

GOVERNMENT NOTICE No. 396 Published On 21-5-2021

THE ENERGY AND WATER UTILITIES REGULATORY AUTHORITY ACT
(CAP. 414)

RULES

(Made under section 40(1)(g))

THE ENERGY AND WATER UTILITIES REGULATORY AUTHORITY (ELECTRICITY AND
NATURAL GAS) (TARIFF APPLICATION AND RATE SETTING) RULES, 2021

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THE ENERGY AND WATER UTILITIES REGULATORY AUTHORITY ACT
(CAP. 414)

RULES

(Made under section 40(1)(g))

THE ENERGY AND WATER UTILITIES REGULATORY AUTHORITY (ELECTRICITY AND
NATURAL GAS) (TARIFF APPLICATION AND RATE SETTING) RULES, 2021

PART I
PRELIMINARY PROVISIONS

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|----------------|---|
| Citation | 1. These Rules may be cited as the Energy and Water Utilities Regulatory Authority (Electricity and Natural Gas) Tariff Application and Rate Setting) Rules, 2021. |
| Application | 2. These Rules shall apply to tariff applications and rate setting under electricity and natural gas sub-sectors in Mainland Tanzania. |
| Interpretation | 3. In these Rules, unless the context otherwise requires: |
| Cap. 414 | “Act” means the Energy and Water Utilities Regulatory Authority Act;
“applicable law” means any principal law, treaty, convention, proclamation, regulation, rule, order or by-law that is customarily treated in Tanzania as having legally binding force and which is relevant to matters pertaining to tariff regulation in the electricity and natural gas sub sectors;
“applicant” means a regulated supplier in the electricity or natural gas sub sectors;
“Authority” means the Energy and Water Utilities Regulatory Authority;
“automatic electricity tariff adjustment” means a tariff adjustment by the regulated electricity utility based on changes in non-controllable costs – that is, costs |

that are beyond the control of the Utility (such as the costs resulting from foreign currency exchange rates, inflation and fuel costs) - which must be passed through to the customer tariff;

“capital cost” means actual costs prudently incurred by a licensee in connection with planning, development, financing, designing, engineering, procurement, supply, construction, installation, completion, commissioning, testing, insurance and ownership of licensed facility that is used and useful in relation to the provision of regulated service;

“capacity-weighted distance model” means setting the allowed revenue and creating a segmented network representation;

"Capital Work in Progress (CWIP)" means accumulated capital costs of an asset under construction or installation which shall be capitalized or transferred to Plant in Service after commercial operation date;

"cost reflective tariff" means a tariff which is based on all conceivable costs necessary to install, operate and maintain the assets and provide reasonable return to the licensee for rendering regulated services;

“capital expenditure” means the actual costs prudently incurred by a utility in procuring and restoring assets and investment costs such as planning, development, financing, design, engineering, procurement, supply, construction, installation, completion, testing, commissioning and insurance;

“customer” means a person who purchases or receives regulated services for own use or sale;

“customer class” means a category of persons who purchase or receive regulated services and are specified according to the use or sale;

"emergency tariff application" means an application submitted by the applicant with a certificate of urgency from the responsible Minister;

“formal presentation” means a written presentation by an interested party who has registered for a public hearing;

“interested party” means a person with an interest in or who is affected by the subject matter of a public

hearing;

"grant" means financial support from the government or donor agency to a licensee to meet operational or capital expenditure;

"letter of no objection" means any permit or approval granted by the sector ministry to any regulated public utility signifying the ministry's consent to the tariff application submitted to EWURA;

"licensee" means a holder of a licence to conduct regulated activity and shall include any entity that is exempted from obtaining a licence pursuant to the provisions of the applicable law;

"LOIS" means an online electronic system maintained by the Authority for submitting and processing of licenses, tariff applications and consumer complaints;

"Ministry" means the Ministry responsible for electricity and natural gas matters;

"operating expenditure" means a category of expenditure that a business incurs as a result of performing its normal business operations;

"postage stamp" means a fixed charge per unit of energy transmitted within a particular zone, regardless of the distance that the energy travels;

"Rate of Return" or "WACC" means the nominal rate of return per annum as determined by using nominal post-tax weighted average cost of capital;

"rate setting methodology" means a methodology approved by the Authority that a licensee uses to determine a tariff;

"reasonable return" means the level of return that a licensee would seek for enterprises of similar risk;

"regulated activity" means:

(a) electricity generation, transmission, system operation, market operation and distribution services; and

(b) natural gas processing, transmission, distribution and compression services;

"reference utility" means an ideal or hypothetical efficient utility that is used to benchmark a licensee for estimation of operational costs of providing regulated

services under the same conditions;

“Regulatory Asset Base” or “RAB” means the total cost to be depreciated over the economic life of the asset and shall include Capital Costs, lenders fees and commissions, interest during construction, the initial debt service reserve account value, development costs and any withholding tax applied and grossed up on interest paid to the lenders prior to the COD;

“regulatory year” means each period of three hundred and sixty-five days (or three hundred and sixty-six days in a “leap year”) commencing on the Expansion Project COD and thereafter on each anniversary of such date until the end of the Term;

“reseller” means the owner of an apartment building, residential or commercial complex who is supplied with regulated services by a licensee and sell the services to the occupants of the reseller’s premises;

“revenue requirement” means the total amount of money a utility must collect from customers to pay all costs which include operating and maintenance expenses, depreciation, government taxes, levies and a reasonable return on investment so as to properly operate and maintain its system and meet its financial obligations and shall be determined from time to time in accordance with rule 16;

