Oct-28	270	13.3	0
3.	Nakopi Village, Nanyumbu District, Lindi Region	30	CRG-2018-006 & CRD-2018-006	10	31-Oct-18	30-Oct-28	250	9.8	0
4.	Barikiwa Village, Liwale District, Lindi Region	30	CRG-2018-007 & CRD-2018-007	10	31-Oct-18	30-Oct-28	272	16.5	0
5.	Mwenge Village, Sikonge District, Tabora Region	28	CRG-2019-014 & CRD-2019-014	10	01-Jul-19	30-Jun-29	362	16.9	0

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
6.	Mgambo Village, Sikonge District, Tabora Region	20	CRG-2019-015 & CRD-2019-015	10	01-Jul-19	30-Jun-29	222	9.7	0
7.	Kiegei Village, Nachingwea District, Lindi Region	16	CRG-2019-016 & CRD-2019-016	10	18-Dec-19	17-Dec-29	256	12.8	0
8.	Matekwe Village, Nachingwea District, Lindi Region	12	CRG-2019-017 & CRD-2019-017	10	18-Dec-19	17-Dec-29	161	9.8	0
9.	Lukumbule Village, Nachingwea District, Lindi Region	40.5	CRG-2019-018 & CRD-2019-018	10	18-Dec-19	17-Dec-29	257	16.3	0
10.	Kagerankanda Village, Kasulu District, Kigoma Region	44	CRG-2019-019 & CRD-2019-019	10	18-Dec-19	17-Dec-29	442	17.6	0
11.	Kalya Village, Uvinza District, Kagoma Region	28	CRG-2019-020 & CRD-2019-020	10	18-Dec-19	17-Dec-29	314	19.7	0
12.	Holola Village, Nanyumbu District, Mtwara	16	CRG-2019-021 & CRD-2019-021	10	27-Dec-19	26-Dec-29	126	7.6	0
13.	**Sub-Total**	**310.1**					**3,013**	**152**	**0**

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
D.	**E. ON Off Grid Solution Gmbh (generating and distributing using solar, located in the off-grid & sales to customers)**								
1.	Malambo Village, Ngorongoro District, Arusha Region	13.14	CRG-2017-004 & CRD-2017-004	10	21-Nov-17	11/20/2027	92	8.5	0
2.	Itaswi Village, Chemba District, Dodoma Region	6.39	CRG-2017-005 & CRD-2017-005	10	19-Dec-17	18-Dec-27	64	11	0
	Sub-Total	**19.53**					**156**	**19.5**	**0**
E.	**Ruaha Energy Co. Ltd (generating and distributing using solar, located in the off-grid & sales to customers)**								
1.	Zombo Village, Kilosa District, Morogoro Region	128	CRG–2017–007 & CRD-2017-007	10	19-Dec-17	18-Dec-27	147	-	-
	Sub-Total	**128**					**147**	**-**	**-**
F.	**Watu na Umeme Limited (generating and distributing using solar, located in the off-grid & sales to customers)**								
1.	Mpale, Korogwe District, Tanga Region	48	CRG-2018-001No. CRD-2018-001	10	23-Apr-18	22-Apr-28	256	7.75	0
	Sub-Total	**48**					**256**	**7.75**	**0**

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
G.	**Power Gen Renewable Energy Limited (generating and distributing using solar, located in the off-grid & sales to customers)**								
1.	London Village, Manyoni District, Singida Region.	16	CRG-2018-003 & CRD-2018-003	10	20-Aug-18	19-Aug-28	210	13	0
2.	Ighombwe Village, Ikungi District, Singida Region.	3	CRG-2018-004 & CRD-2018-004	10	20-Aug-18	19-Aug-28	50	7.1	0
3.	Bugalama Village, Ngara District, Kagera Region.	3.18	CRG-2019-001 & CRD-2019-001	10	11-Jan-19	10-Jan-29	52	2.4	0
4.	Murusagamba Village, Ngara District, Kagera Region.	17.16	CRG-2019-002 & CRD-2019-002	10	11-Jan-19	10-Jan-29	177	8.8	0
5.	Kalenge Village, Biharamulo District, Kagera Region.	16.18	CRG-2019-003 & CRD-2019-003	10	11-Jan-19	10-Jan-29	178	11.4	0
6.	Nyantakara Village, Biharamulo District, Kagera Region.	17.18	CRG-2019-004 & CRD-2019-004	10	11-Jan-19	10-Jan-29	95	7	0
7.	Mavota Village, Biharamulo District, Kagera Region.	17.18	CRG-2019-005 & CRD-2019-005	10	11-Jan-19	10-Jan-29	134	8.1	0
8.	Nemba Village, Biharamulo District, Kagera Region.	23.52	CRG-2019-006 & CRD-2019-006	10	11-Jan-19	10-Jan-29	182	0	0
9.	Leshata Village, Gairo District, Morogoro Region.	15.36	CRG-2019-007 & CRD-2019-007	10	28-Mar-19	27-Mar-29	145	7.5	0

