



GHANA WHOLESALE ELECTRICITY MARKET BULLETIN

MARKET WATCH

Monthly Market Data Analysis

ISSUE NO. 8: 1st August 2016 to 31st August 2016

This Bulletin covers major developments in the Wholesale Electricity Market (WEM) of Ghana from 1st August 2016 to 31st August 2016. It analyses the performance of the key WEM indicators against their benchmarks, and examines the likely implications of any discernable trends in the market. Following comments from readers, more information and discussions on electricity imports and exports have been included in this edition.

The Energy Commission would very much appreciate and welcome comments from readers on the Bulletin. Reasonable care has been taken to ensure that the information contained in this Bulletin is accurate at the time of publication, but nevertheless, regrets any errors, omissions or inaccuracies therein.

HIGHLIGHTS OF THE MONTH

Electricity supply reduces further in August 2016

According to the Electricity Supply Plan (ESP) developed for the year 2016, projected electricity supply for August 2016 was 1,364 GWh but the outturn was 1,058.2 GWh which was 22.4% lower than projected. The total electricity supply of 1,058.2 GWh in August 2016 was made up of 1,003.3 GWh produced domestically and imports of 54.9 GWh from La Cote D'Ivoire. Table 1 shows a comparison of the projected and actual electricity demand and supply for August 2016.

The system coincident peak load (Ghana peak generation plus import) recorded in August 2016 was 1,867.9 MW while the Ghana coincident peak load (domestic peak load including Valco minus export) was 1,843.7 MW. Both the system and Ghana peak loads were lower than the projected peak load of 2,278 MW representing a deviation of over 400 MW. The increase in the Ghana peak load was substantial compared to the peak load of 1,743.3 MW recorded in July 2016 but lower than 1,885.5 MW recorded in June 2016 which was also substantially lower than projected. As a result of the consistent lower peak loads than expected, the Energy Commission has initiated a survey to ascertain the causes. The survey, which is intended to be comprehensive, will cover industries, commercial services and households.

Table 1 Projected and Actual Outturn of electricity supply and demand in August 2016

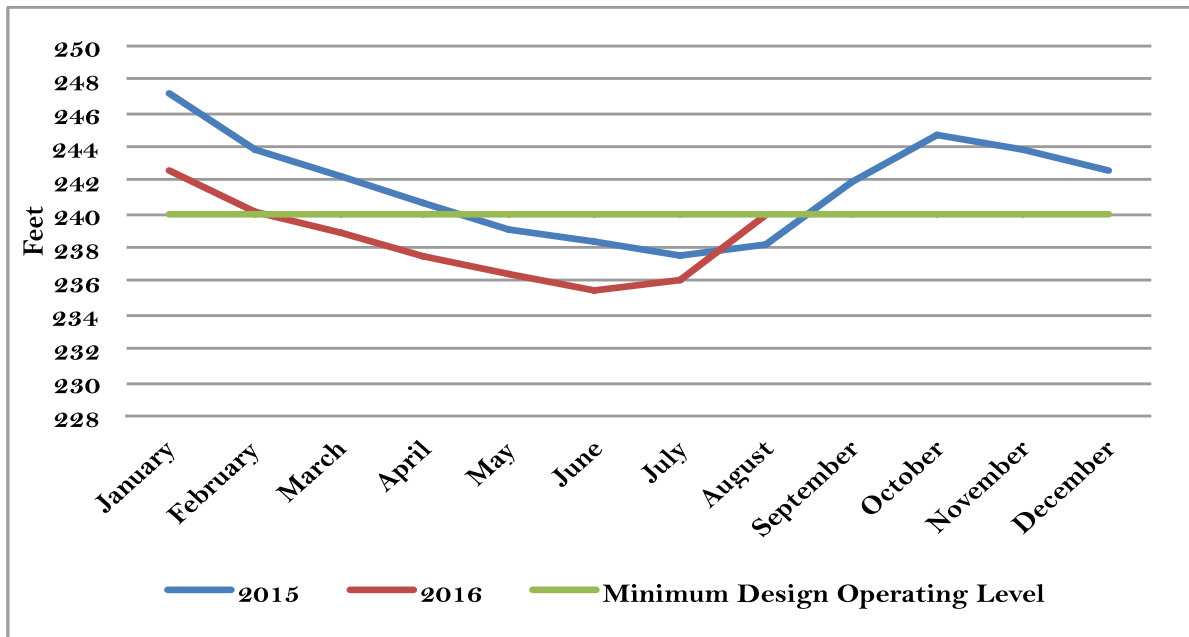
	August 2016	
	Projected	Actual Outturn
Total Demand (GWh)	1,364.0	1,058.2
Supply by Power Plant (GWh)		
Akosombo	278.0	236.8
Kpong	53.0	50.3
Bui	86.0	24.8
TAPCO	195.0	92.1
TICO	202.0	181.7
Sunon Asogli - Phase I	111.0	-
Sunon Asogli - Phase II	57.0	-
CENIT	43.0	42.4
TT1PP	40.0	59.1
TT2PP	-	-
MRP	-	-
KTPP	73.0	9.5
Ameri Energy	154.0	143.9
Karpowership	65.0	162.7
Trojan	-	-
Total Electricity Generation (GWh)		1,003.3
Imports (GWh)	-	54.9
Total Supply (GWh)	1,357.0	1,058.2
Deficit/Over supply (GWh)		(298.8)
% Reduction in Supply		22.0%
Ghana Coincident Peak Load (MW)	2,278.0	1,843.7
System Coincident Peak Load (MW)	2,278.0	1,867.9

