



**ELECTRICITY REGULATORY AUTHORITY
DETERMINATION OF TARIFF ADJUSTMENT FACTORS FOR
THE THIRD QUARTER OF 2017**

**JULY 2017
KAMPALA, UGANDA**

1. INTRODUCTION

1.1 Background

At the beginning of each quarter, the Electricity Regulatory Authority (“the Authority”) undertakes a Quarterly Tariff Review. The Quarterly Tariff Review is undertaken in accordance with the respective licenses issued by the Authority (to Umeme Limited, Uganda Electricity Transmission Company Limited (UETCL), and Eskom Uganda Limited), and in accordance with the Quarterly Tariff Review Methodology approved and published in the Uganda Gazette in January 2014. The Quarterly Tariff Review Methodology provides for adjustment of the Electricity annual Base Tariffs for changes in the following:-

- (i) Inflation rate leading to Inflationary Adjustment Factor (IRAF)
- (ii) Exchange rate leading to Exchange Rate Adjustment Factor (FERAF).
- (iii) Fuel prices at the International Market leading to Fuel Price Adjustment Factor (FPAF)
- (iv) Changes in the Energy Generation Mix, and
- (v) Any cost as may be approved by the Authority

This review has taken into account changes in; the Consumer Price Index, Exchange Rate of the Uganda Shilling (Ush) against the United States Dollar (US\$), International Fuel Prices, and the Energy Generation Mix; from the assumptions used in the determination of the 2017 Base Tariffs. The review has further considered the adjustment of the 2017 annual budget for Uganda Electricity Generation Company Limited (UEGCL), and changes in the approved and verified investments for Umeme Limited and Eskom Uganda Limited. More specifically;

- (i) The Uganda Shilling has appreciated by 0.76% against the US Dollar, from Ush 3,630.22/US\$ in November 2016 to Ush 3,602.63 /US\$ as at 31st May 2017. The Uganda Shilling however depreciated against the United States Dollar between the first and second quarter of 2017, depreciating from Ush 3,586.69/US\$ in February 2017 to Ush 3,602.63 /US\$ as at 31st May 2017.

- (ii) The International Price for crude oil as at the end of May 2017 was US\$ 49.2 compared to US\$ 51.90 per barrel used in the determination of the 2017 Base Tariffs. This represents a reduction in International Fuel Prices by 5.2% from the 2017 base period.
- (iii) The total quarterly energy purchased by UETCL is expected to increase from 942.9 GWh used in the determination of the 2017 Base Tariffs to 958.2 GWh in the third quarter of 2017. This represents an increase of 1.6% in energy purchases by UETCL.
- (iv) The water release at the Nalubaale/Kiira generation complex is projected at 1,000 Cubic meters per second (cumecs) for the third quarter of 2017, translating into an average generation capacity of 150 MW from Nalubaale/Kiira and 173.5 MW from Bujagali Energy Limited.
- (v) Adjustment of the approved and verified investments under-recovery by Eskom Uganda Limited for 2014 and 2015 investments of Ush 1,024,474,472 has been provided for in the third quarter of 2017.
- (vi) Adjustment of the approved and verified investments by Umeme Limited for the period 2012 – 2015 following disposal of the Investment appeal by the Authority. Additional gross investments of US\$ 11,009,051 have been provided for in the third quarter of 2017.
- (vii) Adjustment for Uganda Electricity Generation Company Limited (UEGCL) budget to cater for Mortgage charges amounting to Ush 634,536,000 as approved by the Authority.

The detailed assumptions that form the basis of the Tariff Review for the third quarter of 2017 are contained in the subsequent sections of this report.

1.2 Review Process and consultations

As part of the Tariff Review process for the third quarter of 2017, consultations were undertaken with stakeholders including; the Ministry of Energy and Mineral Development, Uganda Manufacturers Association, Licensees (Umeme Limited, Uganda

Electricity Transmission Company Limited, and Eskom Uganda Limited), and the Media.

During the consultations, the drivers underlying the Tariff determination for the third quarter of 2017 were discussed, and how the drivers have changed since determination of the Base Tariffs for 2017.

1.3 Purpose of this Report

The purpose of this report is to present the results of the Tariff Review for the third quarter of 2017, and to set out the determinations, and the reasons informing the resultant Tariffs approved by the Authority.

1.4 Structure of the Report

This report is divided into five (5) sections. The first four (4) sections of the report after this introduction focus on review of the movement in the macro-economic factors, determination of the adjustment factors for the third quarter of 2017, review of the revenue requirement, and the resultant Tariffs.

2. ELECTRICITY END-USER 2017 BASE TARIFFS

In accordance with the Quarterly Tariff Review Methodology, the Authority at its 270th meeting held on 20th December 2016 approved the 2017 Base Tariffs shown in

Table 1. The quarterly adjustment factors are applied to the approved Base Tariffs, to determine the applicable End-User (Retail) Tariffs for the respective quarters during the Tariff Year.

Table 1: 2017 Base Electricity End-User Tariffs

	End-User (Retail) Electricity Tariffs (Ush/kWh)						
	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street-lights	Weighted average
2017 Approved Base Tariffs	696.9	629.0	577.8	376.3	372.8	679.7	513.2

During the determination of the Base Tariffs, the Authority approved the Base Macroeconomic Parameters for 2017, which are presented in the second column of Table 2 below.

Table 2: Macroeconomic Parameters Used in Determination of 2017 Base Tariffs and the Adjustment Parameters for Q3 2017

Macroeconomic Parameters	Q1 2017	Q3 2017	%age Change Base to Q3 2017
	Base Parameters		
Exchange rate US\$/Ush ¹	3,630.22	3,602.63	(0.76%)
Core Consumer Price Index (CPI) ²	159.4	163.26	2.42 %
US Producer Price Index ³	196.4	198.3	0.90%
International Price of Fuel ⁴ (US\$ per barrel)	51.90	49.2	(5.2%)

The base macroeconomic factors which formed the basis for the 2017 Base Tariffs (for the month of November 2016) determination are stated in column 2 of Table 2. As of May 2017,

¹Bank of Uganda for exchange rate - The exchange rate is the average rate of the buying and selling rates on the last day of the applicable month. That is November 2016 for Q1 2017, and May 2017 for the third quarter of 2017

² Uganda Bureau of Statistics for Consumer Price Index

³ US Bureau of Labour Statistics for US Producer Price Index

⁴ Organization of Petroleum Exporting Countries for International Fuel Prices

these parameters had changed as shown in column 4 of Table 2. The detailed analysis of each of the macroeconomic factors is contained in the subsequent section.

3. DETERMINATION OF THE ADJUSTMENT FACTORS FOR THE THIRD QUARTER OF 2017

3.1. Foreign Exchange Rate Adjustment Factor (FERAF)

The movement in the Exchange Rate of the Uganda Shilling against major currencies (USD) directly affects the costs (Uganda Shilling Revenue Requirement) for companies involved in the Electricity Supply Industry. The Tariffs are adjusted for movement in the Exchange Rate because a substantial portion of the Electricity Supply Industry costs are incurred in foreign currency yet the Retail Tariffs are charged and revenues collected in Uganda Shillings.