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
10.	Kitaita & Songambele Village, Gairo District, Morogoro Region.	15.36	CRG-2019-008 & CRD-2019-008	10	28-Mar-19	27-Mar-29	103	3.9	0
11.	Itabagumba Village, Ziragula Island, Buchosa District, Mwanza Region	30.32	CRG-2019-010 & CRD-2019-010	10	01-Jul-19	30-Jun-29	218	9.3	0
12.	Busenge Village, Yozu Island, Buchosa District, Mwanza Region	28.68	CRG-2019-011 & CRD-2019-011	10	01-Jul-19	30-Jun-29	181	10.1	0
13.	Kanyara Village, Kasalazi island, Buchosa District, Mwanza Region	30.32	CRG-2019-012 & CRD-2019-012	10	01-Jul-19	30-Jun-29	251	12.2	0
14.	Iglansoni Village, Ikungi District, Mwanza Region	23.96	CRG-2019-013 & CRD-2019-013	10	01-Jul-19	30-Jun-29	201	12.1	0
15.	Lyegoba Island, Ukerewe District, Mwanza Region	30.32	CRG-2020-013 & CRD-2020-013	10	07-Dec-20	06-Dec-30	180	2.91	0
16.	Bezi Island, Ilemela District, Mwanza Region	42.6	CRG-2020-014 & CRD-2020-014	10	07-Dec-20	06-Dec-30	340	3.59	0
17.	Juma Island, Sengerema District, Mwanza Region	42.6	CRG-2020-015 & CRD-2020-015	10	07-Dec-20	06-Dec-30	180	7.64	0

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
18.	Chembaya Island, Buchosa District, Mwanza Region	29.8	CRG-2020-016 & CRD-2020-016	10	07-Dec-20	06-Dec-30	155	2.55	0
19.	Sozia Island, Bunda District, Mara Region	29.8	CRG-2020-017 & CRD-2020-017	10	07-Dec-20	06-Dec-30	130	15.1	0
20.	Raranya Village, Rorya District, Mara region	6.36	CRG-2020-018 & CRD-2020-018	10	07-Dec-20	06-Dec-30	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 & sales to customers)**								
1.	Bwisya - Ukara Island	90	NA	10	08-Apr-16	07-Apr-26	680	16.1	5.8
2.	Kibumba/Chembuzi Village, Muleba District	10	CRG-2020–001 & CRD-2020-001	10	14-May-20	13-May-30	72	1.57	0
3.	Kasenyi Village, Muleba District	20	CRG-2020-002 & CRD-2020-002	10	14-May-20	13-May-30	348	3.02	0
4.	Nabweko/Sambi Village, Irungwa ukerewe District	100	CRG-2020-003 & CRD-2020-003	10	14-May-20	13-May-30	559	3.3	0
5.	Kerebe Village, Muleba District	35	CRG-2020-004 & CRD-2020-004	10	14-May-20	13-May-30	256	2.5	0
6.	Goziba Village, Muleba District	45	CRG-2020-005 & CRD-2020-005	10	14-May-20	13-May-30	339	3.64	0
7.	Rukuba/Etaro Village, Musoma District, Mara Region.	10	CRG-2020-006 & CRD-2020-006	10	14-May-20	13-May-30	160	4.73	0

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
8.	Maisome (Kanoni/ Busimbi/Kisaba) Village, Buchosa District, Mwanza Region.	100	CRG-2020-007 & CRD-2020-007	10	14-May-20	13-May-30	675	18.46	0.75
9.	Mulumo (Bunyozi/ Ilamba) Village, Mazinga Island, Muleba District, Kagera Region.	45	CRG-2020-008 & CRD-2020-008	10	14-May-20	13-May-30	378	7	0
10.	Mahaiga Village, Muleba District	20	CRG-2020-009 & CRD-2020-009	10	14-May-20	13-May-30	206	1.42	0
11.	Bukiko/kome Village, Ukerewe District, Mwanza Region.	100	CRG-2020-010 & CRD-2020-010	10	14-May-20	13-May-30	693	20.84	**7.61**
12.	Chifule/Bukungu Village, Ukerewe District, Mwanza Region.	100	CRG-2020-011 & CRD-2020-011	10	14-May-20	13-May-30	548	18.54	5.5
13.	Herembe village, Uvinza District, Kigoma Region	56	CRG-2021–001 & CRD-2021-001	10	01-Jun-21	31-May-31	238	8.56	0.87
14.	Igalula village, Uvinza District, Kigoma Region	56	CRG-2021–002 & CRD-2021-002	10	01-Jun-21	31-May-31	638	10.18	2.17
15.	Kashagulu village, Uvinza District, Kigoma Region	102	CRG-2021–003 & CRD-2021-003	10	01-Jun-21	31-May-31	740	9.3	0