HIGHLIGHTS OF THE MONTH

Akosombo dam water level continues recovery beyond the minimum design operating level in August 2016

The level of the Akosombo dam rose steadily to reach 240.38 feet at the end of August 2016. The good news is that, besides rising above the minimum design operating level of 240 feet, the water level at the end of August 2016 is higher than the level at the same time in August 2015 by about 2.16 feet. The continued rise in water level was impacted by adherence to the planned operation of the power station at 3 units coupled with increased water inflows following the rainy season in the catchment area. Indeed, the rise in the level points to significant improvement in the management of the lake for electricity generation. Figure 2 shows comparative trajectory of the Akosombo dam for 2015 and up to August 2016.

Figure 2: Month-End Water Level for Akosombo Dam from January 2015 to August 2016



Generally, Akosombo power station continued to be operated with caution, running on 2 turbine units at off-periods and 3 turbine units at peak and on few occasions at 4 turbine units at peak periods. The Akosombo power plant generated 236.8 GWh of electricity in August 2016 which was lower than the 276 GWh projected under the 2016 ESP. It was also lower than 251.2 GWh recorded in July 2016 representing a dip in production of about 5.7% between August 2016 and July 2016. Akosombo generated 22.4% of total electricity supplied in August 2016 slightly down from 26% in July 2016 and also contributed 365 MW and 466 MW (4 turbine units) to meet the system peak demand of 1,867.9 MW and the Ghana peak load of 1,843.7 MW recorded in August 2016 respectively.

Electricity generation from Bui Power Plant reduced in August 2016 as water level rises

Electricity production from the Bui Power Plant reduced from 35.6 GWh in July 2016 to 24.8 GWh in August 2016 representing a decrease of 30.3%, based on the daily average production in the two months. Thus the total electricity generated in August 2016 from the Bui power plant was significantly lower than the 86 GWh projected to be generated under the 2016 Electricity Supply Plan (ESP). The water level of the Bui dam continued rising to reach 563.2 feet at the end of August 2016, representing over 12 feet above the minimum operating level of 551 feet. The Bui power plant continued to operate with 2 turbine units at peak times in the month of August 2016 just as in July 2016. At its current water level, the Bui power station could operate 3 turbine units at peak times in the event of emergency. The Bui power plant generated 2.3% of total electricity supplied in August 2016 down from 4.75% in July 2016.

Sunon Asogli Power Plant did not generate electricity in August 2016

The severe difficulties with natural gas supplies from Nigeria which started in July 2016 continued in August 2016 as no gas was delivered to Ghana. As a result, the Sunon Asogli Power Plant (SAPP) whose operation relies primarily on natural gas did not generate any electricity even though it was projected under the 2016 ESP to generate 172 GWh in August 2016. Natural gas supply from Nigeria continues to pose a major challenge for electricity generation by power plants in Ghana in general and power plants in Tema and Kpone Power Enclaves, in particular.

CENIT operated fully in the month of August 2016

CENIT Power Plant operated consistently throughout August 2016 generating 42.4 GWh compared to 27.9 GWh in July 2016 when it operated for half of the month as a result of fuel supply difficulties. The electricity generated in August 2016 was slightly lower than the 43 GWh projected under the 2016 ESP.

HIGHLIGHTS OF THE MONTH

Ameri Energy Power Plant operated throughout August 2016

The power plant generated a total of 143.9 GWh of electricity in August 2016 compared to 95.5 GWh in July 2016, an increase of 48.4 GWh representing a 50.7% rise between July 2016 and August 2016. It was however lower than the 154 GWh projected for the month of August under the 2016 ESP. The lower electricity generation in August 2016 than projected was largely as a result of unscheduled maintenance on some of the units. The Ameri Energy power plant contributed 180 MW and 221 MW to meet system peak demand of 1,867.9 MW and Ghana peak load of 1,843.7 MW respectively. The power plant thus contributed 9.6% of system peak load in the month.

KTPP generation dipped significantly in August 2016

Electricity generated from the Kpone Thermal Power Plant (KTPP) dipped significantly in August 2016 to a total of 9.5 GWh compared to 54.7 GWh it produced in July 2016 representing a reduction of 80.6%. Electricity generation in August 2016 was also 86.9% lower than the 73 GWh projected under the 2016 ESP. The KTPP was operated virtually as a peaking plant on 5 days in the month of August 2016. While it contributed 85 MW, representing 4.6%, to meet system peak demand it was however not scheduled to meet the Ghana peak load in August 2016 as it produced electricity only in the first week of August 2016.