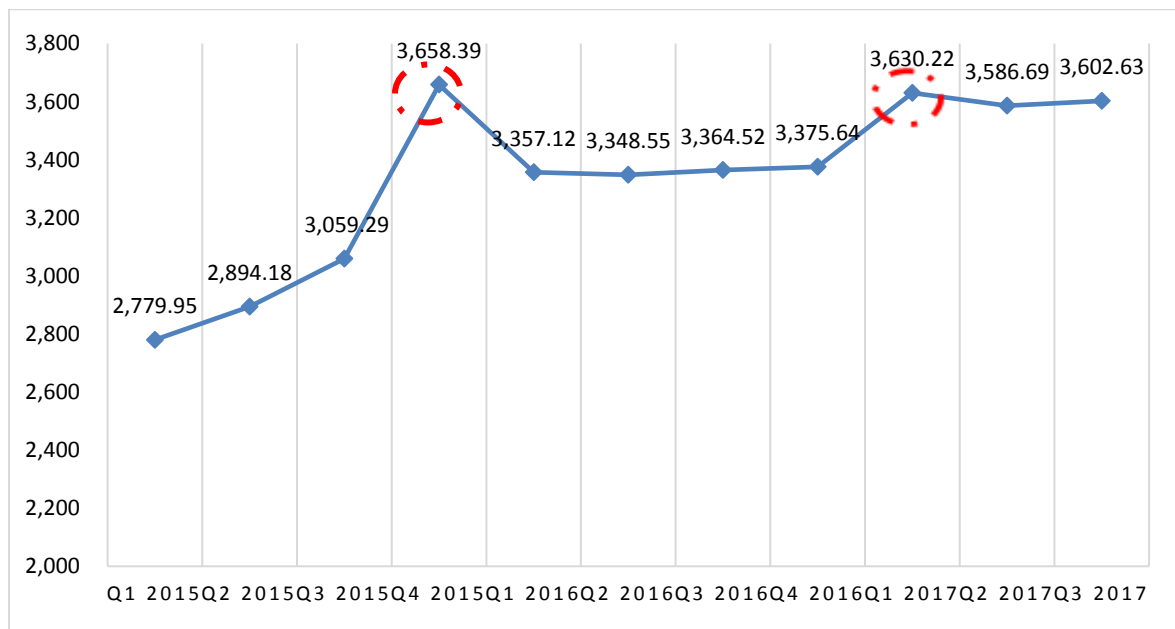
Since the second quarter of 2017, there has been a decrease (compared to the base) in the Uganda Shilling equivalent of the cost incurred in foreign currency on account of the appreciation of the Uganda Shilling against the United States Dollar.

During the determination of the 2017 Base Retail Tariffs, the Authority approved the foreign currency content of the Operation and Maintenance (O&M) Costs of 38.71% for Eskom Uganda Limited, 28.0% for UETCL, and 33.0% for Umeme Limited. Over 99% of UETCL's power purchase costs are incurred in foreign currency as Power Purchase Agreements are either executed in United States Dollars or are pegged on the United States Dollar (except the Power Purchase Agreement for Tibet Hima Mining Company Limited).

In addition, the Investment Related costs for Umeme Limited including capital recovery, and return on Investment are recovered in United States Dollars. Therefore, the appreciation of the Uganda Shilling against the United States Dollar reduces the shilling equivalent of the electricity industry costs required in foreign currency.

Between the fourth quarter of 2016 and second quarter of 2017, the Uganda Shilling has remained relatively stable compared to the period June 2015 to November 2015. The Exchange Rate used in determination of the third quarter of 2017 tariffs is Ush. 3,602.63 Per US\$ compared to Ush. 3,630.22⁵ at the end of November 2016, which was used in the determination of the 2017 Base Tariffs. This represents an appreciation of 0.76%. The trend of the Exchange Rate of the Uganda Shilling against the United States Dollar is shown in Figure 1.

Figure 1: Movement in Ush/US\$ Exchange Rate up to May 2017



Like many other emerging and frontier markets, the fall in export commodity prices and low demand in key export markets weakened many currencies against the United States Dollar. The increase of the interest rates in March 2017 by the Federal Reserve still poses a downward risk to the stability of Uganda's Exchange rate in the medium term over the next six months.

The appreciation of the Uganda Shilling has a substantial impact on Electricity Supply Industry costs and consequently the End-User Tariffs. The Authority's review indicates that the appreciation of the Uganda Shilling in the second quarter of 2017 (compared to the base) decreased the sector annualized

⁵ https://www.bou.or.ug/bou/rates_statistics/statistics.html

revenue requirement by **Ush 9,778 Million** and subsequently decreased the End-User Tariffs by a weighted average of **Ush 2.7/kWh** as shown in Table 3.

Table 3: Foreign Exchange Rate Adjustment Factor (FERAF)

	End-User (Retail) Electricity Tariffs (Ush/kWh)						
	Domes tic	Com mer cial	Mediu m Industri al	Large Industri al	Extr a Larg e	Street - lights	Weighted average
Exchange Rate Adjustment Factor (FERAF)	(3.6)	(3.4)	(3.1)	(1.9)	(1.9)	(3.5)	(2.7)

3.1 Inflation Rate Adjustment Factor (IRAF)

The annual Consumer Price Index (CPI) for the month ending May 2017 was 163.26 compared to 159.4 in November 2016. According to Bank of Uganda, the sharp increase in food crops and higher energy prices account for the increase in the headline inflation to 7.2% in May 2017 from 6.7% recorded in February 2017, however core inflation marginally improved from 5.7% in February 2017 to 5.3% in May 2017. The relative stability of the Exchange rate and subdued domestic demand have contributed to the dampening of core inflationary pressures over the last 12 months.

3.1.1 Effect of Inflation on the Tariffs

The inflation adjustment is applied only to the local currency component of the Operation and Maintenance costs for Eskom Uganda Limited, UETCL, and Umeme Limited. This is based on the local currency content approved by the Authority at the time of determination of the 2017 Base Tariffs (i.e. 61.29% for Eskom Uganda Limited, 72.0% for UETCL and 67.0% for Umeme Limited).

The Inflationary Adjustment Factor is based on the composite Consumer Price Index (CPI) for the second month in the preceding quarter to which the adjustment Tariff relates as published by the Uganda Bureau of Statistics. For the third quarter of 2017, the applicable CPI is 163.26 (May 2017) representing an increase of 2.4% compared to the CPI of November 2016, of 159.4.

The United States (US) Producer Price Index (PPI) is used to adjust the Operation and Maintenance costs denominated in United States Dollars (US\$) to cater for changes in prices of imported supplies. In the period under review, the US PPI increased from 196.4 in November 2016 (Base US PPI) to 198.3 in May 2017, representing an increase of 0.96%.

The movement in the Consumer Price Index and the United States Producer Price Index increased the sector annualized revenue requirement by **Ush 5,312 Million** and subsequently the increase in the electricity Retail Tariffs is **Ush 1.6/kWh** on a weighted average basis across consumer categories as indicated in Table 4.

Table 4: Inflation Rate Adjustment Factor (IRAF)

	End-User (Retail) Electricity Tariffs (Ush/kWh)						
	Domes tic	Com mer cial	Mediu m Industri al	Large Industri al	Extr a Larg e	Street- lights	Weighte d averag e
Inflation Rate Adjustmen t Factor (IRAF)	1.8	1.3	1.4	1.8	1.6	1.3	1.6

3.2 Fuel Price Adjustment Factor (FPAF)

The Fuel Price Adjustment Factor includes adjustment for changes in the International Fuel Prices, changes in the Generation Mix from the assumptions used in the determination

of the Base Tariffs, and any costs as may be approved by the Authority in the respective quarters.

Movement in fuel prices at the International Market affects the cost of generation for the Thermal Generation Plants; Jacobsen Uganda Power Plant Company Limited and Electro-Maxx Uganda Limited. This in turn affects the power purchase costs incurred by UETCL.

Similarly, the changes in the Generation Mix from the assumptions used in determination of the Base Tariffs affect UETCL's power purchase costs and therefore the revenue requirement.

In the 2017 Base Tariffs, the cost of fuel assumed in the Tariff determination was US\$ 51.90 per barrel. According to the Organization of Petroleum Exporting Countries (OPEC); as at end of May 2017, the international price of Heavy Fuel Oil (HFO) was US\$ 49.2 per barrel. For purposes of the third quarter of 2017 Tariff adjustment, the price of Heavy Fuel Oil to be used for electricity generation is US\$ 49.2 per barrel. This is equivalent to US\$ 366.01 per metric ton compared to US\$ 386.2 per Metric ton used in the 2017 base tariffs.

The decrease in oil prices has been attributed to increased supply by Organization of Petroleum Exporting Countries (OPEC) and other non OPEC member countries. As shown in Figure 2, the oil prices have been on a down ward trend for the most part of 2017 with slight spikes experienced in the months of February and April 2017. However, according to the National Association of Securities Dealers Automated Quotations (NASDAQ), crude oil prices are expected to increase to an average of US\$ 51.90 per barrel in the short term, due to expected reduction in production.

Figure 2: Trend of crude oil prices January 2017 to June 2017

CLQ17 - Crude Oil WTI (NYMEX)



The reduction in the International price of fuel as used in the determination of the Tariffs for the third quarter of 2017, compared to the fuel price used in the determination of the 2017 Base tariffs, resulted in an annualised reduction in the projected power purchase costs for UETCL (from Thermal Plants) of **Ush 2,144 Million**. This leads to a weighted average fuel adjustment factor of **Ush (1.1) /kWh** for the third quarter of 2017 as shown in Table 5.