“sub metering” means the installation of equipment to determine the actual usage of the regulated service for each residential unit in an apartment building, residential or commercial unit;

“subsidy” means financial support from the government or donor agency to meet all or part of operating expenses or capital expenditure;

“tariff” means any charge, fee, price or rate charged for the provision of a regulated activity as shall be approved by the Authority;

“tariff period” means a period, in a designated number of years, for which the approved tariffs shall apply;

“tariff schedule” means the detailed set of rates and charges to be applied by a Licensee to its customers for the provision of regulated activities;

“Tariff Application Guidelines” means the guidelines

- issued by the Authority to regulate the procedure on applying for a tariff in the electricity and natural gas sub-sectors;
- "test year" means a period of measurement for a recent, consecutive twelve-month period consisting of a full year of operations where data is readily available;
- "Tariff Application Top Sheet or "Top Sheet" means the cover sheet of the application containing information prescribed under rule 5;
- Cap. 285 "Tribunal" means the Fair Competition Tribunal established under the provisions of the Fair Competition Act; and
- "WACC" means the Weighted Average Cost of Capital.

PART II

TARIFF APPLICATION AND RATE REVIEW PROCEDURES

- Preparation and submission of tariff application
- 4.-(1) A licensee who wants to impose or review its electricity or natural gas tariff shall apply to the Authority in the manner prescribed in these Rules and Tariff Application Guidelines made by the Authority.
- (2) Tariff review applications shall be prepared by licensees in accordance with the tariff application format prescribed in the guidelines prepared by the Authority.
- (3) The application under sub rule (1) shall be made at least one hundred and fifty days prior to the applicability of the proposed tariff.
- (4) a licensee shall submit a complete tariff application accompanied with supporting documents and other information in accordance with these Rules.
- (5) Without prejudice to the provisions of sub rule (4), an application for tariff shall be accompanied by the following:-
- (a) top sheet which shall comprise of:
 - (i) registered name of the applicant;
 - (ii) full address of the applicant to which communications in the matter will be sent;
 - (iii) full name, title and contact information of the applicant's chief executive officer or authorized person;
 - (iv) verifiable reference of an applicant's license

- by EWURA (or a preceding Authority) to provide a regulated service;
 - (v) a succinct statement of the regulatory action being requested; and
 - (vi) signature of the chief executive officer or a duly authorized officer of the applicant;
 - (b) implementation status of conditions contained in the previous order issued to the applicant, if any;
 - (c) business plan which provides in detail the applicant's strategic objectives and implementation plan;
 - (d) audited financial statements, covering the past three financial years and the most recent interim financial statements prior to the date of the application;
 - (e) statement explaining how the proposed adjustment of the current tariff will benefit customers and improve services;
 - (f) financial implications to the applicant if the requested changes in tariff are not approved. These may include ability of the applicant to pay for its creditors, to meet contractual financial obligations, to service its debt; to cover all the fixed costs; and to spend on capital investment projects;
 - (g) an affirmation that states that all contractual agreements that may have impact on the proposed tariffs have been included in the application; and
 - (h) any other information as may be required by the Authority.
- (6) Notwithstanding the provisions of sub-rule (5), an applicant shall be required to submit a letter of no objection from the Ministry on the intention to review existing tariff.
- (7) The application shall be submitted online through LOIS and shall include a workable MS Excel worksheet signed by the Chief Executive or an authorized representative of the applicant in accordance with the format prescribed in the guidelines.
- (8) When the application is not in compliance with

the requirements under this rule, the Authority shall refer back or reject the application.

(9) An application submitted under this rule may be withdrawn by an applicant through a letter to the Authority at any time before the Authority commences an inquiry process.

Waiver of requirements

5. The Authority may, on application by a licensee or on its own motion, waive any application requirement under this Part,
Provided that, no waiver shall be made unless on the grounds of public interest determined as such by the Authority.

Tariff Review at Authority's own motion

6.-(1) The Authority may, on its own motion, initiate an inquiry to review a tariff of any licensee where it makes a finding that-

- (a) there are changes in the circumstances that require tariff adjustment;
- (b) tariff charged by a licensee was not approved by the authority;
- (c) the applicable assumptions used to calculate the tariff have significantly changed; and
- (d) the licensee has failed to submit tariff review application within the prescribed time.

(2) The licensee shall be obliged to submit any information required by the Authority when excising its power to review tariff on its own motion under sub – rule (1).

Confidentiality

7.-(1) A licensee may request the Authority not to circulate specific data or information that it has provided to the Authority;

Provided that, the Authority shall have powers to determine as to whether the information suffice to be treated as confidential or not.

(2) The Authority shall, where it determines that certain information is confidential, limit or prohibit the publication of any information to the public.

Emergency Tariff

8.-(1) A licensee may submit to the Authority an

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- Application emergency tariff application to address an emergency situation.
- (2) The application under sub-rule (1) shall, at minimum contain the Top Sheet and certificate of Urgency from the Minister.
- (3) Depending on the nature of the application, the Authority may deal with the emergency tariff application without undergoing a full inquiry and evaluation process.
- Public Inquiry 9.-(1) The Authority shall conduct an inquiry before exercising power to regulate any rate or charges.
- (2) The inquiry under sub rule (1) shall involve issuance of a public notice on the application and the solicitation of comments from stakeholders and the general public regarding the reasonableness of the proposed tariff review.
- (3) Any interested person may submit written comments to the Authority in connection with an application within twenty one (21) days from the date of the notice or seven (7) days after the public hearing meeting.
- (4) The closure of the Public Inquiry process shall be twenty one (21) days after the date of the public notice or seven (7) days after the public inquiry meeting, whichever is later.
- (5) The applicant shall submit to the Authority the responses to all raised comments within five (5) working days from the date of closure of the Inquiry process.
- Intervention 10.-(1) Any person who wishes to intervene in the approval process for a tariff application shall declare his intention to do so in writing within five (5) working days from the date of the public notice.
- (2) The intention to intervene shall clearly state the name and address of the person seeking intervention and the reasons for that intervention.
- (3) The Authority shall, after reviewing an application to intervene, either grant or deny such application.
- (4) The Authority shall, in the event it denies intervention, inform the applicant of such decision in writing, including the reasons thereof.