Karpowership decreased generation marginally in August 2016 as HFO price increase marginally

The Karpowership power plant generated 162.7 GWh in August 2016 compared to 160.3 GWh it generated in July 2016 and significantly above the projected generation of 65 GWh projected under the 2016 ESP. The power plant also contributed its full capacity of 225.9 MW to meet the system peak demand of 1,867.9 MW and 225.5 MW to meet the Ghana peak load of 1,843.7 MW. Thus the power plant was about 12% of the capacity of both the system demand and Ghana peak load in August 2016. Even though the price of Heavy Fuel Oil (HFO) increased marginally from US\$ 244.13 per metric tonne in July 2016 to US\$245.48 per metric tonne in August 2016, the average fuel cost of electricity production reduced slightly to US cents 4.39/kWh in August 2016 compared to US cents 4.45/kWh in July 2016. The reduction is attributable to improved heat rate of the power plant in August 2016.

TICO operated at maximum capacity in August 2016

The TICO power plant generated 181.7 GWh of electricity in August 2016 compared to 169.7 GWh in July 2016. This represented its highest monthly generation in the whole year except for January 2016 when it generated about 199 GWh. The total generation of 181.7 GWh in August 2016 was however lower than the 202 GWh projected under the 2016 ESP by only 10%. TICO operated largely in combined cycle mode, generating 285 MW to meet the August 2016 system peak load of 1,867.9 MW representing 15.3% but contributed its full capacity of 330 MW to meet the Ghana peak load of 1,843.7 MW representing 17.9%. The TICO power plant operated solely on light crude oil (LCO) consuming about 265,485 barrels of the fuel.

TAPCO continued to generate at half capacity

TAPCO generated a total of 92.1 GWh of electricity in August 2016 up from 55.1 GWh in July 2016. Even though the total electricity generated from TAPCO in August 2016 (92.1 GWh) was significantly higher than its production in July 2016, it was far lower than the projected amount of 195 GWh under the 2016 ESP. TAPCO generated 8.7% of total electricity supplied in August 2016. All of TAPCO's electricity generation in August 2016 was from natural gas and contributed 156 MW to meet system peak demand but was not scheduled to meet the Ghana peak load.

TT1PP increased electricity generation in August 2016

The Tema Thermal 1 Power Plant, (TT1PP) operated throughout August 2016 and generated about 59 GWh compared to 28.7 GWh in July 2016 representing an increase of 106% and also higher than the projected generation of 40 GWh under the 2016 ESP. The power plant operated solely on LCO consuming about 678,202 barrels of LCO. TT1PP produced 5.6% of total electricity supplied in August 2016 and contributed 111 MW to meet system peak load and 109 MW to meet the Ghana peak load.

No natural gas supplies from WAGPP in August 2016

There was no natural gas supplies from the West African Gas Pipeline Project in August 2016 after it was halted in July 2016 leading to the complete curtailment of 380 MW of power from the SAPP which runs solely on natural gas.

Natural gas supplies from GNGC to the Aboadze Power Enclave increased in August 2016

Daily average natural gas supply from the Atuabo Gas Processing Plant to the Aboadze Power Enclave increased from 62 MMSCF per day in July 2016 to 70.7 MMSCF per day in August 2016 even though it remained lower than potential maximum capacity of 100 MMSCF per day. Of the total 1,959 MMSCF of natural gas consumed in August 2016 at the Aboadze Power Enclave, the Ameri Energy power plant and the TAPCO power plant consumed 64.3% and 45.7% respectively as the TICO power plant was operated only on light crude oil (LCO) in August 2016.

Electricity imports increases further in August 2016

Electricity imports from La Cote D'Ivoire have increased consistently in 2016 even though it was projected, at the beginning of the year, that Ghana would be able to meet all its requirements without resorting to imports during the year. It is important to note that part of the imports are required to be wheeled to CEB of Togo/Benin on behalf of CIE of La Cote D'Ivoire but there have been periods when additional domestic generation have been required to make up for exports.