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
16.	Katumbi village, Uvinza District, Kigoma Region	20	CRG-2021–004 & CRD-2021–04	10	01-Jun-21	31-May-31	342	4.06	0
17.	Lubengela village, Uvinza District, Kigoma Region	20	CRG-2021–005 & CRD-2021-005	10	01-Jun-21	31-May-31	315	3.73	0
18.	Mgambo village, Uvinza District, Kigoma Region	72	CRG-2021–006 & CRD-2021-006	10	01-Jun-21	31-May-31	470	8.27	1.67
19.	Nkonkwa village, Uvinza District, Kigoma Region	36	CRG-2021–007 & CRD-2021-007	10	01-Jun-21	31-May-31	256	5.45	0
20.	Rukoma village, Uvinza District, Kigoma Region	46	CRG-2021–008 & CRD-2021-008	10	01-Jun-21	31-May-31	644	13.14	0
21.	Sibwesa village, Uvinza District, Kigoma Region	92	CRG-2021–009 & CRD-2021-009	10	01-Jun-21	31-May-31	601	8.71	0
22.	Sigunga village, Uvinza District, Kigoma Region	56	CRG-2021–010 & CRD-2021-010	10	01-Jun-21	31-May-31	702	13.83	4.75
	Sub-Total	**1231**					**9860**	**186.35**	**29.12**
	Total	**3,648.01**					**16,661**	**516**	**29**

SUMMARY

GENERAL SUMMARY FOR ALL COMPANIES				
A. Generation Capacity (kW)	**2019/20**	**2020/21**	**%±**	**Description**
1. Total VSPP (kW)_Hydro + Solar	2780	3,620.51	23	All registered Entities
2. Total_VSPP_solar_Main Grid	0	0	0	No registered Entity in this category
3. Total_VSPP_Solar_Off Grid	1,466	2,175.5	33	PowerCorner (310.10kW) +EON (19.53kW) + Ruaha Energy (128.00kW) + Watu na Umeme (48.00kW) + Powergen (438.88kW) + Jumeme (1,231.00kW).
4. Total_VSPP_Hydro_Main Grid	1,315.00	1,315.00	0	Darakuta (320kW) +Yovi (995kW)
5. Total_VSPP_Hydro_Off Grid	0	0	0	No registered Entity in this category
6. Total_VSPP_Main-Grid	1,315.00	1,315.00	0	Darakuta (320kW) +Yovi (995kW)
7. Total_VSPP_Off-Grid	1,466	2,175.5	33	PowerCorner (310.10kW) +EON (19.53kW) + Ruaha Energy (128.00kW) + Watu na Umeme (48.00kW) + Powergen (438.88kW) + Jumeme (1,231.00kW).
B. Number of Customer	**2019/20**	**2020/21**	**%±**	
8. Total VSPP _Hydro + Solar	10,943	16,661	34	All registered Entities
9. Total_VSPP_solar_Main Grid	0	0	0	No registered Entity in this category
10. Total_VSPP_Solar_Off Grid	1,466.29	16,661	91	PowerCorner (3,013) +EON (156) + Ruaha Energy (147) + Watu na Umeme (256) + Powergen (3,227) + Jumeme (9,860).
11. Total_VSPP_Hydro_Main Grid	2	2	0	Darakuta (1) +Yovi (1) – all sale to TANESCO
12. Total_VSPP_Hydro_Off Grid	0	0	0	No registered Entity in this category
13. Total_VSPP_Main-Grid	2	2	0	Darakuta (1) +Yovi (1) – all sale to TANESCO
14. Total_VSPP off-Grid	10,941	16,659	34	PowerCorner (3,013) +EON (156) + Ruaha Energy (147) + Watu na Umeme (256) + Powergen (3,227) + Jumeme (9,860).
C. Infrastructure Line length (km)	**KM**			
15. Total VSPP _Hydro + Solar	422.91	544.91	34	All registered Entities
16. Total_VSPP_solar_Main Grid	0	0	0	No registered Entity in this category
17. Total_VSPP_Solar_Off Grid	422.91	544.91	91	PowerCorner (152) +EON (**46.2**) + Ruaha Energy (NA) + Watu na Umeme (7.75) + Powergen (112.9) + Jumeme (104.07).
18. Total_VSPP_Hydro_Main Grid	0	0	0	Darakuta (0) +Yovi (0) – all are doing generation activities only. No distribution activities.
19. Total_VSPP_Hydro_Off Grid	0	0	0	No registered Entity in this category
20. Total_VSPP_Main-Grid	0	0	0%	Darakuta (0) +Yovi (0) – all are doing generation activities only. No distribution activities.
21. Total_VSPP off-Grid	422.91	544.91	34%	PowerCorner (152) +EON (**46.2**) + Ruaha Energy (NA) + Watu na Umeme (7.75) + Powergen (112.9) + Jumeme (104.07).