Evaluation of
Tariff
Application

11.-(1) The Authority shall, after receipt of the application under rule 4 and closure of the public inquiry, evaluate and decide on such application pursuant to the Act, sector legislation, these Rules and Tariff Application Guidelines.

(2) The tariff set by the Authority under sub-rule (1) shall be published in the Government *Gazette* and subject to the provisions of sub-rule (3) or other applicable legislation, be in use for a period of three years.

(3) Notwithstanding the provision of sub-rule (2), the Authority may:-

(a) review the tariff before the period of three years where it discovers that the tariff set is contrary to the provisions of the Act, sector legislation and these Rules;

(b) extend the tariff set in sub rule (1) for a further period as the Authority may determine.

Evaluation
Criteria

12.-(1) All Tariff Application filed under these Rules shall be evaluated by the Authority on the basis of and in accordance with the following criteria:

(a) tariffs shall reflect the average cost of service of each licensee;

(b) tariffs shall include:-

(i) a mechanism to allow licensee a benefit from efficient investment; and

(ii) penalties for failure to achieve benchmarks set by the Authority through yardstick regulations in regard to capacity utilization, operation and maintenance and unaccounted regulated services;

(c) tariffs shall be determined in a manner which promotes continued reasonable investment in equipment, facilities and research and development for qualitative and quantitative improvement in the provision of regulated activities;

(d) tariffs shall be determined in a manner that protects consumers against monopolistic and oligopolistic pricing;

(e) tariffs shall generally be determined taking into account a reasonable rate of return, prudent operation and maintenance costs, depreciation,

government levies and if applicable financial services and cost of regulated services;

- (f) while determining the value of a licensee's fixed assets in operation, the value of assets funded wholly or partially, on a nonrefundable basis by a person other than a licensee shall be excluded to the extent of such contribution;
- (g) only such capital expenditure shall be included in the rate base as is prudent, cost effective and economically efficient; and
- (h) depreciation of a licensee's assets shall be allowed on the basis of their useful life as may be determined from time to time by the Authority.

(2) The Authority shall strike a balance, to the extent possible, in order to optimize the benefits to all persons likely to be affected by the Authority's determination of tariffs when evaluating the tariff application.

Decision of the
Authority

13.-(1) The Authority shall, after due consideration of all material facts to the application, issue a Tariff Order prescribing the approved tariff and charges to be applied by the applicant in providing regulated services.

(2) No licensee shall charge any customer a tariff exceeding that approved by the Authority pursuant to these Rules and published in the *Government Gazette*.

Periodic Tariff
Adjustment in
the Electricity
sub-sector

14.-(1) The Authority shall, upon application by a licensee:

- (a) on quarterly basis, review and adjust the tariffs for costs associated with fuel and exchange rate fluctuation;
- (b) on half yearly basis adjust the tariffs for costs associated with inflation;
- (c) on annual basis, review and adjust the tariffs based on performance of the planned projects; and
- (d) adjust the tariff accordingly, whenever the licensee receives a tax exemption, grant or a subsidy from the Government.

(2) Tariff adjustments for costs associated with fuel, exchange rate fluctuations and inflation shall be done in

accordance with the formula provided for in the First Schedule.

(3) Notwithstanding the generality of sub-rule (1), the Authority may, on its own motion, effect periodic tariff adjustment.

(4) The Authority shall, on quarterly, half yearly and annual basis, as the case may be, publish the adjusted tariffs under sub-rule (1), in newspapers of wide circulation.

Sub- metering
by resellers

15.-(1) Any person who owns an apartment building, residential or commercial complex and receives electricity or natural gas from a licensee may provide for sub-metering of each dwelling house or rental unit for the measurement of quantity of electricity or natural gas consumed by the occupant of the unit.

(2) A person who has provided for sub metering under sub rule (1) shall aggregate the total electricity or natural gas cost of the main meter which are energy, demand, services and government taxes and levies including technical losses up to 5% in the building and apportion the amount thereof to each tenant according to the total unit consumed by each tenant.

(3) Notwithstanding the provision of sub-rule (1) in the absence of sub-meters, energy and other charges to the tenants shall be distributed proportionally based on the agreed criteria provided that the cost to be incurred by the tenants shall not exceed the bill paid by the owner of the premises to the utility.

PART III TARIFF SETTING METHODOLOGY

Revenue
Requirement

16.-(1) The Authority shall use a Revenue Requirement Methodology in determining tariff for regulated sectors.

(2) The Revenue Requirement Methodology shall be framed on the principles that revenues of the regulated utilities have to cover operating and maintenance expenses, depreciation, taxes and shall ensure a fair return on assets employed in rendering regulated services. The revenue requirement shall be determined by the following formula:

$$RR = O\&M + D + T + (WACC \times RAB)$$

Where:

RR means Revenue Requirement for the regulatory year;

O&M means Operation and maintenance expenses;

D means Depreciation charge;

T means Corporate Taxes;

WACC means Weighted Average Cost of Capital;
and

RAB means assets of the licensee which are used and useful in the provision of regulated service to the customers.