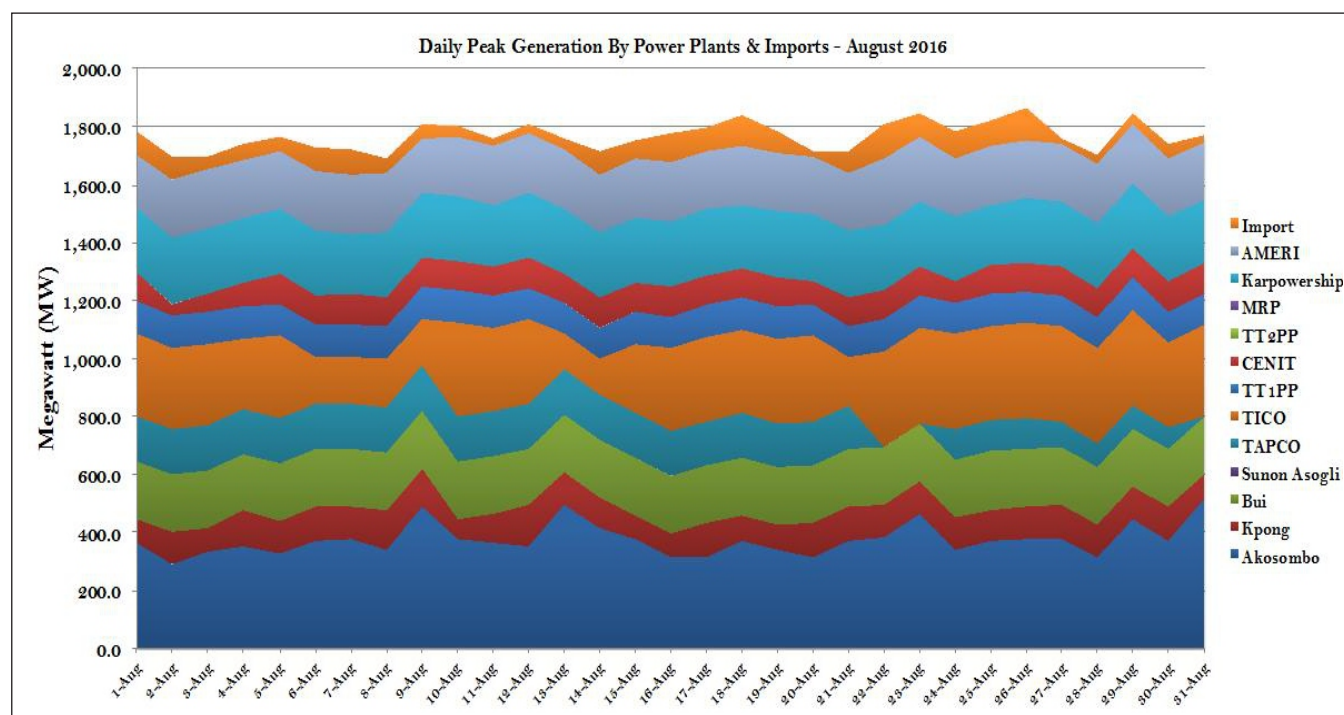
Electricity imports continue to rise reaching 54.9 GWh in August 2016 from 38.2 GWh in July 2016 representing an increase of about 43.7% over July 2016. Of the total imports of 54.9 GWh, 19.8 GWh, representing 36% was exported to Communaute Electrique du Benin (CEB). Electricity imports to meet daily peak demand in August 2016 ranged between 17 MW and 120 MW. Imports contributed 79 MW to meet the GRIDCo system peak load of 1,867.9 MW that occurred on 1st August 2016 and 80 MW to meet the Ghana Peak Load of 1,843.7 MW that occurred on 23rd August 2016. Of the largest import of 120 MW that occurred in August 2016, 85 MW was to meet Ghana's peak load and the rest of 35 MW was exported to meet CEB's peak load. The largest additional domestic generation at peak to support exports to CEB occurred on 12th August 2016 when out of the total exports to CEB of 64 MW, 33 MW was from domestic generating resources and the rest, 31 MW, was from imports.

OPERATIONAL FACT SHEET

Peak Electricity Supply (MW) - August 2016

Source of Supply	Week 1	Week 2	Week 3	Week 4	Maximum Non-Coincident Peak Generation	Generation at System Coincident Peak Load	Generation at Ghana Coincident Peak Load
Akosombo	376.0	497.0	378.0	519.0	519.0	365.0	466.0
Kpong	119.0	143.0	117.0	118.0	143.0	80.0	110.0
Bui	203.0	201.0	201.0	202.0	203.0	200.0	200.0
Sunon Asogli	-	-	-	-	-	-	-
TAPCO	156.0	154.0	155.0	108.0	156.0	156.0	-
TICO	285.0	326.0	293.0	332.0	332.0	285.0	330.0
TT1PP	112.0	111.0	110.0	109.0	112.0	111.0	109.0
CENIT	101.0	103.0	102.0	104.0	104.0	101.0	102.0
KTPP	85.0	85.0	-	90.0	90.0	85.0	-
TT2PP	-	-	-	-	-	-	-
MRP	-	-	-	-	-	-	-
AMERI Energy	205.4	206.1	204.5	227.6	227.6	180.0	221.2
Karpowership	225.9	225.6	225.4	226.3	226.3	225.9	225.5
Import	87.0	75.0	105.0	120.0	120.0	79.0	80.0
Trojan Power	-	-	-	-	-	-	-
System Coincident Peak Load	1,955.3	2,126.7	1,890.9	2,155.9	2,232.9	1,867.9	1,843.7
Ghana Coincident Peak Load	1,868.3	2,051.7	1,785.9	2,035.9	2,112.9	1,788.9	1,763.7