Table 5: Fuel Price Adjustment Factor (FPAF)

	End-User (Retail) Electricity Tariffs (Ush/kWh)						
	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street-lights	Weighted average
Fuel Price Adjustment Factor (FPAF)	(1.3)	(1.0)	(1.0)	(1.0)	(0.9)	(1.0)	(1.1)

3.3 Generation Mix

The fuel adjustment factor includes the adjustment for changes in the dispatch of the generation plants or the generation mix relative to the assumptions made in the determination of the Base Tariffs. The changes in the generation mix affect energy generated from the respective generation plants and the respective power purchase costs.

3.3.1 DEMAND ASSUMPTIONS

3.3.1.1 Maximum Demand

The registered peak system demand in May 2017 (including export of **13.10 MW** to Tanzania and **41.30 MW** Export to Kenya) stood at **577.30 MW** (compared to **564.14 MW** for April 2017). The Uganda peak domestic demand in May 2017 stood at **526.23 MW** (compared to **528.04 MW** for April 2017).

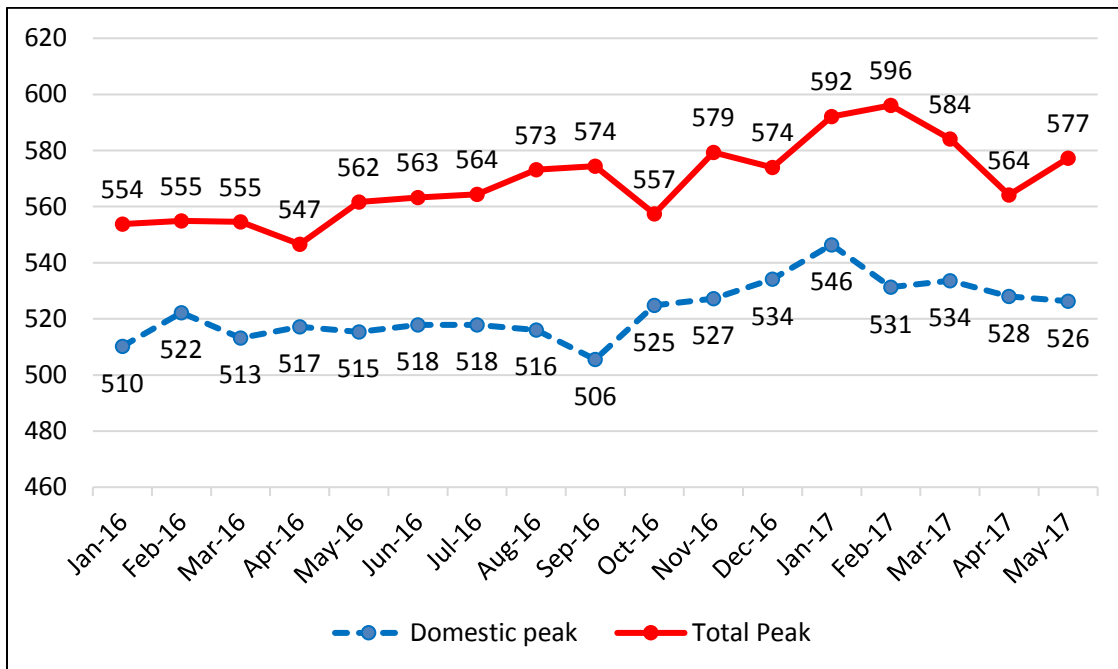
The shoulder peak system demand for May 2017 was recorded at **513.96 MW** (compared to **525.03 MW** for April 2017) and an off-peak maximum system demand of **416.28 MW** (compared to **414.75 MW** for April 2017). The lowest system load registered for May 2017 was **264.20 MW**.

In the third quarter of 2017, demand projections put the combined peak domestic demand and export to Tanzania at

563 MW, a maximum of **502 MW** during the shoulder and a maximum demand of **419 MW** during the off-peak period.

The optimization of available generation supply shall cover projected Domestic demand plus exports to Kenya, with secondary reserve capacity at about 20MW-68 MW. The reserve capacity shall dwindle during the third quarter of 2017 when one of the units at Bujagali Energy Limited is shut down for maintenance.

Figure 3: Maximum Demand, January 2016 – MAY 2017



Economic activities and Gross Domestic Product (GDP) influence electricity demand and consumption. According to the Bank of Uganda's (BOU) policy statement⁶, domestic demand in the last twelve months has been relatively low. This further affected the overall demand for electricity. The outlook for 2017, however, points at a relative recovery in domestic demand following BOU's reduction in the Central Bank Rate (CBR) in May 2015 to 10 percent (The lowest Central Bank Rate by Bank of Uganda).

⁶ BOU policy statement is available at https://www.bou.or.ug/bou/monetary_policy/monetary_policy_statements.html

3.3.1.2 Energy purchases by UETCL

During the fourth quarter of 2016, UETCL purchased 910.08 GWh from the generation plants and imports. In the first quarter of 2017, UETCL purchased 969.26 GWh, representing growth of 6.5%. In the third quarter of 2017, UETCL is expected to purchase 958.2GWh, on account of expected reduction in exports to Kenya. The electricity demand is expected to grow in the third and fourth quarter of 2017 after implementation of investments by Umeme Limited geared towards unlocking suppressed demand especially industrial demand in Mukono and Bombo Industrial Parks.

The change in the dispatch for the respective generation plants from the base assumptions used in determination of the 2017 Base Tariffs is shown in Figure 4. Details of the generation plants dispatch is discussed in Annex 1.

Figure 4: Energy Purchases by UETCL from Large Hydro Plants (GWh)