SPECIFIC SUMMARY FOR EACH COMPANY				
D. Company Name	**Description**	**2019/20**	**2020/21**	**%±**
1. Darakuta Hydropower Development Co. Limited • *Hydro power plant, connected to Main-Grid, and Sales power to TANESCO.*	Capacity (kW)	320	320	0
	Number of Customer	1	1	0
	Infrastructure Line length (km)	1	1	0
2. Yovi Hydropower Company Limited • *Hydro power plant, connected to Main-Grid, and Sales power to TANESCO.*	Capacity (kW)	995	995	0
	Number of Customer	1	1	0
	Infrastructure Line length (km)	1	1	0
3. PowerCorner • *solar power plants, connected to off-grids, and distributing power to customers.*	Capacity (kW)	257.76	310.1	20
	Number of Customer	2,177	3,013	38
	Infrastructure Line length (km)	112.9	152	35
4. E. ON Off Grid Solution Gmbh • *solar power plants, connected to off-grids, and distributing power to customers.*	Capacity (kW)	47.03	19.53	-58
	Number of Customer	476	156	-67
	Infrastructure Line length (km)	46.2	46.2	0
5. Ruaha Energy Co. Ltd • *solar power plants, connected to off-grids, and distributing power to customers.*	Capacity (kW)	128	128.00	0
	Number of Customer	147	147	0
	Infrastructure Line length (km)	unknown	unknown	#VALUE!
6. Watu na Umeme Limited • *solar power plants, connected to off-grids, and distributing power to customers.*	Capacity (kW)	48	48.00	0
	Number of Customer	256	256	0
	Infrastructure Line length (km)	7.75	7.75	0
7. Power Gen Renewable Energy Limited • *solar power plants, connected to off-grids, and distributing power to customers.*	Capacity (kW)	257.76	438.88	70
	Number of Customer	2,177	3,227	48
	Infrastructure Line length (km)	112.9	112.9	0
8. Jumeme Rural Power Supply Ltd • *solar power plants, connected to off-grids, and distributing power to customers.*	Capacity (kW)	675	1,231	82
	Number of Customer	4,874	9,860	102
	Infrastructure Line length (km)	104.07	104.07	0

Annex 6: 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	Minihydro	Wind	Solar	Biomass	Bagasse
	USc²/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

Annex 7: Tanzania Electric Supply Company Limited (TANESCO) Tariff

Note: *It commence on 1st April 2016*

a) Approved TANESCO Tariff

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 avarage consume les than 75kWh per month. Any unit exceeding 75kWh is charged a high rate of Ths 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 comercial and light industrial use, Public lighting and billboards. Power is suplied 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 cunsumption 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	Aproved 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	Aproved 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 Post Paid Meters

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

Annex 8: 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

b) Approved Service Line Charges

Description	Approved Connection Charges After the First 2600 Connections (TZS)	Approved Connection Charges for the First 2600 connections (subsidized) (TZS)
Application fees	5,000	5,000
New Service Line Charges		
(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

Annex 9: Approved Electricity Tariff Trend from 2007 to Date

A. Electricity Tariff as Of December 2007

Customer category		Component	Tariff (TZS)
D1	Domestic Low Usage.	Basic charge /month	0
		Energy charge (0-50kWh)	40
	High-Cost Units: Penalty-High Usage	Energy charge above 50kWh	128
T1	General Use	Basic charge /month	1,892
		Energy charge	106
T2	Low Voltage Supply.	Basic charge /month	7,012
		Energy charge	70
		Demand (kVA)	7,680
T3	High Voltage Supply.	Basic charge /month	7,012
		Energy charge	65
		Demand (kVA)	7,123
T5	State Fuel and Power Corporation of Zanzibar (ZECO).	Basic charge /month	7,012
		Energy charge	28
		Demand (kVA)	3,907