Daily Peak Generation By Power Plants & Imports - August 2016

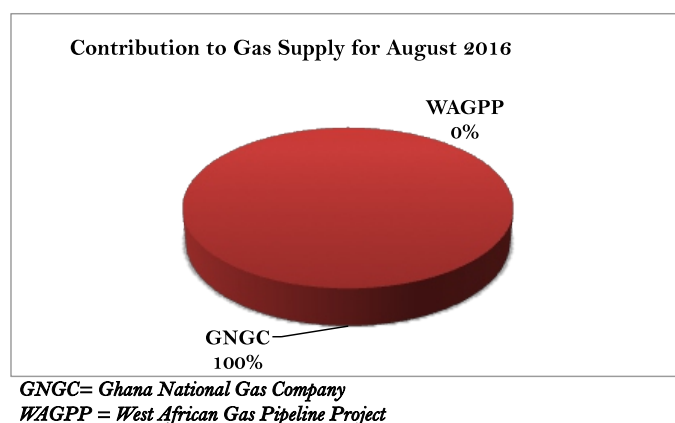
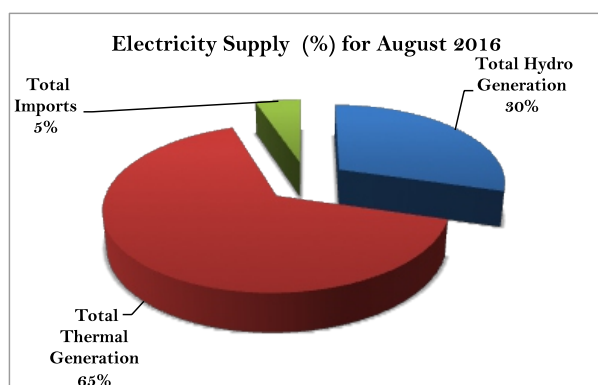


Ghana Electricity Demand for August 2016

Maximum Peak Load	MW	1,843.70
Minimum Peak Load	MW	1,661.60
Average Peak Generation	MW	1,739.34
Total Electricity Consumption	GWh	1,058.17
Load Factor (LF)	%	77.1%

OPERATIONAL FACT SHEET

Weekly Electricity Supply (GWh) - August 2016					
Power Plant	Week 1	Week 2	Week 3	Week 4	Total
Akosombo	48.9	56.0	51.3	80.5	236.8
Kpong	11.0	11.6	10.8	16.9	50.3
Bui	5.7	5.9	5.4	7.7	24.8
Sunon Asogli	-	-	-	-	-
TAPCO	25.3	23.9	25.3	17.7	92.1
TICO	37.3	32.9	41.0	70.6	181.7
TT1PP	13.3	15.1	10.8	19.9	59.1
CENIT	6.4	12.5	11.4	12.1	42.4
KTPP	9.1	0.4	-	-	9.5
TT2PP	-	-	-	-	-
MRP	-	-	-	-	-
AMERI Energy	32.3	31.0	32.0	48.6	143.9
Karpowership	36.7	37.4	36.1	52.5	162.7
Import	10.9	9.0	12.7	22.3	54.9
Trojan Power	-	-	-	-	-
Total electricity supply including imports	237.1	235.6	236.8	348.7	1,058.2
Total domestic electricity generation	226.1	226.6	224.1	326.4	1,003.3

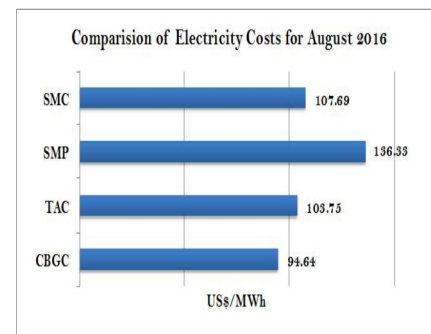


Average Gas Flow (MMSCFD) - August 2016					
Location	Week 1	Week 2	Week 3	Week 4	Monthly Average
Etoki	-	-	-	-	-
Tema	-	-	-	-	-
Aboadze	73.39	73.24	69.86	67.94	70.70

Water Level (ft) - August 2016					Change in water level
Hydro Dam	Week 1	Week 2	Week 3	Week 4	(feet)
Akosombo	236.12	237.35	237.88	240.38	4.26
Bui	554.02	555.11	556.85	563.21	9.19
Akosombo Minimum Design Operating Level	240.00	240.00	240.00	240.00	
Akosombo Maximum Level	278.00	278.00	278.00	278.00	

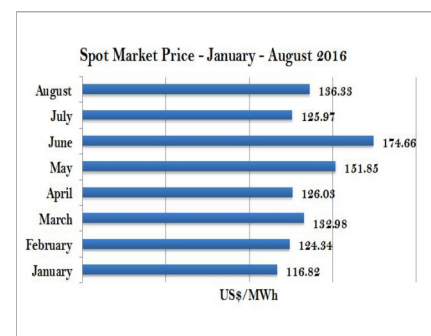
ECONOMIC FACT SHEET

Month at a Glance				
	Units	August 2016	July 2016	Change
Average Market Energy Cost	US\$/MWh	78.49	74.70	3.79
Average Market Capacity Charge (AMCC)	US\$/MWh	25.25	28.84	(3.59)
Total Average Market Cost (TAC)	US\$/MWh	103.75	103.55	0.20
System Marginal Cost (SMC)	US\$/MWh	107.69	95.77	11.92
System Marginal Capacity Charge (SMCC)	US\$/MWh	28.64	30.20	(1.56)
Spot Market Price (SMP)	US\$/MWh	136.33	125.97	10.36
Composite Bulk Generation Charge (CBGC)	US\$/MWh	94.64	94.64	(0.00)
Deviation of TAC from CBGC	US\$/MWh	(9.11)	(8.91)	(0.20)
Deviation of SMP from CBGC	US\$/MWh	(41.69)	(31.33)	(10.36)