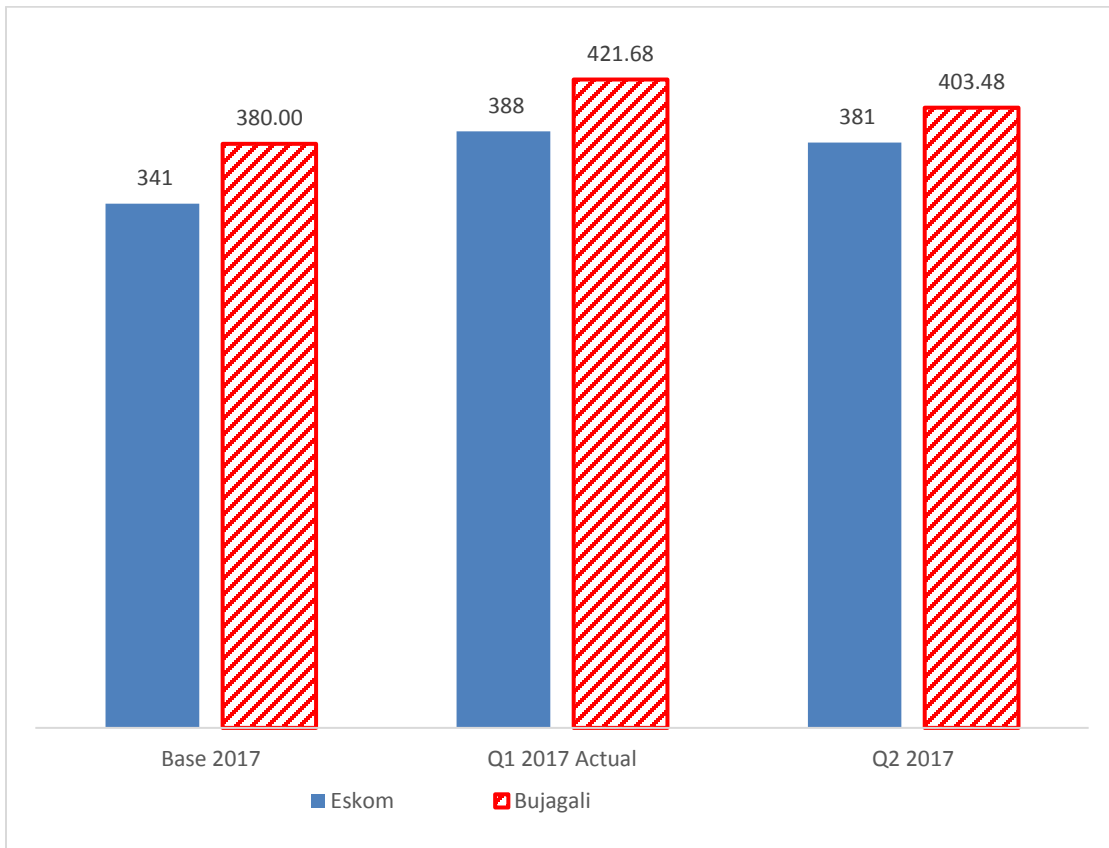
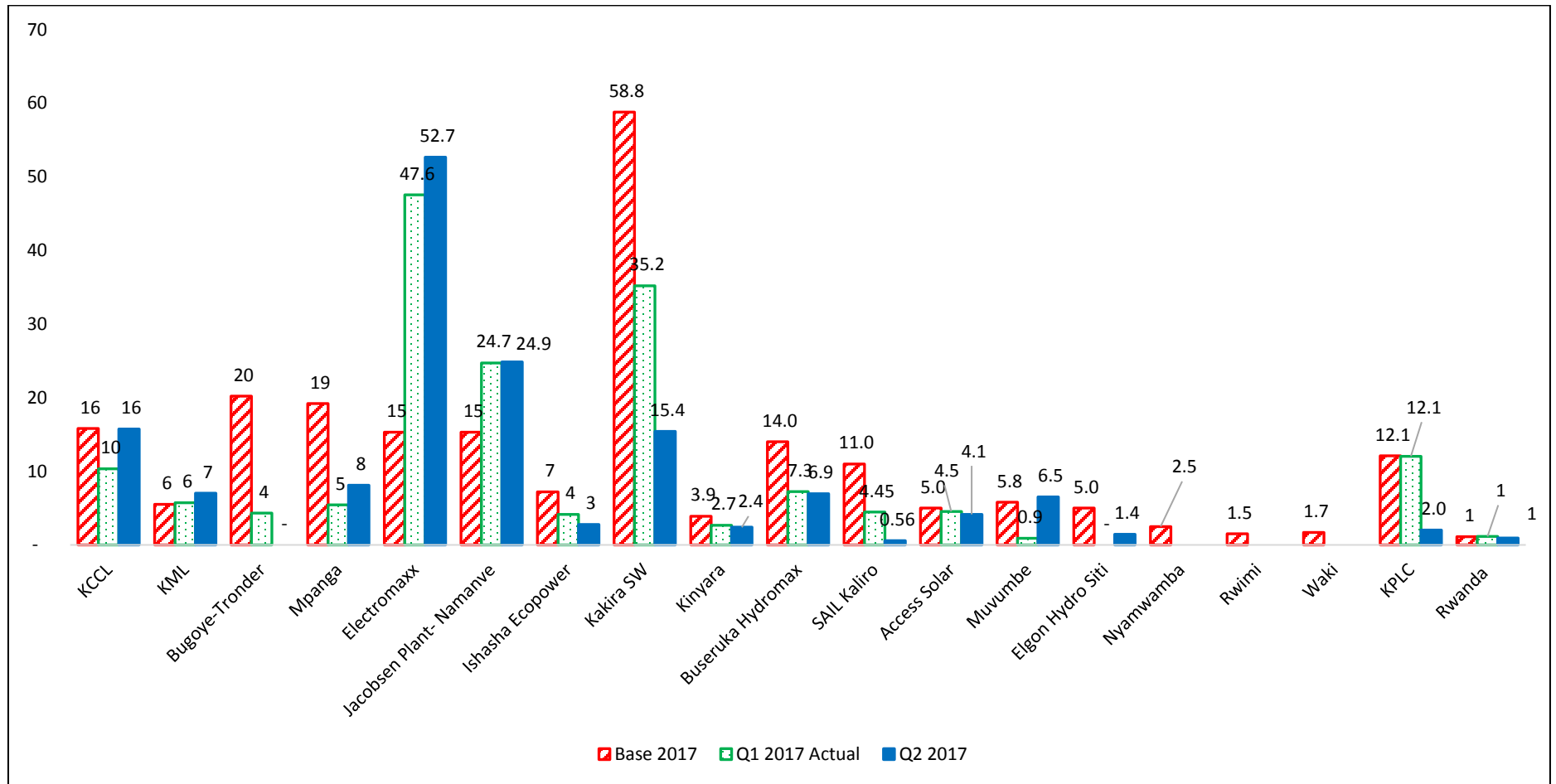


Figure 5: Energy Purchases by UETCL from Small Hydros, Thermal and Co-generation Plants (GWh)



The variance between the forecast in the generation mix and the outturn for the second quarter of 2017 is attributed mainly to;

- (i) The changes in hydrological conditions which affected generation from Mini Hydro Power Plants.

- (ii) Decreased generation from co-generation Bagasse Plants on account of decreased supply of cane from out-growers. The reduction in supply from out-growers had affected generation from Kakira Sugar Limited and Sugar & Allied during both the first and second quarters of 2017.

- (iii) Increased dispatch from Large Hydro Power Plants to bridge the deficit created by reduced dispatch from Mini-Hydro Plants and Co-Generation bagasse.

The detailed discussion is presented in **Annex 1** to this report.

3.3.1.3 Energy Sales by UETCL

The energy purchased by UETCL is adjusted for transmission losses and sold to different distribution companies and exported. Based on the forecast, UETCL will sell 90.55 percent of the energy to Umeme Limited as shown in Table 6. UETCL is expected to export 7.93 percent of energy and the rest (1.52 percent) will be sold to the small distribution companies in the country.

Table 6: Energy Sales by UETCL Q1 2017 to Q3 2017

Distribution Licensee/export	Q1 2017 Annualized Energy Sales by UETCL (GWh)	%age sales - Q1 2017	Q2 2017 Annualized Energy Sales by UETCL (GWh)	%age sales – Q2 2017	Q3 2017 Annualized Energy Sales by UETCL (GWh)	%age sales – Q3 2017
Umeme Limited	3,305.60	87.63%	3,372.62	93.23%	3,274.73	90.55%
UEDCL	46.10	1.22%	46.08	1.27%	41.92	1.16%
KIL	5.20	0.14%	5.24	0.14%	5.68	0.16%
BECS	3.30	0.09%	3.24	0.09%	2.72	0.08%
PACMECS	2.40	0.06%	2.40	0.07%	1.64	0.05%
KRECS	3.30	0.09%	3.24	0.09%	3.04	0.08%
EXPORT	406.50	10.78%	184.64	5.10%	286.80	7.93%
TOTAL	3,772.40	100.00%	3,617.46	100.00%	3,616.53	100.00%

In May 2017, the energy interchange between Uganda and Kenya was a net export of **16,728,415 kWh** from UETCL to Kenya Power and Lighting Company Limited as compared to net export of **16,984,510 kWh** in April 2017. The observed decrease in exports registered in the month of May 2017 was due to lower levels of Power support requested by Kenya Power and Lighting Company Limited owing to slight improvement in the hydrology at power plants in Western Kenya.

The impact of the change in the generation mix is a downward adjustment of the Electricity End-User Tariffs by a weighted average of (6.5) Ush /KWh relative to the Base Tariffs as shown in Table 7.

Table 7: Generation Mix/Dispatch Adjustment Factor

	End-User (Retail) Electricity Tariffs (Ush/kWh)						
	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street-lights	Weighted average
Exchange Rate Adjustment Factor (FERFAF)	(7.8)	(6.3)	(6.3)	(6.1)	(5.8)	(6.4)	(6.5)

3.4 Adjustments of Operation and Maintenance Costs

3.4.1 Adjustment of the Budget for Uganda Electricity Generation Company Limited

Mortgage Payment

The Authority at its 270th meeting, approved a Uganda Electricity Generation Company Limited (UEGCL) budget to be recovered through the Eskom Uganda Limited Capacity Price as Concession Fees. The budget included a loan repayment for the UEGCL House of Ush. 634,536,000. This amount was approved by the Authority for inclusion in the second quarter Tariff adjustment to be recovered over the last three (3) quarters of the Tariff Year 2017. Therefore, the total annualized UEGCL budget considered in the determination of the Tariffs for the third quarter of 2017 is **Ush. 7,154,212,000.**

3.4.2 UETCL Operation and Maintenance costs for 2017

The Authority approved a Multi-Year Tariff for UETCL for the period 2017-2019. The approved Operation and Maintenance cost for 2017 is Ush 85,245 Million and other revenue of Ush 15,480 Million. The Multi-Year Tariff and the Tariff Methodology provide

that UETCL Operation and Maintenance costs shall be subject to quarterly adjustment for changes in Exchange Rate and Consumer Price Index.

