2020 THIRD QUARTER ELECTRICITY AND WATER TARIFF DECISION

July, 2020

1.0 Introduction

The Public Utilities Regulatory Commission (PURC) is mandated under sections 3(a) and (b) of the Public Utilities Regulatory Commission Act, 1997 (Act 538) and Section 2.4 of the PURC Rate Setting Guidelines for Electricity Distribution and Supply (Volume 2), 2018 to examine and approve rates chargeable for provision of utility services among other functions. In fulfillment of above function, the Commission carried out review of Electricity and Water Tariffs for the Third Quarter of 2020 using the Automatic Adjustment Formula. This decision paper highlights results from analyses of actual and projected data with respect to natural gas, electricity and water service provision for Third Quarter 2020 and the Commission's decisions thereof.

2.0 Methodology, Analysis and Findings

2.1 Methodology

The methodology employed in determining the 2020 Third Quarter tariff results is the PURC's quarterly tariff adjustment framework (Automatic Adjustment Formula). Under this framework, projections were made for Exchange Rate based on data from Association of Bankers and Bank of Ghana actual Ghana Cedi-US Dollar Exchange Rate, Ghana Statistical Service Inflation Rate for 2020 and Fuel Prices as well as Adjustment in projected Hydro Electrical Energy Generation from both Akosombo and Kpong generating stations data submitted by the Volta River Authority to the Electricity Market Oversight Panel (EMOP) and PURC, whilst accounting for actual data in respect of above variables so as to address under and over recovery of the tariff which may have occurred over previous quarters as approved by the Board.

2.2 Analysis

To determine the direction of the Commission's decision with respect to 2020 Third Quarter tariff results, underpinning data with respect to Generation mix (Hydro-Thermal Mix), Ghana Cedi- US Dollar Exchange Rate, Inflation Rate and Fuel Price were analysed using the methodological framework noted in the previous section. The selected data which were analysed are presented in Table-1.

2.2.1 Underpinning Data

The underpinning data of the 2020 Third Quarter Tariff analysis are summarised and presented in Table-1.

Table-1: Summary of Data Used in Analysis of 2020 Third Quarter Electricity Tariffs

Item No.	Item Description	Unit	2019-2020 Approved Underlying Effective 1st July 2019	Q4, 2019 Approved Underlying Effective 1st October 2019	Q1, 2020 Actuals January-March 2020	Q2, 2020 Actuals April-June 2020	Q3, 2020 Projections July - September 2020
A.	Generation Mix:						
A1	Hydro	%	23.4	24.2	24.2	29.0	28.33
A2	Thermal	%	76.6	75.8	75.8	71.0	71.67
B.	Exchange Rate	₵/USD ExRate	5.0500	5.3767	5.5861	5.4539	5.6359
C.	Inflation	%	8	8	8	8	9.90
D.	Fuel Price :						
D1	Natural Gas	US$/MMBtu	6.08	6.08	6.08	6.08	6.08
D2	Heavy Fuel Oil	US$/MTonne	390	390	390	300	241

Source: PURC Data & Tariff Analysis, 2020

2.3 Findings/Results from Analysis of Data

The findings/results from analysis of Data Captured in Table-1 are discussed as follows.

2.3.1 Hydro -Thermal Electrical Energy Generation Mix

The data presented in Table 1 with respect to Hydro-Thermal generation indicates the following:

a) *The hydro generation mix of 28.33% represents actual hydro generation as a percentage of total electrical energy generated from both hydro and thermal sources covering April-June, 2020.This indicates a 4.13% variance over fourth quarter of 2019 generation data (which data assumption underpinned computation of existing tariffs being paid by consumers).*
b) *The actual thermal generation mix of 71.67% represents a 4.13% reduction over fourth quarter 2019 projected thermal generation of 75.8%.*

2.3.2 Ghana Cedi-US Dollar Exchange Rate

With respect to Ghana Cedi-US Dollar Exchange Rate, data shown in Table-1 indicates the following:

a) *A projected Weighted Average Ghana Cedi-US Dollar Exchange Rate of GHS5.6359/US$1.0000. This projection is based on Actual Association of Bankers Inter-Bank Average Ghana Cedi-US Dollar Selling Exchange Rate for March, April & May, 2020.*
b) *The Ghana Cedi-US Dollar Selling Exchange Rate noted in (a) above represents a projected 4.8% depreciation of the Ghana Cedi against the US Dollar over the fourth quarter 2019 Exchange Rate of GHS5.3767/US$1.0000.*

2.3.3 Inflation Rate

Similar to data and approach in respect of Ghana Cedi-US Dollar Exchange Rate noted in the previous section, a projected Ghana Average Inflation Rate of 9.9% was used as one of the key assumptions for the Third Quarter of 2020 tariff results. This represents projected average inflation rate variance of 1.9% between 2019 Fourth Quarter Average Inflation Rate of 8% and the projected Average Inflation Rate noted above.