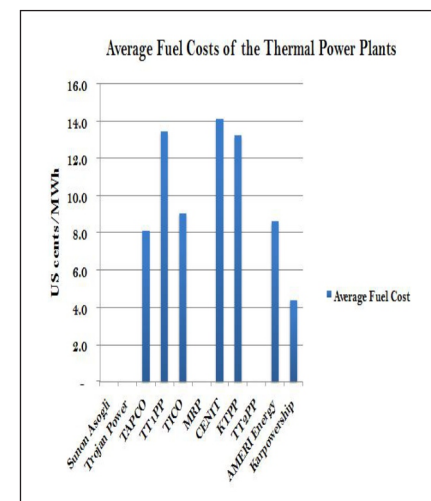
CBGC = Composite Bulk Generation Charge; SMC = System Marginal Cost; SMP = Spot Market Price

Power Plant	Maximum Non-Coincident Peak Generation (MW)	Plant Utilisation Factor (%)	Electricity Generation (GWh)	Gas Consumption (MMBTU)	LCO Consumption (MMBTU)	HFO Consumption (MMBTU)
Akosombo	519.00	61.32	236.76	-	-	-
Kpong	143.00	47.28	50.30	-	-	-
Sunon Asogli	-	-	-	-	-	-
Bui	203.00	16.43	24.82	-	-	-
Trojan Power	-	-	-	-	-	-
TAPCO	156.00	79.38	92.13	811,089.63	-	-
TTIPP	112.00	70.92	59.10	-	678,202.10	-
TICO	332.00	73.57	181.73	-	1,404,655.56	-
MRP	-	-	-	-	-	-
CENT	104.00	54.75	42.36	-	511,797.98	-
KTPP	85.00	15.04	9.51	-	-	-
TT2PP	-	-	-	-	-	-
AMERI Energy	227.60	84.99	143.91	1,463,141.48	-	-
Imports	-	-	54.88	-	-	-
Karpowership	225.90	92.00	162.67	-	-	1,310,384.97
Total	2,107.50		1,058.17	2,274,231.11	2,594,655.64	1,310,384.97



Spot Market Price = SRMC of Energy + SRMC of Capacity

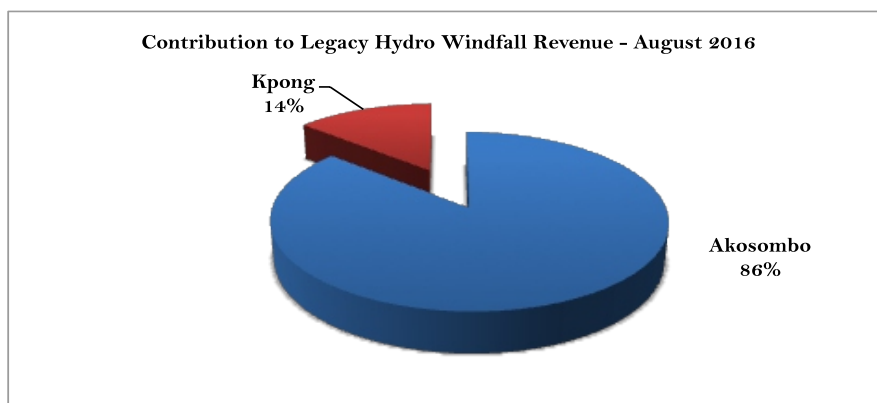
	August 2016	July 2016	Change	
Total Thermal Power Plants Fuel Cost	US\$	58,579,440.34	46,868,098.31	11,711,342.03
Average Thermal Power Plants Fuel Cost	US\$/MWh	78.49	74.61	3.88



Legacy Hydro Windfall Revenue for August 2016				
Power Plant	Average Cost (US\$/MWh)	Average SMP (US\$/MWh)	Difference (US\$/MWh)	Windfall Revenue (US\$)
Akosombo	33.10	136.33	103.23	24,439,747.68
Kpong	59.20	136.33	77.13	3,879,429.29
Total				28,319,176.97