The effective Operation and Maintenance cost for UETCL for the third quarter of 2017 is Ush 88,478 Million (including Ush 368 Million approved for skill development). The effective Operation and Maintenance costs is captured under the inflation and Exchange rate adjustment factors.

3.4.3 Eskom Uganda Limited Operation and Maintenance costs for 2017

The Authority approved Operation and Maintenance cost of Ush 26,619 million (US\$ 9.286 million) for Eskom Uganda Limited for the Tariff Year 2017. The Eskom Uganda Limited License No. 018 as amended as well as the 2014 approved Quarterly Tariff Adjustment Methodology provide for adjustment of Generation Operation and Maintenance Costs (GOMC) Base parameters for changes in Exchange Rate and inflation as measured by the Consumer Price Index (CPI).

The effective Operation and Maintenance cost for Eskom Uganda Limited for the third quarter of 2017 is Ush 31,532 million (including Ush 122 Million approved for skill development). The effective Operation and Maintenance costs is captured under the inflation and Exchange rate adjustment factors.

3.4.4 ESKOM Uganda Limited Investments for 2014 and 2015

During the consideration of the base Capacity Price for Eskom Uganda Limited, the Authority approved tentative investments of US\$ 2.625 Million for 2014, and US\$ 1.628 Million for 2015 for Eskom Uganda Limited, subject to verification.

The Authority concluded the investment verification of Eskom Uganda Limited. The Authority approved US\$ 3,354,643 as investments completed in 2014 for purposes of earning a return; and US\$ 1,648,497 as investments completed in 2015 for purposes of earning a return.

During the period 2015 and 2016, Eskom Uganda experienced a reduction in revenue amounting to Ush 1,024,474,472, on account of the verified investments being more than the tentative investments used in the determination of the Capacity Price for 2015 and 2016.

The under-recovery amounting to Ush 1,024,474,472 has been considered in the computation of the Capacity Price for Eskom Uganda Limited in the third quarter of 2017 through the Exchange Rate adjustment factor.

3.4.5 Umeme Limited Investments for 2012 - 2015

The Umeme Limited Tariff Methodology provides for determination of the distribution revenue requirement comprising of; Operation & Maintenance costs, investment-related costs, and lease/concession fees.

The investment-related costs include; Capital Recovery, Return on Investment, and Corporate Income Taxes.

At the end of every Tariff year, and as part of the Tariff application for the subsequent year, Umeme Limited applies for inclusion in the Regulatory Asset Base the investments executed by the company. The implemented investments are included in the Regulatory Asset Base and used in the determination of the Distribution Price pending verification by the Authority.

Following the conclusion of the investment verification, a reconciliation is undertaken (if the verified investments are different from those applied for by the Licensee during the determination of the distribution price) on account of; Capital Recovery, Return on Investment, and Corporate Income Taxes.

The Authority at its 279th meeting considered the appeal by Umeme Limited regarding the verified and approved investments for the period 2012-2015. The adjusted investments for Umeme Limited are shown in Table 8.

Table 8: Verified and Approved for Umeme Limited

Tariff Year	Investment implementation Year	Amount in Base Tariff - US\$ Million	Adjusted Amount after Appeal - US\$ Million
2011	2010	18.87	18.87
2012	2011	25.23	25.23
2013	2012	25.22	25.22
2014	2013	39.49	39.49
2015	2014	49.66	57.51
2016	2015	64.32	67.47
2017	2016	72.50	2016 under verification

The adjusted investments are more than the investments used in the determination of the 2017 Base Tariffs. In order to avoid further under recovery (on account of the Investments), the approved and adjusted investment after the appeal have been used in the determination of the Distribution Price for the third quarter of 2017.

3.5 Impact of Adjustment and other factors on the revenue requirement

On the basis of the foregoing discussion of adjustment factors considered in the Tariff for the third quarter of 2017, the annualized revenue requirement decreased from Ush 1,625,838 Million in Q1 2017, Ush 1,611,601 Million in Q2 2017 to Ush 1,518,804 Million in Q3 2017. The contribution of each of the adjustment factors to the movement in the annualized revenue requirement is shown in Table 9.

Table 9: IMPACT OF PARAMETERS ON REVENUE REQUIREMENT

Adjustment Factor parameter	Impact on Annualized Revenue Requirement – Ush Million	%age change from Q1 2017 Annualized Revenue Requirement
Exchange Rate	(9,778)	-0.6%
Inflation - CPI	4,701	0.3%
US PPI	611	0.0%
Fuel Prices	(2,144)	-0.1%
Generation Mix	(80,469)	-4.9%
UEGCL budget Adjustment	846	0.1%
Export Sales	(40,748)	-2.5%
Umeme Investments	15,849	1.0%
Eskom Investments	4,098	
TOTAL	(107,034)	-6.8%
Annual Sales to Umeme Q1 2017	3,413	
Annual Sales to Umeme Q3 2017	3,323	
%age Change	-2.65%	

The overall effect of adjustments included in determination of Tariffs for Q3 2017 is a reduction in the annualized revenue requirement of the electricity industry by Ush 107,034 Million from the first quarter of 2017 levels.

Changes in the generation mix led to a decrease in the annualized revenue requirement of Ush 80,469 Million from the costs assumed in the determination of the 2017 Base tariffs. The appreciation of the Uganda Shilling against the United States Dollar led to a reduction in the annualized revenue requirement by Ush 9,778 Million, while a reduction in fuel prices led to a reduction in annualized revenue requirement by Ush 2,144 Million.

On the other hand, increase in the US PPI led to an increase in the annualized revenue requirement by Ush 611 Million. An increase in the Consumer Price Index between November 2016 and May 2017 increased the annualized revenue requirement by Ush 4,701 Million.

3.6 Overall Tariff Adjustment Factor

The applicable Tariff adjustment for the third quarter of 2017 is the sum of the Exchange Rate Adjustment Factor, Inflation Adjustment Factor and Fuel Price Adjustment Factor. The adjustment factors for the third quarter of 2017 are as shown in Table 10.

Table 10: Total Tariff Adjustment Factors Q3 2017

	Tariff Adjustment Factors (Ush/kWh)						
	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street - lights	Weighted average
Inflation Rate Adjustment Factor (IRAF)	1.8	1.3	1.4	1.8	1.6	1.3	1.6
Exchange Rate Adjustment Factor (FERFAF)	(3.6)	(3.4)	(3.1)	(1.9)	(1.9)	(3.6)	(2.7)
Fuel Price Adjustment Factor (FPAF)	(9.1)	(7.3)	(7.3)	(7.1)	(6.7)	(7.4)	(7.5)
Fuel Price Adjustment Factor	(1.3)	(1.0)	(1.0)	(1.0)	(0.9)	(1.0)	(1.1)
Energy Mix Adjustment factor	(7.8)	(6.3)	(6.3)	(6.1)	(5.8)	(6.4)	(6.5)
Total Tariff Adjustment	(10.9)	(9.4)	(9.0)	(7.3)	(7.0)	(9.7)	(8.6)

4 REVENUE REQUIREMENT, TARIFF AND SUBSIDY IMPLICATIONS

4.1 Revenue Requirement Implications

The annualized revenue requirement for the electricity industry is shown in Table 11.

Table 11: Summary of Revenue Requirement

	Eskom Generation				Transmission				Other power purchases	Export revenues	Distribution			
	Total	Asset related	O&M	Lease fee	Total	Asset related	O&M	Levies & Funds	Total	Total	Total	Asset related	O&M	Lease fee
	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill	USh mill
Q1 2017	54,440	13,011	34,860	6,569	126,122	-	93,600	32,522	960,044	73,212	558,445	394,147	158,383	5,915
Q2 2017	65,779	12,855	34,962	17,962	125,407	-	94,092	31,315	958,709	106,502	568,208	402,913	159,452	5,844
Q3 2017	59,622	17,010	35,197	7,415	125,176	-	94,841	30,334	959,774	197,193	571,426	404,703	160,852	5,870

In the determination of Tariffs for the third quarter of 2017, the annualized revenue requirement for Eskom Uganda Limited is projected to increase to Ush 59,622 Million in Q3 2017 from Ush 54,440 Million in Q1 2017. The increase is largely driven by;

- (i) Adjustment for Consumer Price Index leading to an increase in the local content of the Operation and Maintenance costs, and
- (ii) Adjustment of the 2017 annual budget for Uganda Electricity Generation Company Limited leading to increase in Concession Fees.
- (iii) Adjustment for Investment costs under recovery for 2015 and 2016 leading to an increase in investment related costs.