B. Electricity Tariff from January 2008

Customer category		Component	Tariff (TZS)
D1	Domestic Low Usage	Basic charge /month	0
		Energy charge (0-50kWh)	49
	High-Cost Units: Penalty-High Usage	Energy charge above 50kWh	156
T1	General Use	Basic charge /month	2,303
		Energy charge	129
T2	Low Voltage Supply.	Basic charge /month	8,534
		Energy charge	85
		Demand (kVA)	9,347
T3	High Voltage Supply.	Basic charge /month	8,534
		Energy charge	79
		Demand (kVA)	8,669
T5	State Fuel and Power Corporation of Zanzibar (ZECO).	Basic charge /month	8,534
		Energy charge	75
		Demand (kVA)	4,755

C. Electricity Tariff as from January 2011

Customer category		Component	Tariff (TZS)
D1	Domestic Low Usage.	Basic charge /month	0
		Energy charge (0-50kWh)	60
		Energy charge above 50kWh	195
T1	General Use	Basic charge /month	2738
		Energy charge	157
T2	Low Voltage Supply	Basic charge /month	10,146
		Energy charge	94
		Demand (kVA)	12,078
T3	High Voltage Supply	Basic charge /month	10,146
		Energy charge	84
		Demand (kVA)	10,350
T5	ZECO	Basic charge /month	10,146
		Energy charge	83
		Demand (kVA)	8,610

D. Electricity Tariff used from January 2014 and also from March 2015

Customer Category	Component	Unit	Tariff (TZS)
D1	Service charge	TZS/kWh	-
	Energy charge (0-75kWh)	TZS/kWh	100
	Above 75kWh	TZS/kWh	350
T1	Service Charge	TZS/kWh	5,520
	Energy charge	TZS/kWh	298
	Maximum Demand Charge	TZS/kVA/kWh	-
T2	Service Charge	TZS/kWh	14,233
	Energy Charge	TZS/kWh	200
	Maximum Demand Charge	TZS/kVA/kWh	15,004
T3-MV	Service Charge	TZS/kWh	16,769
	Energy Charge	TZS/kWh	159
	Maximum Demand Charge	TZS/kVA/kWh	13,200
T3-HV	Service Charge	TZS/kWh	-
	Energy Charge	TZS/kWh	156
	Maximum Demand Charge	TZS/kVA/kWh	16,550

E. Electricity Tariff from April 2016 to Date

Customer category	Component	Unit	Tariff (TZS)
D1	Service charge	TZS/kWh	-
	Energy charge (0-75kWh)	TZS/kWh	100
	Above 75kWh	TZS/kWh	350
T1	Service Charge	TZS/kWh	-
	Energy charge	TZS/kWh	292
	Maximum Demand Charge	TZS/kVA/kWh	-
T2	Service Charge	TZS/kWh	14,233
	Energy Charge	TZS/kWh	195
	Maximum Demand Charge	TZS/kVA/kWh	15,004
T3-MV	Service Charge	TZS/kWh	16,769
	Energy Charge	TZS/kWh	157
	Maximum Demand Charge	TZS/kVA/kWh	13,200
T3-HV	Service Charge	TZS/kWh	-
	Energy Charge	TZS/kWh	152
	Maximum Demand Charge	TZS/kVA/kWh	16,550

Annex 10: Grid and Off-Grid 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			
1. Kidatu	4	Hydro	204.00
2. Kihansi	3	Hydro	180.00
3. Mtera	2	Hydro	80.00
4. New Pangani Falls	2	Hydro	68.00
5. Hale	2	Hydro	21.00
6. Nyumba ya Mungu	2	Hydro	8.00
7. Uwemba	3	Hydro	0.84
Sub-Total Hydro			***561.84***
1. Ubungo I	12	Natural Gas	102.00
2. Ubungo II	3	Natural Gas	129.00
3. Tegeta	5	Natural Gas	45.00
4. Kinyerezi I	4	Natural Gas	150.00
5. Kinyerezi II	6	Natural Gas	248.22
6. Mtwara	9	Natural Gas	30.60
7. Somanga	3	Natural Gas	7.50
Sub-Total Natural Gas			***712.32***
1. Zuzu	3	HFO	7.40
2. Nyakato	10	HFO	63.00
3. Biharamulo	5	GO	4.14
4. Songea	6	GO	7.67
5. Namtumbo	1	GO	0.34
6. Ludewa	3	GO	1.27
7. Mbinga	2	GO	2.00
8. Madaba	1	GO	0.48
9. Ngara	2	GO	2.50
Sub-Total HFO/GO			**88.80**
Sub-Total Main Grid Power Plant Owned by TANESCO			***1,362.96***
(b) Power Plant owned by Independent Power Producer (IPP)			
1. Songas	6	Natural Gas	189.00
Sub-Total Main Grid Power Plant owned by IPP			***189.00***
(c) Small Power Producers (SPP) owned by Private Entity			
1. TANWAT	1	Biomass	1.50
2. TPC	1	Biomass	9.00
3. Mwenga Hydro Limited	1	Hydro	4.00
4. Andoya	1	Hydro	1.00
5. Tulila	2	Hydro	5.00
6. Yovi	1	Hydro	0.95
7. Darakuta	1	Hydro	0.45
8. Matembwe	1	Hydro	0.59
Sub-Total Main Grid Small Power Producers (SPP)			**22.49**
Total Main Grid Installed Capacity			***1,574.45***