SMP = Spot Market Price

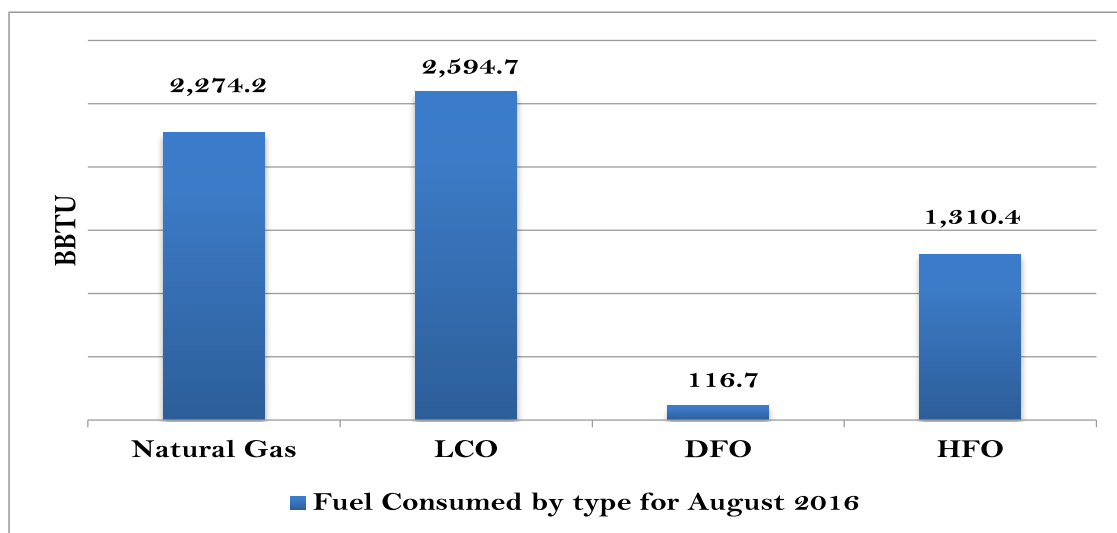
Average Fuel Prices		
Fuel Type	Unit	Delivered Cost
Natural Gas	US\$/MMBTU	8.72
LCO	US\$/BBL	63.60
HFO	US\$/Tonne	245.48
DFO	US\$/Tonne	400.05



1. LCO dominates fuel-supply mix for electricity generation in August 2016

Light crude oil (LCO) contributed 41.6% of fuel used in power generation by the thermal power plants in August 2016. Natural gas contributed 35.5%, HFO about 21% and then DFO 1.9%. About 54% of total LCO supplied in August 2016 was consumed within the Aboadze Power Enclave by TICO power plant and the rest (44%) was consumed in the Tema Power Enclave by TT1PP and CENIT power plants. Figure 1.1 shows fuel consumption for electricity generation by the thermal power plants in August 2016.

Figure 1.1 Fuel consumption mix for electricity generation in August 2016.



Natural gas supply from the West African Gas Pipeline Project (WAGPP) was curtailed completely in August 2016. Natural gas supply from GNGC was continuous throughout the month of August 2016 but at a reduced rate owing to technical challenges with gas production at the Jubilee Field. Average gas supply from GNGC to the Aboadze Power Enclave for August 2016 was 70.7 MMSCf per day which represents about 70% of the potential dependable daily supply capacity of 100 MMSCf per day. Out of the total gas supply of 1,959 MMSCF (2,274 Billion BTU) in August 2016 to the Aboadze Power Enclave, about 64% was consumed by the Ameri Energy power plant and the rest (46%) was consumed by TAPCO power plant. In August 2016 TAPCO power plant operated solely on natural gas. Owing to the diminished supply of natural gas to the Aboadze Power Enclave, the TICO power plant was run solely on LCO even though it could also be run on natural gas.

All the Heavy Fuel Oil (HFO) consumed in August 2016 for electricity generation was used by the 225 MW capacity Karpowership power plant that is located in the Tema Port. The Karpowership power plant contributed 15.4% of total electricity supplied in August 2016 and also increased system reliability by providing fuel diversity being the only power plant operated on HFO.

In August 2016, 96.5% of total Distillate Fuel Oil (DFO) supplied was consumed by KTRPP for power generation while the rest (3.5%) was used as start-up fuel by TICO, TT1PP and CENIT who used LCO as the primary fuel for power generation.

2. Energy Commission 2nd Renewable Energy Fair reaffirms commitment to accelerated up-take of renewables in Ghana

The Energy Commission has reaffirmed its commitment to increasing the uptake of renewable energy in the energy supply mix of Ghana. This was clearly stated by the Chairman of the Energy Commission during the 2nd Renewable Energy Fair organized by the Commission from 9th – 11th August 2016 at the International Conference Center, Accra. The theme of the Fair was “Renewable Energy and Energy Efficiency: Accelerating Energy Access and Security.

A record number of participants attended the 2nd Renewable Energy Fair. The opening ceremony was attended by a number of dignitaries including the Honourable Marrieta Brew Appiah Oppong, Minister for Justice and Attorney General, Honourable Mona Quartey, Deputy Minister for Finance, Honourable Dr. Bernice Adiku-Heloo, Deputy Minister for Environment, Science, Technology and Innovation, H.E. Mohammed Soleymoni, Ambassador of Iran to Ghana, Mr. Solomon Asoalla, Chief Director of Ministry of Power, and Dr. Kwame Ampofo, Chairman of the Energy Commission who was also the Chairman of the event. Over 2000 visitors attended the Fair with about 58 companies exhibiting various renewable energy technologies and associated products. The technologies included solar PV, clean cooking solutions as well as energy efficiency solutions and products. Thirty-one (31) technical presentations were made during the Fair while a visit was organized for participants to a Renewable Energy Mini-Grid installation at Peditorkope, an island community on the Volta River.