2.3.4 Price of Fuel - Light Crude Oil (LCO), Heavy Fuel Oil (HFO) and Natural Gas

The three primary fuels which are normally used in determination of the Fuel Recovery Charge by the Commission as a component of the individual power plant tariffs hence Composite Bulk Generation Tariff are Light Crude Oil (LCO), Heavy Fuel Oil (HFO) and Natural Gas. For Natural Gas, the Approved Weighted Average Cost of Gas (WACOG) of US$6.08/MMBtu was used while a plant gate HFO price of US$ 241/Metric Tonne equivalent to US$6.6443/MMBtu[1] was used specifically in determination of AKSA's Fuel Recovery Charge.

It must be noted that LCO usage in generation of electricity has significantly reduced as a result of significant domestic production of Natural Gas which is used by all thermal generation plants except AKSA Power Plant. However, whilst it is acknowledged that Ghana's dominant fuel is now natural gas, there is not much benefit in terms of reduction in tariffs for the quarter based on Gas Fuel Recovery Charge due to high priced long term domestic Natural Gas contracts.

[1] HFO price of US$241/Metric Tonne was converted to US$/Barrel using a conversion factor of 6.67 and further to US$/MMBtu using a conversion factor of 5.438

3.0 Commission's Decision on 2020 Third Quarter Tariffs

In light of results from analysis of data discussed in previous sections, the Commission has taken the following decisions.

1. *The Commission has approved a no change in electricity and water tariffs.*
2. *The cost of electricity constitutes about 30% of Ghana Water Company Limited (GWCL) total cost of water production, transmission and distribution therefore with a no increase in electricity tariffs decision, the resulting effect is no impact on electricity cost of GWCL.*
3. *The other costs drivers of GWCL did not indicate any significant impact on the company's cost of operations over the period under review. The Commission will continue to monitor this trend and effect the appropriate regulatory decision when necessary through application of the AAF in the coming quarter.*
4. *The Commission has placed Utility Service Providers on notice that any over/under recovery of revenues from previous quarters currently being undertaken through reconciliation of data by the Commission will be applied in 2020 Fourth Quarter.*
5. *To address the financial challenges facing Natural Gas, Electricity and Water Utility Service Providers, the Commission is urging a doubling of efforts in revenue collection by Utility Service Providers. The Commission wishes to assure all Stakeholders including Utility Service Providers that all necessary and relevant regulatory tools will be put to the wheel for realisation of financial viability of Utility Service Providers (USDs) whiles ensuring USDs adhere to benchmarks which have been put in place to ensure continuous provision of quality of service delivery.*

Appendix-1 *Approved Electricity Tariffs Effective July 01, 2020*

Customer Class	Approved Tariff (GHp/kWh)
Residential	
0-50	*32.6060*
51-300	*65.4161*
301-600	*84.8974*
600+	*94.3304*
Service Charge for Lifeliners	*213.0000*
Service Charge for Other Residential Consumers	*745.6947*
Non-Residential	
0-300	*79.7943*
301-600	*84.9097*
600+	*133.9765*
Service Charge	*1242.8245*
Customer Class	***Approved Tariff (GHp)***
SLT-LV	
Energy Charge (GHp/kWh)	*104.7943*
Service Charge (GHp/month)	*4971.2983*
SLT-MV	
Energy Charge (GHp/kWh)	*79.5167*
Service Charge (GHp/month)	*6959.8177*
SLT-HV	
Energy Charge (GHp/kWh)	*83.4562*
Service Charge (GHp/month)	*6959.8177*
SLT-HV Mines	
Energy Charge (GHp/kWh)	*263.9705*
Service Charge (GHp/month)	*6959.8177*

Appendix-2 *Approved Water Tariffs Effective July 01, 2020*

Category of Service	*Approved Rates in GHp/1000 litres*
Metered Domestic	
0-5	*329.2121*
5 and above	*560.2083*
Commercial	*923.0390*
Industrial	*1111.8338*
Public Institutions/Government Departments	*718.6628*
Premises without connection (Public stand pipes)	
Per 1000 Litres	*369.4489*
Special Commercial	*5607.5588*
Sachet Water Producers	*1237.7011*
GHAPOHA (Internal Usage)	*923.0390*
GHAPOHA (Ocean Going Vessels)	*12586.8266*

NB: Special Commercial refers to bulk customers who use GWCL treated water as the main raw material for bottling water