Part II: Off-Grid Power Plant			
	No. of Units	**Energy Source**	**Installed Capacity (MW)**
(a) Off-Grid Power Plant owned by TANESCO			
1. Kigoma	7	GO	6.25
2. Mpanda	5	GO	5.046
3. Mafia	4	GO	3.20
4. Sumbawanga	4	GO	6.25
5. Kasulu	2	GO	2.50
6. Kibondo	2	GO	2.50
7. Loliondo	4	GO	3.50
8. Inyonga	1	GO	0.816
9. Bukoba	4	GO	2.56
Sub-Total Off-Grid Power Plant owned by TANESCO			**32.622**
(b) Sub-*Total Off-Grid Power Plant owned by Private Entities - Refer Annex 5*			**2.176**
Total Off-Grid Installed Capacity			**34.798**
National System Total (Main Grid and Off-Grid)			**1,609.25**

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.	Songas	Dar es Salaam	189.00	Natural Gas
15.	Ubungo I	Dar es Salaam	102.00	Natural Gas
16.	Ubungo II	Dar es Salaam	129.00	Natural Gas
17.	Tegeta	Dar es Salaam	45.00	Natural Gas
18.	Kinyerezi I	Dar es Salaam	150.00	Natural Gas
19.	Kinyerezi II	Dar es Salaam	248.22	Natural Gas
20.	Mtwara	Mtwara	30.60	Natural Gas
21.	Somanga	Lindi	7.50	Natural Gas
22.	Liwale	Lindi	0.85	Diesel
23.	Zuzu	Dodoma	7.40	Diesel
24.	Nyakato	Mwanza	63.00	Diesel
25.	Bihalamulo	Kagera	4.14	Diesel
26.	Songea	Ruvuma	5.77	Diesel
27.	Tunduru	Ruvuma	1.72	Diesel
28.	Mbinga	Ruvuma	1.00	Diesel
29.	Madaba	Ruvuma	0.48	Diesel
30.	Ludewa	Njombe	1.27	Diesel
31.	Ngara	Kagera	2.50	Diesel
32.	Kigoma	Kigoma	6.25	Diesel
33.	Mpanda	Katavi	5.05	Diesel
34.	Mafia	Coast	3.20	Diesel
35.	Sumbawanga	Rukwa	6.25	Diesel
36.	Kasulu	Kigoma	2.50	Diesel
37.	Kibondo	Kigoma	2.50	Diesel
38.	Loliondo	Manyara	3.50	Diesel
39.	Inyonga	Njombe	0.82	Diesel
40.	Bukoba	Kagera	2.56	Diesel
41.	PowerCorner	Manyara, Lindi, Mtwara, Tabora	0.31	Solar
42.	E.O. N	Dodoma	0.03	Solar
43.	Ruaha Energy	Morogoro	0.13	Solar
44.	Watu na Umeme	Tanga	0.05	Solar
45.	PowerGen	Singida, Kagera, Morogoro, Mwanza, Mara	0.44	Solar
46.	Jumeme	Mwanza and Kagera	1.23	Solar

(c) Grid and Off-Grid Installed Capacity by Licensee

Licensee Name & Description	Energy Source	Installed Capacity (MW)
Part 1: TANESCO		
(a) Main Grid		
1. Kidatu	Hydro	204.00
2. Kihansi	Hydro	180.00
3. Mtera	Hydro	80.00
4. New Pangani Falls	Hydro	68.00
5. Hale	Hydro	21.00
6. Nyumba ya Mungu	Hydro	8.00
7. Uwemba	Hydro	0.84
Sub-Total Hydro		***561.84***
1. Ubungo I	Natural Gas	102.00
2. Tegeta	Natural Gas	45.00
3. Ubungo II	Natural Gas	129.00
4. Kinyerezi I	Natural Gas	150.00
5. Kinyerezi II	Natural Gas	248.22
6. Mtwara	Natural Gas	22.00
7. Somanga	Natural Gas	7.50
Sub-Total Natural Gas		***703.72***
1. Zuzu	HFO	7.40
2. Nyakato	HFO	63.00
3. Biharamulo	GO	4.14
4. Songea	GO	7.67
5. Namtumbo	GO	0.34
6. Ludewa	GO	1.27
7. Mbinga	GO	2.00
8. Madaba	GO	0.48
9. Ngara	GO	2.50
Sub-Total HFO/GO		***88.80***
Sub-Total Main Grid Power Plant Owned by TANESCO		***1,362.96***