(3) For the purpose of sub rule (2):

(a) operating and maintenance expenses shall include all expenditure just and reasonable incurred wholly and exclusively for the provision of regulated activity and shall meet the following qualification criteria:

- (i) expenses must be incurred in an arm's length transactions;
- (ii) expenses must be incurred in the normal operation of the licensee including a reasonable level of refurbishment, repairs and maintenance costs;
- (iii) expenses must be prudently incurred after careful consideration of available options and such consideration would entail a competitive bidding and transparency in the procurement process;

(b) regulatory Asset Base shall be determined as per the First Schedule and shall include all used and useful assets in the provision of regulated activity and shall be considered in the determination of

annual depreciation charge, irrespective of sources of financing;

- (c) the Regulatory Asset Base shall cover all assets employed by the applicant in the provision of regulated activities. The said assets shall be prudently designed, competitively procured and or constructed;
- (d) the Return on Regulatory Asset Base for the applicant shall be calculated using the Weighted Average Cost of Capital (WACC) which shall be determined according to the First Schedule;
- (e) the depreciation charge of the allowed revenue requirement shall be computed on the Historical cost of the Regulatory Asset Base using a straight line method over the useful economic life of the asset or project according to the First Schedule;
- (f) subject to the requirements of the Income Tax Act, any taxes including corporate taxes paid or to be paid by the licenses may be considered in the determination of revenue requirement provided that exempted taxes in the provision of regulated services shall not be included in the determination of revenue requirement.

(4) Notwithstanding the generality of sub rule (2) and (3), the Authority may specify provisions that are specific to the natural gas sub-sector or different segments of the electricity sub-sector for determination of the revenue requirement.

Electricity
Tariff Setting
Methodology

17. Methodologies for determination of the electricity generation, transmission, system operation, market operation, distribution and supply tariffs shall be as prescribed in the Second Schedule.

Natural Gas
Tariff Setting
Methodology
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18. Methodologies for determination of tariff for natural gas regulated activities shall be in accordance with the Petroleum (Natural Gas Pricing) Regulations, 2020 or any other replacement thereof.

PART IV GENERAL PROVISIONS

Summoning
process

19.-(1) The Authority may summon any person it believes to be capable of supplying information necessary to assist it in fulfilling its obligations.

(2) A summon made under sub-rule (1) may require a person to:

- (a) furnish information in writing;
- (b) produce any document to the Authority; or
- (c) appear before the Authority to give evidence.

(3) Any person who without lawful excuse refuses or fails to comply with a summons to provide information commits an offence and shall, on conviction, be liable to a fine not exceeding three hundred thousand shillings or imprisonment for a term not exceeding fifteen months or to both.

Offences

20. Any person who:

- (a) offers for sale or sells regulated services using a tariff that is not approved in accordance with these Rules;
- (b) offers for sale or sells regulated services at a tariff that exceeds the approved tariff;
- (c) either individually or jointly with another person creates an artificial shortage of the regulated services;
- (d) refuses or fails to conduct its licensed activity in the absence of an authorization to do so by the Authority; or
- (e) fails to implement conditions stated in the Tariff Order,

shall be deemed to have contravened an order of the Authority and shall on conviction-

- (a) in the case of an offence related to the electricity sub-sector, be liable to a fine of not less than three million shillings; and
- (b) in the case of an offence related to the natural gas sub sector, be liable to a fine of not less than ten million shillings or to imprisonment for a term of not less than two years or both.

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| Appeals

Cap.285 | 21. Any person who is aggrieved by the decision of the Authority made under these Rules may appeal to the Tribunal pursuant to the provisions of the Fair Competition Act. |
| General penalty | 22. Any person who breaches any provisions of these Rules for which no specific penalty is prescribed shall be liable to a fine not exceeding five hundred thousand shillings. |
| Revocation of
GN. No.
452/2017 | 23.-(1) The Energy and Water Utilities Regulatory Authority (Tariff Application and Rate Setting) Rules, 2017 are hereby revoked.

(2) Notwithstanding the revocation of the Energy and Water Utilities Regulatory Authority (Tariff Application and Rate Setting) Rules, 2017, all orders, exemptions or directives made or issued or deemed to have been made or issued under those rules shall be deemed to have been made under these Rules, and shall remain in force until revoked or otherwise expire or cease to have effect. |
| Authority to
supplement
procedures | 24. The Authority may, in the event procedures are not provided for under these Rules, do whatever is necessary and permitted by the Act, the EWURA Act and relevant laws to enable it to effectively and completely adjudicate on any matter before it. |

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FIRST SCHEDULE

(Made under Rule 14(2) and 16(3))

GENERAL METHODOLOGY FOR DETERMINATION OF SOME COMPONENTS OF
REVENUE REQUIREMENT

- Regulatory Asset Base 1. (1) The Regulatory Asset Base (RAB) shall be determined using the following methodology:

$$RAB = \frac{(RAB_t + RAB_{t-1})}{2}$$

whereas:

RAB_t means Regulatory Asset Base at the end of year t (current year)
 RAB_{t-1} means Regulatory Asset Base at the end of year t-1

- (2) The Regulatory Asset Base at the end of year t shall be determined by the following formula:

$$RAB_t = RAB_{t-1} + CAPEX_t - S_t - D_t + \Delta WC_t$$

whereas:

RAB_t means Regulatory Asset Base on year t (current year)
 RAB_{t-1} means Regulatory Asset Base in year t-1
 $CAPEX_t$ means capital additions during year t,
 S_t means asset disposals during year t
 D_t means depreciation in the reporting year, and
 ΔWC_t means change in the working capital in the reporting year.