Three days of fruitful discussions included technical sessions on the following areas were held:

- (i) National Rooftop Solar Programme;
- (ii) Energy Efficiency as a tool for development;
- (iii) Productive uses of renewable energy;
- (iv) Improved cookstoves and alternative fuels;
- (v) Biogas technology; and
- (vi) Innovations in renewable energy and energy efficiency

The success of the Fair is amply illustrated by the interests expressed by some Embassies in Ghana to partner the Energy Commission in organizing the next Renewable Energy Fair.

3. Planning in a Liberalized Power Market – The Case of Ghana

Planning in a liberalized power market is fundamentally different from the monopolized markets in several respects. In the monopoly power market, where a single state-owned utility company is responsible for carrying out all the functions of power generation and supply, planning is primarily the function performed by the state-owned monopoly to meet all its requirements. Planning, in reality, is done from the perspective of the monopolist firm whose interest may not coincide, necessarily, with the national interests. Regulatory oversight in monopoly environments is usually invested in the political administration whose political interests are imposed on the state-owned utility's planning and operational functions.

In a liberalized market with many players or actors including multiple power suppliers both private and state-owned across the value chain, the appropriate architecture for planning is to give the responsibility of overall planning to a neutral entity that provides indicative planning to guide the development of the sector at the national level.

The liberalized market architecture was embraced as the preferred model in Ghana in 1997 following from the Power Sector Reform (PSR) programme whose primary objective was to ensure reliable and efficient power supply by encouraging private sector investments and participation in all aspects of electricity delivery through the creation of competitive environments along the value chain wherever feasible.

The planning landscape in Ghana changed following the legislation of power sector reforms. Besides creating a new regulatory environment, the coordination of power sector planning has been re-orientated towards international good practice. The establishment of the Energy Commission under the PSR has been towards achieving the requisite coordination in the delivery of policy and strategic planning outputs of energy sector in general including the power sector. Indeed, the need for such coordinated planning responsibility was amply emphasized, as far back as in 1992, by the World Bank in a report on Ghana titled – Ghana Energy Sector Review: Issues and Options. The report observed, among other things, that the *“overall forecasting efforts by the various parties involved over recent years have been rather loosely coordinated and, frequently, ad hoc in approach, resulting in a composite ECG/VRA forecast which lacks methodological consistency. With the profusion of forecasts in circulation – in both original and modified form – the utilities and the Ministry of Energy had yet to agree in mid-1991 on which (if any) of the various reports constituted the latest or the most widely-accepted position.”*

This observation amply describes the current situation in the power sector even after the establishment of the Energy Commission with a primary responsibility to cure this ill. Besides the constitutional mandate of regulating and management of the utilization of Ghana's energy resources, one of the key function of the Energy Commission as provided for in the Energy Commission Act 541 is to *“prepare, review and update periodically indicative national plans to ensure that reasonable demands for energy are met.”* The function of the Energy Commission regarding planning for the power sector in the context of the liberalized power market in Ghana is made amply clear by the law as encapsulated in the provision in the Energy Commission Act 541. Indeed, out of the eight (8) functions of the Energy Commission as contained in the Energy Commission Act 541, four (4) of them are related to planning and policy advise to the Minister responsible for Energy.

Since then, the Energy Commission prepared and published the Strategic National Energy Plan (SNEP) I in 2005 covering the planning period 2006 to 2020. The SNEP I, which sort to provide the necessary coordinating platform for energy planning in Ghana, made several recommendations for the smooth development of the energy sector in general and the power sector in particular. It is sad to observe that the power sector continued to be challenged even though such a strategic planning space had been created. Ironically the challenges facing power sector, in the past decade, can be attributed to the lack of coordination in the sector. It is also sad to say that the difficulties that have plagued the smooth development of the power sector since the inception of the SNEP I have been occasioned by the fact that some major stakeholders in the energy sector have stuck to the old planning routine and therefore find it difficult to let their previous roles diminish.

It is desirable that the institutional obstacles limiting the implementation of planning and development of the energy sector are addressed dispassionately. While the platform for better coordination of the sector has been developed, it is important for all stakeholders to *“allow the system to work”*. In that regard, the requisite policy implementation climate needs to be created for the system to work as legislated.

Acronyms

Btu = British Thermal Units
CEB = Communauté Electrique du Benin
ECG = Electricity Company of Ghana
GNGC = Ghana National Gas Company
GHp = Ghana Pesewa
HFO = Heavy Fuel Oil
LCO = Light Crude Oil
MMscf = Million Standard Cubic Feet
PSR = Power Sector Reforms
SNEP = Strategic National Energy Plan
WAGPP = West African Gas Pipeline Project
WEM = Wholesale Electricity Market

CBGC = Composite Bulk Generation Charge (gazetted by the PURC)
DFO = Distillate Fuel Oil
ESP = Electricity Supply Plan
GoG = Government of Ghana
GWh = Giga-watt Hours
kWh = Kilo-watt hours
MW = Megawatt
MWh = Mega-watt hours
SAPP = Sunon Asogli Power Plant
VRA = Volta River Authority

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