(b) Off Grid		
1. Kigoma	GO	8.25
2. Mpanda	GO	5.406
3. Mafia	GO	3.00
4. Sumbawanga	GO	5.00
5. Kasulu	GO	3.38
6. Kibondo	GO	2.50
7. Loliondo	GO	3.75
8. Inyonga	GO	0.76
9. Bukoba	GO	2.56
Sub-Total Off-Grid Power Plant owned by TANESCO		***32.622***
Total TANESCO (Main Grid + Off-Grid)		***1,395.58 (86.72%)***
Part II: Main Grid Power Plant owned by Independent Power Producer (IPP)		
1. SONGAS	Gas	189.00
Sub-Total Main Grid Power Plant owned by IPP		***189.00 (11.74%)***
Part III: Main Grid SPP owned by Private Entity		
1. TANWAT	Biomass	1.50
2. TPC	Biomass	9.00
3. Mwenga Hydro Limited	Hydro	4.00
4. Andoya	Hydro	1.00
5. Tulila	Hydro	5.00
6. Yovi	Hydro	0.95
7. Darakuta	Hydro	0.45
8. Matembwe	Hydro	0.59
Sub-Total Main Grid SPP		***22.49 (1.40%)***
VSPP Off-Grid Power Plant -Refer Annex 5		***2.176 (0.14%)***
National System Total (Main Grid and Off-Grid)		***1,609.25***
Source: Daily Operation Report from TANESCO and EWURA Licensee Data Base		

Annex 11: Power Plants Operation Performance Data

(a). Main Grid Power Plants Operation Performance for FY 2020/21

Plants Name	Energy Source	Installed Capacity (MW)	Plant Availability (%)	Plant Utilization (%)
Kidatu	Hydro	204	70.89	61.62
Kihansi	Hydro	180	98.41	51.86
Mtera	Hydro	80	96.26	87.36
N/P Falls	Hydro	68	92.25	73.11
Hale	Hydro	21	45.61	23.54
Nyumba ya Mungu	Hydro	8	86.27	91.71
Average			**81.62**	**64.87**
Songas	Natural Gas	189	95.74	76.41
UGP1	Natural Gas	102	67.27	60.89
UGP2	Natural Gas	129	86.34	73.80
TGP	Natural Gas	45	93.07	50.89
Kinyerezi I	Natural Gas	150	89.96	32.42
Kinyerezi II	Natural Gas	248.22	92.38	69.92
Mtwara	Natural Gas	22	71.14	39.66
Somanga	Natural Gas	7.5	52.08	6.60
Average			**81.00**	**51.32**
TANESCO Diesel (Zuzu)	Diesel	7.4	59.01	1.85
Nyakato	HFO	63	40.00	0.41
Average			**49.51**	**1.13**

(b). Off-Grid Power Plants Operation Performance for FY 2020/21

Plants Name	Installed Capacity (kW)	Average Available Capacity (kW)	Average Power Generated (kW)	Plant Availability (%)	Plant Utilization (%)
Kigoma	6250	6250.00	3488.28	100.00	55.81
Mpanda	5046	4270.83	1900.36	84.64	44.50
Mafia	3200	1895.83	681.81	59.24	35.96
Sumbawanga	6250	5000.00	85.00	80.00	1.70
Kasulu	2500	2566.67	1236.14	102.67	48.16
Kibondo	2500	2395.83	692.23	95.83	28.89
Loliondo	3500	1666.67	200.10	47.62	12.01
Inyonga	816	545.83	211.03	66.89	38.66
Bukoba	2560	2200.00	7.27	85.94	0.33
Average				**80.31**	**29.56**