- (3) RAB shall consist of all assets that are “used and useful” in provision of regulated services.

- Weighted Average Cost of Capital 2. (1) The Weighted Average Cost of Capital (WACC) after tax, applicable to the Regulatory Asset Base (RAB) shall be determined using the formula:

$$WACC = \left(\frac{E}{D + E} \times K_e \right) + \left[\frac{D}{D + E} \times K_d \times (1 - T_e) \right]$$

whereas:

WACC” means the rate of return, expressed as percentage, required by the providers of capital (both debt and equity) which is approved by the Authority;
“E” means the market value of equity expressed in TZS;
“D” means the market value of debt expressed in TZS;
“E+D” market value of the Regulated Licensee expressed in TZS;
“K_e” means the cost of equity expressed as a percentage as

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- determined in accordance with sub- paragraph (2);
 “K_d” means the weighted average cost of debt expressed as percentage; and
 “T_c” means applicable statutory corporate tax rate expressed in percentage.

(2) The cost of equity shall be calculated using the Capital Asset Pricing Model (CAPM) as given hereunder:

$$K_e = R_f + \beta_e \times [R_m - R_f]$$

whereas:

- K_e means the cost of equity;
 R_f means the risk free rate of return;
 β_e means the equity beta as determined in sub-paragraph (3);
 and
 [R_m-R_f] means the return over the risk free rate that investors would expect in order to invest in a well-diversified portfolio of equities (otherwise referred to as the equity or market risk premium).

(3) The equity beta shall be determined using the following formula:

$$\beta_e = \beta_a \times \left(1 + \frac{D}{E}\right)$$

whereas:

- β_e means the equity beta;
 β_a means the asset beta; and
 D/E means the debt to equity ratio.

(4) The cost of debt capital shall be calculated by the following formula:

$$R_d = R_f \times DRP$$

whereas:

- R_d means the cost of debt;
 R_f means the risk free rate of return; and
 DRP means the debt premium, that is, the increment above the risk free rate that reflect the additional risk of borrowing compared with Government bonds.

(5) In the event that some parameters in the computation of the cost of equity are not readily available in the Tanzanian market, the applicant may suggest the cost of equity applicable to utilities in other countries with similar conditions as that of Tanzania.

Regulatory
Depreciation

3. Regulatory depreciation of each asset for any Regulatory Year ‘t’, shall be determined using a straight line method using the following formula-

$$D_t = \frac{RAB}{N}$$

whereas:

- D_t means the annual regulatory depreciation for the Regulatory Year ‘t’;

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- RAB means Regulatory Asset Base of each asset as determined in paragraph 1 of this Schedule; *and*
- N means capital redemption period expressed as a number of regulatory years based on the remaining useful economic life of each regulatory asset.

SECOND SCHEDULE

(Made under Rule 17)

PART I
GENERATION RATE SETTING METHODOLOGY

- Generation Service Charge Weighted Average Cost of Generation
1. Generation Service Charge (GSC) shall include the Weighted Average Cost of Generation and Power Purchases as determined under paragraph 2.
- 2.-(1) The Weighted Average Cost of Generation (WACG) shall be determined as follows:

$$WACG = \frac{\sum_{i=1}^n G_i X_i + (FC_t * IC_t)}{\sum_{i=1}^n X_i}$$

whereas:

- X_i means forecast total units planned to be generated by generator i in year t and expressed in MWh;
- G_i means benchmark generation costs of generator i and shall include all known variable costs;
- FC_t means benchmark fixed costs (capacity costs) expressed in TZS/MW as determined in paragraph (3); and
- IC_t means installed capacity of used and useful plants in year t expressed in MW.

(2) Fixed costs for generation shall include the cost of investment annuity (the fixed assets multiplied by the weighted average cost of capital plus depreciation) and the fixed operation and maintenance costs as follows:

$$Fixed\ Cost = (FA * WACC) + DP + Fixed\ O\&M$$

whereas:

- FA means Fixed Assets;
- WACC means the Weighted Average Cost of Capital as determined in paragraph 2 of the First Schedule; and
- DP means the Regulatory Depreciation calculated using the Straight Line Depreciation Method as per paragraph 3 of the First Schedule.

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PART II
TRANSMISSION SYSTEM OPERATOR RATE SETTING METHODOLOGY

Transmission Pricing 1. Transmission tariff shall be determined using a postage stamp methodology.

Determination of Revenue Requirement 2. The Revenue Requirement of the Transmission System Operator shall be determined using the following methodology:

$$RR = (RAB * WACC) + D + O\&M - R$$

whereas:

RR means the Revenue Requirement;
RAB means the average Transmission Regulatory Asset Base which shall be determined as per paragraph 1 of the First Schedule;
WACC means Weighted Average Cost of Capital which shall be determined as per paragraph 2 of the First Schedule;
D means the regulatory depreciation which shall be determined using the straight line method in accordance to paragraph 3 of the First Schedule;
O&M means the operation and maintenance costs which shall be prudently incurred for the provision of service by the Transmission System Operator in accordance with the technical standards used in Tanzania and applicable legal regulations;
R means other revenues related to the regulated activity including the net amount (revenues - expenditures) realised through the cross-border trade.