The reduction in the Eskom Uganda Limited revenue requirement between the second quarter 2017 and the third quarter of 2017 is on account of adjustment of the UEGCL Budget during the second quarter of 2017. The adjustment amounts were fully recovered in the second quarter of 2017, and have therefore not been provided for in the third quarter of 2017.

The appreciation of the Uganda Shilling against the United States Dollar cushioned the increase in the Uganda Shilling equivalent asset-related costs.

Due to the changes in the Generation Mix mainly attributed to the reduction in dispatch from Eskom Uganda Limited and Bujagali Energy Limited during the second quarter of 2017 and the increase dispatch from thermal plants, the annualized power acquisition costs (excluding the capacity payments to all Thermal Generators) increased from Ush 958,709 Million used in the determination of the second quarter of 2017 to Ush 959,774 Million in Q3 2017.

The annualized revenue requirement for Umeme Limited has increased from Ush 558,445 million provided for in the tariff for Q1 2017 to Ush 571,426 million in Q3 of 2017 (despite the appreciation of the Uganda Shilling against the United States Dollar), mainly on account of adjustment for the 2014 and 2015 approved and verified investments.

There was an increase in the Operation and Maintenance cost component of Umeme Limited from Ush 158,383 Million in Q1 2017 to Ush 160,852 Million in Q3 2017. The increase is on account of adjustment for Consumer Price Index for the local content of the Operation and Maintenance Costs.

The increase in the annualized asset-related costs from Ush 394,147 Million in Q1 2017 to Ush 407,001 Million in Q3 2017 on account of the adjustment for the 2014 and 2015 approved and verified investments.

4.1.1 Capacity Price for Eskom Uganda Limited

The Capacity Price for Eskom Uganda Limited will increase from Ush 43,112 per MW per hour in Q1 2017 to Ush 47,216 per MW per hour in Q3 2017 as shown in Table 12. The increase is attributed to increased costs on account of adjustment of local content Operation and Maintenance costs for Consumer Price Index, and adjustment to the 2017 annual budget for Uganda Electricity Generation Company Limited.

Table 12: Eskom Capacity Price for Q3 2017

	Average Capacity Price	Total costs	Investment component	Capital recovery charges	Return on investment	Net accumulated investment	Income taxes payable	O&M component	USh-portion of O&M	US\$-portion of O&M	Concession fee
	CP y,q	USh mill	USh mill	US\$ thous	US\$ thous	US\$ thous	US\$ thous	OM y, q=1	LOM y, q	EOM y, q	LP y, q=1
	Ushs/ MW							Ush mill	Ush mill	Ush mill	US\$ thous
Q1 2017	43,112	54,440	13,011	1,098	1,740	14,500	746	34,860	18,145	13,049	6,569
Q2 2017	52,092	65,779	12,855	1,098	1,740	14,500	746	34,962	18,403	12,893	17,962
Q3 2017	47,216	59,622	17,010	1,098	1,740	14,500	746	35,197	18,582	12,950	7,415

4.1.2 Bulk Supply Tariff (BST)

The annualized bulk supply costs have increased from Ush 1,118,908 Million in Q1 2017 (2017 base) to Ush 1,169,230 Million in Q3 2017. The sales to distribution companies have reduced from 3,413 GWh in Q1 2017 to 3,323 GWh in Q3 2017. As a result, the Bulk Supply Tariffs have reduced from Ush 373.5/kWh, Ush 287.3/kWh, and Ush 181.1/kWh at Peak, Shoulder and Off-peak periods respectively, to Ush 365.5/kWh, Ush 281.2/kWh, and Ush 177.3/kWh for the respective Time of Use periods in Q3 2017, as shown in Table 13.

Table 13: BULK SUPPLY COSTS AND RESULTANT BULK SUPPLY TARIFFS (BST)

	Peak price	Shoulder price	Off-peak price	Sales to distributors	Total costs	Power Purchase Costs	Transmission costs	Total asset related costs	Total O&M component	Other
	USh/kWh	USh/kWh	USh/kWh	GWh	USh mill	USh mill	USh mill	Ush mill	Ush mill	Ush mill
Q1 2017	379.9	292.2	184.1	3,413	1,118,908	992,786	126,122	6,412	87,188	32,522
Q2 2017	373.5	287.3	181.1	3,373	1,112,520	987,113	125,407	6,336	87,756	31,315
Q3 2017	365.5	281.2	177.3	3,323	1,169,230	1,044,054	125,176	6,364	88,478	30,334

The reduction in the Bulk Supply Tariff despite the increase in power purchase costs is on account of increased export sales to Kenya Power and Lighting Company Limited. The increase power purchase costs incurred by UETCL is offset by the increase in export revenue by UETCL. The annualized bulk supply costs before off setting exports increased by 4.5% between Q1 2017 and Q3 2017 and the sales to distributors reduced by 2.6% over the same period, leading to reduction in the Bulk Supply Tariff.

The changes in the energy generation mix and changes in the Exchange rate of the Uganda Shilling against the United States Dollar affects that actual power purchase costs by UETCL. It is therefore expected that UETCL will either under recover or over

recover (at the approved Bulk Supply Tariff) during the third quarter. At the end of every Tariff Year, the Authority undertakes reconciliation for UETCL to establish the actual under/over recovery. The under/over recovery is considered at part of the tariff determination for the subsequent Tariff Year.

5 RETAIL TARIFFS

In accordance with Amendment No. 2 of the Umeme Limited Licence No. 48 for Supply of electricity, the retail tariff charges for electric service shall be subject to and liable for automatic fuel cost adjustment, foreign Exchange rate fluctuation adjustment, and an automatic adjustment for inflation that will be calculated in accordance with such formulae as determined by the Authority.

The quarterly adjustment factors and the resulting end-user tariffs across the customer categories for Q3 2017 are as shown Table 14.

Table 14: Q3 2017 Adjustment Factors and resultant End-User Tariffs

	End-User (Retail) Electricity Tariffs (Ush/kWh)						
	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street-lights	Weighted average
2017 Approved Base Tariffs	696.9	629.0	577.8	376.3	372.8	679.7	513.2
	Tariff Adjustment Factors (Ush /kWh) for Q3 2017						
Inflation Rate Adjustment Factor (IRAF)	1.8	1.3	1.4	1.8	1.6	1.3	1.6
Exchange Rate Adjustment Factor (FERFAF)	(3.6)	(3.4)	(3.1)	(1.9)	(1.9)	(3.6)	(2.7)
Fuel Price Adjustment Factor (FPAF)	(9.1)	(7.3)	(7.3)	(7.1)	(6.7)	(7.4)	(7.5)
Fuel Price Adjustment Factor	(1.3)	(1.0)	(1.0)	(1.0)	(0.9)	(1.0)	(1.1)
Energy Mix Adjustment factor	(7.8)	(6.3)	(6.3)	(6.1)	(5.8)	(6.4)	(6.5)
Total Tariff Adjustment	(10.9)	(9.4)	(9.0)	(7.3)	(7.0)	(9.7)	(8.6)
Approved Q3 2017 Tariff	686.0	619.6	568.8	369.0	365.8	670.0	504.6
Approved Q2 2017 Tariff	687.1	620.9	569.7	370.2	366.9	671.2	505.8
Percentage Change from Q2 2017	-0.2%	-0.2%	-0.2%	-0.3%	-0.3%	-0.2%	-0.2%

The resultant Capacity Price, Bulk Supply Tariff, and End-User Tariff at the respective Time of Use periods is shown in Table 15.