Annex 12: Electricity Transmission Data – TANESCO

Electricity Transmission Data Requisition Form	2020/21			
Line Voltage (kV)	**66**	**132**	**220**	**400**
Route Length (km)	543.00	1,672.57	3,224.71	670.00
Additional Route Length (km)			55	
Number of Customers Connected (Number)	-	4	1	-
Number of Transmission Substation (Number)	7	30	22	
Capacity of Transmission Substation (MVA)	98.6	1710.9	3306.5	
Planned Outages (Hours)	234.53	434.35	978.26	0
Planned Outages frequency (Number)	26	57	105	0
Unplanned Outages (Hours)	72.21	160.47	492.61	0
Unplanned Outages frequency (Number)	11	126	59	0
Energy received in Transmission System (MWh)				7,891,332.37
Total Energy Received at P/S for Distribution (MWh)				7,424,116.24
Transmission System Losses (MWh)				**464,460.03**
Hale-Tanga-Kilimanjaro-Arusha				96,729.12
Kidatu-Morogoro-Ubungo-Hale				79,275.33
Kidatu-Iringa-Mufindi-Mbeya				97,025.46
Iringa-Kihansi-Kidatu				49,083.40
Iringa-Mtera-Mwanza-Musoma-Tabora				101,800.51
Singida-Njiro				40,546.22
Total Auxilliary use (MWh)				2,756.09
Unserved Energy (MWh)				103,515.29
Cross boarder Energy Import (MWh)				125,503.46
Cross boarder Energy Export (MWh)				-
Total grid failure (Hours)				3.38
Total grid failure (Frequency)				2.00
SAIFI-CP				6.36

Annex 13: Electricity Distribution Data – TANESCO

1. Customers by Tariff			
Tariff Category	No. of Customers		% Change
	2019/20	2020/21	
Domestic Use (D1)	924,074	1,032,461	*11.73*
General Use (T1)	1,936,490	2,253,726	*16.38*
Low Voltage Supply (T2)	3,165	3,403	*7.52*
High Voltage Supply (T3)	831	900	*8.56*
Total	**2,864,560**	**3,290,490**	***14.9***

2. Distribution Route Length	
Voltage Level	**km**
Route length 33kV line	47,487.88
Route length 11kV line	12,486.11
Route length LV lines	88,570.24
Total	**148,544.23**

Annex 14: Total Revenue (TZS in millions)

Description	Electricity Sales			Other Income			TOTAL		
FY	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
TANESCO	1,535,255	1,564,353	1,641,019	191,944	225,613	224,187	1,727,199	1,789,966	1,865,206
Songas	189,669	199,657	178,935	38,005	26,116	25,270	227,674	225,773	204,205
Mwenga Hydro	2,921	3,894	4,798	1,172	2,381	1,657	4,092	6,275	6,455
Tulila	10,362	4,670	6,490	104	104	104	10,466	4,774	6,594
Andoya	1,123	527	789	331	276	34	1,454	803	823
Mwenga Power	338	406	455	64	0	9	402	406	463
TOTAL	**1,739,667**	**1,773,506**	**1,832,486**	**231,619**	**254,490**	**251,260**	**1,971,286**	**2,027,996**	**2,083,746**

Percentage Change

Description	Electricity Sales			Other Income			TOTAL		
FY	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21	2018/19	2019/20	2020/21
TANESCO	1%	2%	5%	56%	18%	-1%	6%	4%	4%
Songas	6%	5%	-10%	12%	-31%	-3%	7%	-1%	-10%
Mwenga Hydro	3%	33%	23%	-28%	103%	-30%	-4%	53%	3%
Tulila	17%	-55%	39%	0%	0%	0%	16%	-54%	38%
AHEPO	29%	-53%	50%	NA	-17%	-88%	29%	-45%	3%
Mwenga Power	30%	20%	12%	-36%	-100%	4238%	17%	1%	14%
TOTAL	**2%**	**2%**	**3%**	**46%**	**10%**	**-1%**	**6%**	**3%**	**3%**

Annex 15: TANESCO Sales per Customer Category

Customer Category	Sales (TZS Billions)				Sales (MWh)			
FY	2017/18	2018/19	2019/20	2020/21	2017/18	2018/19	2019/20	2020/21
Domestic low usage (D1)	36	35	34	37	309	312	314	337
General usage (T1)	695	753	775	817	2,418	2,597	2,633	2,773
Low Voltage Supply (T2)	157	164	161	164	601	633	614	623
High Voltage Supply (T3)	543	583	594	624	2,677	3,010	3,055	3,166
TOTAL	**1,431**	**1,535**	**1,564**	**1,641**	**6,005**	**6,551**	**6,616**	**6,898**

Percentage Contribution								
FY	2017/18	2018/19	2019/20	2020/21	2017/18	2018/19	2019/20	2020/21
Domestic low usage (D1)	2%	2%	2%	2%	5%	5%	5%	5%
General usage (T1)	44%	48%	50%	50%	40%	40%	40%	40%
Low Voltage Supply (T2)	10%	11%	10%	10%	10%	10%	9%	9%
High Voltage Supply (T3)	35%	37%	38%	38%	45%	46%	46%	46%

(Footnotes)

[1] Rusumo Hydro Power Project (80MW) is a regional project developed by the Government of the United Republic of Tanzania (26.7MW), the Government of Republic of Rwanda (26.7MW) and the Government of Republic of Burundi (26.7MW).

[2] The prevailing exchange rate to be used

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