Determination of Transmission Tariff 3. The transmission tariff shall comprise the transmission tariff paid by Producers, Distribution Network Operator and eligible customers and shall be determined in accordance with the following formula;

$$T_{tso} = \frac{Rg_{tso} + Rd_{tso} + Re_{tso}}{kWh}$$

whereas:

T_{tso} means the Average Transmission Tariff;
Rg_{tso} means Revenue Requirement in respect of transmission service rendered to generators which shall consist of energy and capital related components;
Rd_{tso} means Revenue Requirement in respect of transmission services rendered to Distribution Network Operators which shall consist of energy and capital related components;
Re_{tso} means Revenue Requirement in respect of transmission services rendered to eligible customers which shall consist of the energy and capital related components; and
kWh means annual units transmitted through the transmission line.

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PART III
SYSTEM OPERATOR RATE SETTING METHODOLOGY

System Operation Pricing 1. System Operation fee shall be charged to customers that are connected to the voltage levels of 400 kV, 220 kV, 132 kV and 66 kV and shall include the following elements:

- (a) active electric energy injected in the transmission network by generators connected to the transmission network;
- (b) take-off of active electric energy; and
- (c) ancillary services including excessive take-off of reactive electric energy.

Determination of Revenue Requirement 2. The Revenue Requirement of the System Operator shall be determined using the following methodology:

$$RR_{SO} = O\&M + D - R$$

where,

- RR_{SO} means total Revenue Requirement to be generated from customers (R_{cso}) and generators (R_{gso});
- D means the regulatory depreciation which shall be determined by the straight line method in accordance to paragraph 3 of the First Schedule;
- O&M means the operation and maintenance costs which shall be prudently incurred for the provision of service by the System Operator in accordance with the technical standards used in Tanzania and applicable legal regulations;
- R means other revenues related to the regulated activity including the net amount (revenues - expenditures) realised through the cross-border trade.

Determination of System Operator's Fee 3. The System Operator's fee shall be paid by generators, Transmission System Operators, Distribution Network Operators and eligible customers, and shall be determined in accordance with the following methodology:

$$T_{so} = \frac{Rg_{so} + Rt_{so} + Rd_{so} + Re_{so}}{kWh}$$

Where,

- T_{so} means the Average System Operator's Fee;
- R_{gso} means Revenue Requirement in respect of the System Operator's services rendered to generators which shall consist of energy and capital related components;
- R_{tso} means Revenue Requirement in respect of System Operator's services rendered to the Transmission System Operator which shall consist of energy and capital related components;
- R_{dso} means Revenue Requirement in respect of System Operator's services rendered to Distribution System Operators which shall consist of energy and capital related components;
- R_{eiso} means Revenue Requirement in respect of System Operator's services rendered to eligible customers which shall consist of energy and capital related components; and
- kWh means annual active electric energy taken over by customers.

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PART IV
MARKET OPERATOR RATE SETTING METHODOLOGY

Transmission Pricing 1. Market Operation Tariff shall be charged in respect of market operation services offered to customers connected to voltage levels of 400 kV, 220 kV, 132 kV and 66 kV.

Determination of Revenue Requirement 2. The Revenue Requirement of the System Operator shall be determined using the following methodology:

$$RR_{IMO} = O\&M + D - R$$

where,

RR_{IMO} means the Revenue Requirement;

D means the regulatory depreciation which shall be determined by the straight line method;

O&M means the operation and maintenance costs which shall be prudently incurred for the provision of market services by the Market Operator; and

R means other revenues related to the regulated activity including the net amount (revenues - expenditures) realised through the cross-border trade.

Determination of Market Operator's Fee 3. The Market Operator's fee shall be charged to generators, Transmission System Operators, Distribution Network Operator and eligible customers, and shall be determined in accordance with the following methodology:

$$T_{mo} = \frac{Rg_{mo} + Rt_{mo} + Rd_{mo} + Re_{mo}}{kWh}$$

where,

T_{mo} means the Average Market Operator's Tariff;

Rg_{mo} means Revenue Requirement in respect of Market Operator's services rendered to generators which shall consist of energy and capital related components;

Rt_{mo} means Revenue Requirement in respect of Market Operator's services rendered to Transmission System Operators which shall consist of energy and capital related components;

Rd_{mo} means Revenue Requirement in respect of Market Operator's services rendered to Distribution Network Operators which shall consist of energy and capital related components;

Re_{mo} means Revenue Requirement in respect of Market Operator's services rendered to eligible customers which shall consist of energy and capital related components; and

kWh means annual active electric energy taken over by customers.

PART V
DISTRIBUTION AND SUPPLY TARIFF SETTING METHODOLOGY

Distribution and Supply Cost 1.-(1) Distribution and Supply cost shall be determined using the following formula:

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$$D\&S = O\&M + (WACC \times RAB) + D + NL + DN$$

whereas:

- "D&S" means the Distribution and Supply cost expressed in TZS;
- "O&M" means Operation and maintenance Costs;
- "WACC" means the rate of return, expressed as percentage, as determined in paragraph 2 of the First Schedule;
- "RAB" means the Regulatory Asset Base (RAB) determined based on historical costs applying the formula stipulated in paragraph 1 of the First Schedule;
- "D" means the Depreciation as determined in paragraph 3 of the First Schedule;
- "NL" means Capital and O&M expenditure required to reduce Network Losses;
- "DN" means Capital expenditure required for expansion of the distribution network.