Table 15: The resultant tariff at the different Time of Use periods

Capacity Price	47,216	Ush/MW per hour				
	Peak	Shoulder	Off-Peak			
BST	365.5	281.2	177.3	Ush/kWh		
End-User (Retail) Electricity Tariffs (Ush/kWh)						
	Domestic	Commercial	Medium Industrial	Large Industrial	Extra Large	Street-lights
2017 Base Tariffs - Ush/kWh						
Average	696.9	629.0	577.8	376.3	372.8	679.7
Peak		815.9	747.9	498.2	493.1	
Shoulder		628.1	575.7	383.5	379.6	
Off peak		391.5	355.6	244.5	243.3	
Tariff Adjustment Factors (Ush/kWh) for Q3 2017						
Inflation Rate Adjustment Factor (IRAF)	1.8	1.3	1.4	1.8	1.6	1.3
Exchange Rate Adjustment Factor (FERFAF)	(3.6)	(3.4)	(3.1)	(1.9)	(1.9)	(3.6)
Fuel Price Adjustment Factor (FPAF)	(9.1)	(7.3)	(7.3)	(7.1)	(6.7)	(7.4)
Fuel Price Adjustment Factor	(1.3)	(1.0)	(1.0)	(1.0)	(0.9)	(1.0)
Energy Mix Adjustment factor	(7.8)	(6.3)	(6.3)	(6.1)	(5.8)	(6.4)
Total Tariff Adjustment	(10.9)	(9.4)	(9.0)	(7.3)	(7.0)	(9.7)
Approved Q3 2017 End-User Tariff in Ush/kWh						
Average	686.0	619.6	568.8	369.0	365.8	670.0
Peak		806.5	738.9	490.9	486.2	
Shoulder		618.7	566.7	376.2	372.6	
Off peak		382.1	346.6	237.2	236.3	

ANNEX 1: ENERGY DISPATCH AND GENERATION MIX

Eskom Uganda Limited (380 MW)

At the time of determination of the Base Tariffs for 2017, it was assumed that the water release at the Kiira-Nalubaale complex would be 900 Cumecs for the greater part of the year. In order to cover for the shortfall arising from reduced dispatch from the Mini-Hydro Plants, the water release was increased to 1,000 Cumecs during the first quarter of 2017. At water release of 1,000 cumecs, Eskom Uganda Limited was able to generate 380.7 GWh in the second quarter of 2017 compared to 341.0 GWh used in the determination of the 2017 Base Tariffs.

For the third quarter of 2017, Eskom Uganda Limited is expected to generate and sell 382.7 GWh to UETCL. The marginal increase is on account of the sustained water release of 1,000 Cumecs and delayed improvement of hydrology conditions affecting generation from Mini-Hydro Power Plants.

The quarterly power purchase costs for Eskom Uganda Limited are expected to increase from Ush 13.6 Billion in the first quarter of 2017 to Ush 14.9 Billion in the third quarter of 2017. The increase is mainly on account of the adjustment of the annual budget for UEGCL and provision for under-recovery of Investments in the third quarter of 2017.

Bujagali Energy Limited (250 MW)

The generation and dispatch from Bujagali Energy Limited is a direct result of the water release at the complex which is around 112% more efficient than the Kiira-Nalubaale Power Plant operated by Eskom Uganda Limited. Bujagali Energy Limited is expected to complete the routine maintenance of one of its units on the 30th of June 2017, the company is expected to continue conducting routine maintenance shutdowns/outages in the third quarter of 2017, at the rate of one unit each month to October 2017. This indicates that the plant will have one unit not fully operational during the third quarter of 2017.

In the second quarter of 2017, Bujagali Energy Limited generated 403.48 GWh compared to 380.0 GWh used in the determination of the 2017 Base Tariffs.

Considering the plant maintenance schedule and expected water release, Bujagali Energy Limited is expected to generate 407.5 GWh in the third quarter of 2017.

UETCL is expected to incur Ush 143.2 Billion in the third quarter of 2017 on account of purchasing energy from Bujagali Energy Limited.

Africa EMS Mpanga Ltd (18 MW)

During the first and second quarters of 2017, the country experienced unfavorable hydrology conditions which resulted into lower than planned dispatch from most Mini Hydros. In the second quarter of 2017, Mpanga Hydro Power Plant is expected to generate 8.1 GWh compared to 19.21 GWh expected during the setting of the base tariffs. The generation of 8.1 GWh in the second quarter of 2017 represents an increase from 5.45 GWh generated in the first quarter of 2017.

The catchment areas for Mpanga Hydro Power Plant are expected to experience the same hydrology conditions in the third quarter of 2017. The power plant is expected to generate 8.1 GWh in the third quarter.

The Authority approved a phased tariff for Africa EMS Mpanga of US cents 9/KWh for the first six years and US cents 6.66/KWh for the rest of the License period. The Power plant achieved Commercial Operations Date in March 2011. In March 2017, the Power Plant switched to Phase two of the Tariff Structure. The weighted average Tariff for Africa EMS Mpanga in 2017 is US cents 7.24/KWh.

The power purchase costs are expected to reduce from Ush 5.1 Billion used in the determination of the 2017 Base Tariffs to Ush 2.1 Billion in third quarter of 2017. The reduction is mainly on account

of the reduction in generation and lower Tariff in phase two of the Tariff structure.

Bugoye Power Limited – Bugoye (13 MW)

Bugoye Power Limited generated 4.31 GWh in the first quarter of 2017. During the same quarter, the plant experienced mechanical breakdown when the penstock burst and was switched off on 13th February 2017 to enable the company address the mechanical breakdown. The repairs on the penstock are expected to be completed in August 2017. Generation from Bugoye Power Plant is therefore expected for two (2) months during the third quarter of 2017. Accordingly, UETCL is expected to purchase 13.4 GWh (compared to 20 GWh used in the determination of the Base Tariffs) at power purchase costs of Ush 4.3 Billion from Bugoye Power Plant during the third quarter of 2017.

Kasese Cobalt Company Ltd - KCCL (10.5 MW)

Kasese Cobalt Company Limited Power Plant generated 15.75 GWh in the second quarter of 2017 compared to 15.77 GWh used in the determination of the 2017 Base Tariffs.

The power plant is expected to experience the same hydrology conditions in the third quarter of 2017, and is therefore expected to generate 15.77GWh during the quarter.

UETCL power purchase costs for Kasese Cobalt Company Limited Power Plant are expected to reduce marginally from Ush 3.271 Billion used in the Base Tariffs to Ush 3.25 Billion in the third quarter of 2017. The reduction in power purchase costs is mainly on account of Exchange rate appreciation.

Tibet Hima Limited – KML (5 MW)

Mobuku 1 Hydropower Plant operated by Tibet Hima Limited (formerly Kilembe Mines Limited) has an installed capacity of 5 MW. The power plant was not adversely affected by the drought conditions (because of the different catchment area) and

generated 5.72 GWh in the first quarter of 2017 compared to 5.48 GWh assumed in the determination of the 2017 Base Tariffs. The hydrology improved in the second quarter of 2017 and the power plant is expected to generate 7.01 GWh in the third quarter of 2017.

UETCL power purchase costs for Tibet Hima Limited are expected to increase from Ush 481 Million assumed in the 2017 Base Tariff to Ush 615 Million during the third quarter of 2017. The increase is mainly on account of increased dispatch. The tariff of KML is in Uganda Shillings and therefore the power purchase costs are not subjected to changes in Exchange Rate.

Eco Power-Ishasha (6.5 MW)

Eco Power Ishasha Power Plant is estimated to generate 2.78 GWh by the end of the second quarter of 2017. In 2015, the plant experienced power evacuation challenges due to constraints in the Umeme network. Umeme Limited in 2016, rehabilitated lines from Mbarara North substation to both Kabale and Rukungiri. We, therefore, expect that the plant will not experience major evacuation challenges arising from grid instability in 2017. The Plant is projected to dispatch 2.8 GWh in the third quarter of 2017.

The power purchase costs are expected to reduce from Ush 1.9 Billion used in the determination of the 2017 Base Tariffs to Ush 730 Million in the third quarter of 2017. The reduction in power purchase costs is on account of reduction generation.

Hydromax Limited - Buseruka (9 MW)

The plant is expected to dispatch 6.95 GWh by the end of the second quarter of 2017 compared to 14.0 GWh used in the determination of the 2017 Base Tariffs. This is as a result of lower hydrology as well as constraints in the power evacuation line. UETCL is expected to commission the Hoima substation in September 2017, which will help in the evacuation of the plant. It is therefore projected that the plant will dispatch 7.0 GWh in the third quarter of 2017.

The Power Purchase costs for Hydromax are expected to decrease from Ush 4.8 Billion in the 2017 Base Tariff to Ush 2.4 Billion in the third quarter of 2017. The decrease in the power purchase costs is on account of the decrease in energy generation from the power plant.

Muvumbe Hydro Power Plant (6.5 MW)

The project started construction in the fourth quarter of 2015 and achieved Commercial Operations Date in March 2017 after inspection and tests carried out by UETCL and Umeme Limited. The power plant is expected to generate 5.8 GWh in the third quarter of 2017.

UETCL is expected to incur power purchase costs amounting to Ush 2.0 Billion arising from energy purchases from Muvumbe Hydro Power Plant for the third quarter 2017 based on a Generation Tariff of US cents 9.4/Kwh as approved by the Authority.

Siti 1 Hydro Power Plant (5 MW)

Siti 1 Hydro Power Plant started construction in the third quarter of 2015 and was commissioned in April 2017, the plant is expected to supply 5.0 Gwh to the grid for the third quarter of 2017.

UETCL is expected to incur power purchase costs amounting to Ush 1.8 Billion arising from energy purchases from Siti 1 Hydro Power Plant based on a generation Tariff of US cents 10.0/Kwh as approved by the Authority.

Nyamwamba Hydro Power Plant (9 MW)

Nyamwamba Hydro Power Plant had been expected to be commissioned in October 2017 and generate 10.2 GWh in 2017 based on the installed capacity, the plant factor and expected days of generation in 2017. However, it was reported that the project experienced delays and is expected to be completed in December 2017.

The expected generation from the power plant is spread over the four (4) quarter 2017. UETCL is expected to incur Ush 3.2 Billion

in 2017 for Power Purchase Costs from the power plant at the approved tariff of US Cents 8.5/kWh, this has not been included in the third quarter computations.

Rwimi Hydro Power Plant (5.5 MW)

Rwimi Hydro Power Plant is expected to be commissioned in October 2017. The plant is expected to generate 6.0 GWh in 2017 based on installed capacity, the plant factor and expected days of generation in 2017.

Rwimi Hydro Power Plant is expected to sell energy to UETCL at US cents 9.8/Kwh. This therefore implies that UETCL will incur power purchase costs of Ush 2.0 Billion in 2017, of which 25% has been provided for in the determination of the tariffs for the third quarter of 2017.

Waki Hydro Power Plant (4.8 MW)

Waki Hydro Power Plant is expected to be commissioned in October 2017 and generate 6.6 GWh in 2017 based on the installed capacity, plant factor and expected days of generation in 2017.

UETCL is expected to incur power purchase costs of Ush 2.4 Billion in 2017 on account of dispatch of the Waki Hydro Power Plant.

Kakira Sugar Limited (52 MW)

Kakira Sugar Limited generated 15.48 GWh during the second quarter of 2017. The plant has experienced some challenges of reduced access to cane/fuel.

The cane/fuel challenge was caused by the development of a number of other sugar manufacturing companies in the same area with limited expansion of sugar cane plantations, leading to competition for cane. The generation for the third quarter is expected to be 15.4 GWh.

UETCL power purchase costs for the Kakira Sugar Limited energy are expected to decrease from Ush 20.7 Billion used in the Base Tariffs of 2017 to Ush 5.43 Billion in the third quarter 2017. The

reduction in power purchase costs is mainly on account of decreased generation from the power plant.

Kinyara Sugar Ltd (5.0 MW)

During the second quarter of 2017, the plant generated and sold 2.40 GWh to the National Grid compared to 3.9 GWh anticipated in the Base Tariffs of 2017. The reduction in power generation is mainly on account of lower access to cane/fuel, and power evacuation challenges on the Hoima-Masindi 33KV line. The works on the evacuation line are expected to be completed in the fourth quarter of 2017. The plant is expected to generate 2.4 GWh during the third quarter of 2017.

The Kinyara power purchase costs are expected to decrease from Ush 1.14 Billion used in the Base Tariffs of 2017 to Ush 0.71 Billion in the third quarter of 2017 on account of decreased generation from the power plant.

Sugar and Allied Limited (SAIL)

Sugar and Allied Limited was commissioned in 2013, generating power for own use. The plant was then connected to the Grid in 2015 with an installed capacity of 11.5 MW with 6.5 MW committed to the National Grid. The plant, however, experienced constraints in cane supply and therefore supplied limited capacity to the National Grid.

SAIL supplied 0.56 GWh to the National Grid in the second quarter of 2017 compared to 11.0 GWh used the Base Tariffs for 2017. The generation by the plant is projected at 0.56 GWh during the third quarter of 2017 as the challenge of access of cane /fuel for the plant is expected to be sustained in the third quarter of 2017.

The Sugar and Allied Power Purchase costs are expected to reduce to Ush 0.198 Billion in the third quarter of 2017 from Ush 3.86 Billion in used in the Base Tariffs of 2017 on account of reduced generation from the Power Plant.

Electro-Maxx Ltd Tororo (50 MW)

In February 2017, the Authority approved UETCL's request to dispatch the Thermal Plants above the 7 MW minimum dispatch implemented by the Authority. The request by UETCL was premised on requirement to increase export to Kenya to 50 MW.

In the second quarter of 2017, Electro-Maxx generated 52.68 GWh. The generation from the Thermal Plants is expected to change based on the power export requirement to Kenya during the third quarter of 2017. The plant is expected to generate 45.7 GWh in the third quarter of 2017 as support to Kenya and the Eastern part of the country currently affected by the faulty transformer at the Tororo Substation is expected to continue during the third quarter of 2017.

The power purchase costs are expected to increase from Ush 10.14 Billion in the Base Tariffs to Ush 30.3 Billion in the third of quarter 2017. This is due to the increased generation requirement to meet the Kenya Export. The prices of fuel on the international market are expected to have a down ward trend into the third quarter of 2017.

Whereas the Authority approved renewal of the Electro-Maxx Uganda Limited Licence and change of the Tariff structure, the effective date for the Authority's decision is 1st November 2017.

Jacobsen Uganda Power Plant Company Limited - Namanve (50 MW)

The License for Jacobsen expired on 14th September 2016. The company applied for renewal of its License. The Authority approved a one year license renewal. The company commenced generation in the fourth quarter of 2016. In the second quarter of 2017, the plant is generated 24.86 GWh and is expected to generate 16.2 GWh in the third quarter of 2017 at a cost of Ush 24.9 Billion.

Access Solar TSK (10 MWp)

The plant was procured through a competitive bidding process under the Global Energy Transfer Feed-in-Tariff (GETFiT) Program with a total capacity of 10 MWp and a plant factor of 23%. Following the award of a Licence by the Authority, construction started and the company achieved Commercial Operations on 12th December 2016.

In the first quarter of 2017, the plant generated 4.5 GWh and is expected to generate 4.4 GWh in the third quarter of 2017 at a cost of Ush 2.02 Billion.

Tororo Solar North (10 MWp)

The project was procured under the GETFiT program with 10MWp total capacity and a plant factor of 23% but experienced delays in achieving financial close. The project is expected to be commissioned in the fourth quarter of 2017. Tororo Solar North is expected to generate 5.1 GWh in 2017 and UETCL is expected to incur Ush 2.1 Billion on account of Power Purchase Costs in 2017.

Import and export of Power

UETCL imports and exports power from Kenya and Rwanda mainly for tie line flow and not for commercial purposes.

In May 2017, Kenya continued to experience un-favorable hydrological conditions which affected generation from hydro power plants. As a result, Kenya requested UETCL to supply about 50MW. The export by UETCL to Kenya has increased from 28.46 GWh in Q4 2016 to 75 GWh in the first quarter 2017. The dispatch reduced in the second quarter of 2017 to 51.93 GWh. The Q2 2017 outturn was higher than the 19.9 GWh that was used in the determination of the Base Tariffs for 2017.

In the third quarter of 2017, the hydrology condition in Western Kenya is expected to improve with more rains expected between July to September 2017. As such the exports for the

third quarter of 2017 are projected to be 42.3 GWh during the period and earn revenue of 34.89 Billion.

In respect to power import, UETCL is expected to maintain the import levels for tie line flow of 2.9 GWh for both Kenya and Rwanda and at a cost of 1.6 Billion.