- (2) The costs in sub-paragraph (1) shall be approved by the Authority based on efficiency in the sense of cost and technically compliant, sufficient to meet demand and quality to meet supply.

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| Operation and Maintenance Expenses | 2. Operation and Maintenance Expenses shall be determined by using the Reference Utility Model or projections based on historical costs, whichever is lower. |
| Capital Contribution | 3. Asset acquired through Government or consumer contribution or funds allowed in tariff for the expansion of the distribution network shall be considered in the calculation of depreciation but shall be excluded from the calculation of Rate of Return. |
| Network Losses | 4. Cost associated with Network Losses may be considered in the determination of distribution expenses. The Authority shall determine such costs on an annual basis. |
| Distribution Network Expansion | 5. Funds for expansion of the distribution network may be considered by the Authority if it is proven that the Rural Energy Agency (REA) cannot finance such projects, the utility cannot source financing from financial institutions or the available funds from an approved tariff will not be sufficient to finance the approved expansion plan. |

PART VI
AUTOMATIC ADJUSTMENT AND PASS THROUGH COSTS

1. All electrical energy units purchased by electricity customers shall be liable to a Fuel Cost Charge which shall be calculated in accordance with the following formula:

Fuel Cost Charge in TZS/kWh calculated to the nearest **Shilling**:

$$= \frac{1}{1-L} \times \left\{ \frac{\sum C_i G_i S_i + \sum P_i}{G} \right\} \times 100$$

Where:

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	C_i	<i>means</i> actual price in TZS/litre or TZS/mmBTU paid by the Utility or Electric Power Producers for fuel consumed by Plant i, where $i = 1, 2, \dots, n$, during the quarter preceding the first month of the following quarter at all existing thermal plants on the Interconnected System and the Off-Grid System, as the case may be. This shall also include other thermal power plants to be constructed and in respect of which the distribution or supply licensee shall enter into Power Purchase Agreements with Electric Power Producers for the supply of electricity;
	G_i	<i>means</i> all units generated and or purchased by the utility from Electric Power Producers' Plant i, where $i = 1, 2, \dots, n$, during the quarter preceding the first month of the following quarter at each existing thermal plant on the Interconnected System and the Off-Grid System, and imports or exports from Uganda Electricity Transmission Company Limited, Zambia Electric Company, Kenya Power Lighting Company adjusted for system losses as the case may be. This shall also include other thermal power plant(s) to be constructed and in respect of which the distribution or supply licensee shall enter into Power Purchase Agreement(s) with Electric Power Producer(s) for the supply of electricity;
	S_i	<i>means</i> Specific fuel consumption in litre/kWh or mmBTU/kWh for any thermal plants;
	P_i	<i>means</i> sum of fuel displacement costs and other pass through charges based on power purchased from Power Plant i, where $i = 1, 2 \dots n$, Emergency Power Plants and other power plants to be constructed in respect of which a generation licensee shall enter into a Power Purchase Agreement with Electric Power Producers for the supply of electricity to a distribution or supply licensee;
		All fuel displacement and pass through costs shall be converted to Tanzania Shillings using the actual mean exchange rate obtained by the licensee as reported by the Bank of Tanzania in the quarter preceding the first month of the following quarter;
	G	<i>means</i> total of all units generated by the utility, purchased by the utility from Electric Power Producer(s), and net imports during the quarter preceding the first month of the following quarter, including Off-Grid power stations and imports; and
	L	<i>means</i> the target System loss factor in transmission and distribution system.
Foreign Exchange Rate Fluctuation Adjustment	2.	All electrical energy units purchased by electricity customers shall be liable to a Foreign Exchange Rate Fluctuation Adjustment which shall be calculated in accordance with the following formula: Foreign Exchange Rate Fluctuation Adjustment in TZS/kWh calculated to

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the nearest **Shilling**:

$$FERFA = \frac{1}{1-L} \left\{ \frac{(\sum(F_{t-1} \times Z_t \times X_0)) + (\sum(P_{t-1} \times Z_t \times X_0)) + (\sum(S_{t-1} \times Z_t \times X_0))}{G} \right\} \times 100$$

Where:

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| F_{t-1} | Sum of the foreign currency costs on non fuel cost items incurred by a generation licensee in the quarter preceding the first month of the following quarter; |
| P_{t-1} | Sum of the foreign currency costs paid by the Transmission System Operator and the distribution or supply licensee in the quarter preceding the first month of the following quarter; |
| S_{t-1} | Sum of the foreign currency costs paid by the System and Market Operators in the quarter preceding the first month of the following quarter; |
| G | means Total of all units purchased by a distribution or supply licensee from Electric Power Producer(s), generated by a generation licensee and net imports during the quarter preceding the first month of the following quarter, including Off-Grid power stations and imports; |
| L | means the Target System loss factor in transmission and distribution systems; and |
| Z_t | The factor Z_t is the proportionate change in the exchange rate (X_t) in the current Billing Period t from the Base Exchange rate (X_0) in the base period and shall be determined according to the following formula: |

$$Z_t = \frac{X_t - X_0}{X_0}$$

where:

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| X_t | actual mean exchange rate obtained by the licensee as reported by the Bank of Tanzania for the quarter preceding the first month of the following quarter; |
| X_0 | mean exchange rate which was used in the computation of approved tariffs for the given tariff period; |

Inflation
Adjustment

3. All Tariffs for electrical energy specified above shall be liable to an Automatic adjustment for inflation at the end of every six months period starting from the date to be specified by the Authority.

The effect of domestic and international inflation on cost of supply shall be calculated in accordance with the following formula:

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$$INFA_t = \frac{1}{1-L} \times \left(\frac{INFA_{Gen} + INFA_{T\&D} + INFA_{SO\&MO}}{G_p} \right) \times 100$$

Where

INFA_t = means Total Inflation Adjustment in TZS/kWh for the half year period t. The first adjustment shall be effected on the date to be specified by the Authority;

L = means the Target System loss factor in transmission and distribution systems;

G_p= means the Total Units generated or purchased by a distribution or supply licensee from Electric Power Producer(s), during the half-year Adjustment Period. This shall also include other power plants to be constructed and in respect of which a distribution or supply licensee shall enter into a Power Purchase Agreement with Electric Power Producers.

INFA_{Gen} means a total of inflation adjustment relating to non-fuel costs of generation facilities of the licensee which shall be determined as follows:

$$INFA_{Gen} = \sum INFAKP_i$$

Where

INFAKP_i means Specific Inflation Adjustment in half-year period, relating to generation licensee's contracted plant i, which shall be determined as follows:

$$\left((KP_i \times FOMCR_{bi}) + (GK_i \times VOMCR_{bi}) \right) \times (0.7 \times 0.3) \left(\frac{CPIU_t}{CPIU_b} - 1 \right) + 0.3 \left(\frac{USCPI_t}{USCPI_b} - 1 \right)$$

Where

KP_i means contracted capacity for generation licensee's plant i in kW;

FOMCR_{bi} means the base Fixed Operation and Maintenance Charge for generation licensee's plant i in TZS/kW/year, divided by two;

GK_i means Units purchased from licensee's plant i in kWh in the half-year Adjustment Period;

VOMCR_{bi} means the base Variable Operation and Maintenance Charge or variable energy charge rate as applicable, for generation licensee's plant i in TZS/kWh;

CPIU_t means the Underlying Consumer Price Index for the month of March for adjustments effected in the period July – December; and September for adjustments effected in the period January – June every year as posted by the Tanzania National Bureau of Statistics;

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- CPIU_b means the Underlying Consumer Price Index for September 2017 as posted by Tanzania National Bureau of Statistics;
- USCPI_t means the "Consumer Prices Index for all urban consumers (CPI - U) for the US city average for all items 1982 - 84 =100" as published by the United States Department of Labour Statistics index for the month of March for adjustments effected in the period July – December; and for September for adjustments effected in the period January – June every year;
- USCPI_b means the "Consumer Prices Index for all urban consumers (CPI - U) for the US city average for all items 1982 - 84 =100" as published by the United States Department of Labour Statistics index for September 2017;
- INFA_{T&D} Is the Specific Inflation Adjustment in half-year period, relating to transmission and distribution operation and maintenance costs, which shall be determined as follows:

$$INFA_{T\&D} = TDOM_b \left[0.7 \times 0.3 \left(\frac{CPIU_t}{CPIU_b} - 1 \right) + 0.3 \left(\frac{USCPI_t}{USCPI_b} - 1 \right) \right]$$

Where,

- TDOM_b means the transmission and distribution network operation and maintenance costs excluding depreciation of assets and provision for bad debts in the previous year, divided by two;
- CPIU_b means the Underlying Consumer Price Index for September 2017 as posted by Tanzania National Bureau of Statistics;
- CPIU_t means the Underlying Consumer Price Index for the month of March for adjustments effected in the period July – December; and September for adjustments effected in the period January – June every year as posted by the Tanzania National Bureau of Statistics;
- USCPI_b means the "Consumer Prices Index for all urban consumers (CPI - U) for the US city average for all items 1982 - 84 =100" as published by the United States Department of Labour Statistics index for September 2017;
- USCPI_t means the "Consumer Prices Index for all urban consumers (CPI - U) for the US city average for all items 1982 - 84 =100" as published by the United States Department of Labour Statistics index for the month of March for adjustments effected in the period July – December; and for September for adjustments effected in the period January – June every year.
- INFA_{SO&MO} Is the Specific Inflation Adjustment in half-year period, relating to the operation and maintenance costs of the System Operator and Market Operator, which shall be determined as follows:

$$INFA_{SO\&MO} = SMOM_b \left[0.7 \times 0.3 \left(\frac{CPIU_t}{CPIU_b} - 1 \right) + 0.3 \left(\frac{USCPI_t}{USCPI_b} - 1 \right) \right]$$

where,

- SMOM_b means the System and Market Operators' base costs of operation and maintenance excluding depreciation of assets and provision for bad debts in the previous year, divided by two;

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CPIU _b	means the Underlying Consumer Price Index for September 2017 as posted by Tanzania National Bureau of Statistics
CPIU _t	means the Underlying Consumer Price Index for the month of March for adjustments effected in the period July – December; and September for adjustments effected in the period January – June every year as posted by the Tanzania National Bureau of Statistics;
USCPI _b	means the “Consumer Prices Index for all urban consumers (CPI - U) for the US city average for all items 1982 - 84 =100” as published by the United States Department of Labour Statistics index for September 2017;
USCPI _t	means the “Consumer Prices Index for all urban consumers (CPI - U) for the US city average for all items 1982 - 84 =100” as published by the United States Department of Labour Statistics index for the month of March for adjustments effected in the period July – December; and for September for adjustments effected in the period January – June every year.

Note:

Any difference between the total inflation costs and the actual billed amount for a given half year adjustment period shall be adjusted for in the following half year period.

Dodoma,
11th May, 2021

GODFREY H. CHIBULUNJE
Director General