

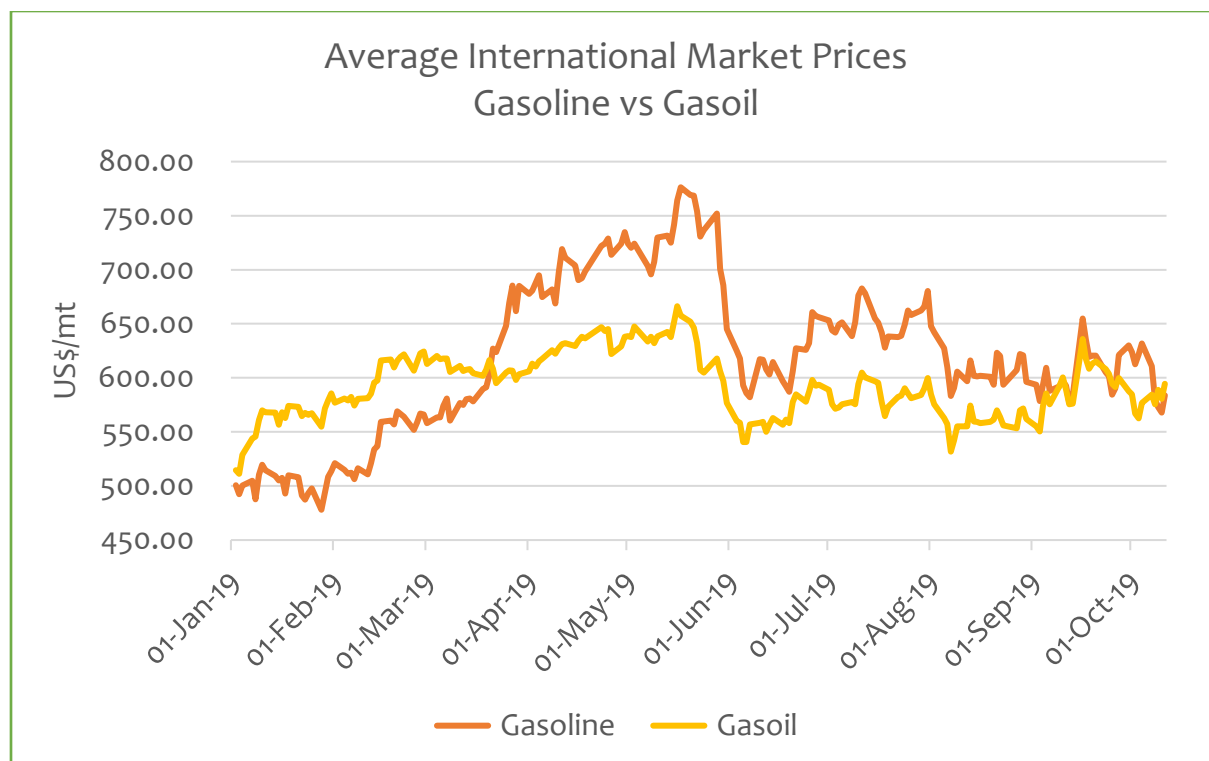


CBOD PETROLEUM PRICE OUTLOOK

16th -31st October 2019

Refined Products Review and Outlook

The international market prices of gasoline and gasoil for the second pricing window of October (27th September to 11th October) averaged \$605.11/mt and \$582.02/mt respectively. This was 1% (\$3.37/mt) and 4% (\$21.62/mt) lower for gasoline and gasoil respectively relative to the previous pricing window (12th September to 26th September). Prices for gasoline and gasoil fell as a result of a restoration in market speculation caused by the attacks on Saudi Aramco's oil processing facilities which saw prices rise in the previous window. Prices for the second pricing window of October (27th September to 11th October) were 20% and 7% higher than average prices observed in the beginning pricing window of the year.



Fufex

The Fufex30¹ which is a 30-day forward Ghs/USD FX rate for the petroleum downstream industry is estimated at **Ghs 5.60/USD** for the second pricing window of October (27th September to 11th October 2019). The FufeX30 is estimated using the average quoted indicative forward forex rate from major oil financing banks adjusted by the covered-interest parity pricing model and the CBOD internal research outlook.

On 1st October, 2019, the Bank of Ghana announced a foreign exchange forward rate auction limited to 7-day, 15-day, 30-day, 45-day, 60-day and 75-day tenors. According to the Bank of Ghana, the purpose of the multiple price forward FX auctions is to aid price discovery, deepen the FX market and reduce uncertainty on the future availability of the FX to meet the FX need of the banks' clients.

¹ The FufeX30 is a 30-day Ghs/USD forward fx rate used as a benchmark rate for BDC ex-ref price estimations.

This initiative will definitely improve price discovery and reshape the FufeX30 estimation structure. Its exact impact on the FufeX30 will be determined after the first round of auctions expected to take place on the 15th of October 2019.

The Auction Calendar for Forward Foreign Exchange Auctions to be held in the fourth quarter of 2019 are as follows:

Month	Date	Volume Target (USD)
October	15th October,2019	USD25,000,000
	29th October,2019	USD25,000,000
November	12th November,2019	USD25,000,000
	26th November, 2019	USD25,000,000
December	10th December, 2019	USD25,000,000
CUMULATIVE AUCTION TARGET		USD125,000,000.00

Source: Bank of Ghana

<https://www.bog.gov.gh/wp-content/uploads/2019/10/201910-Notice-for-Publication-of-Forex-Forward-Auctions-Calendar-for-Q-4-2019.pdf>

The Ex-refinery Price Indicator (Xpi)

The Ex-ref price indicator (Xpi) is computed using the referenced international market prices usually adopted by BDCs, factoring the CBOD economic breakeven benchmark premium for a given window and converted from USD/mt to Ghs/ltr using the FuFeX.

$$XPI = \frac{(\text{International Market Price} + \text{CBOD Benchmark Premium}) \times \text{FuFeX}}{\text{Conversion Factor}}$$

Ex-ref Price for 27th September to 11th October 2019

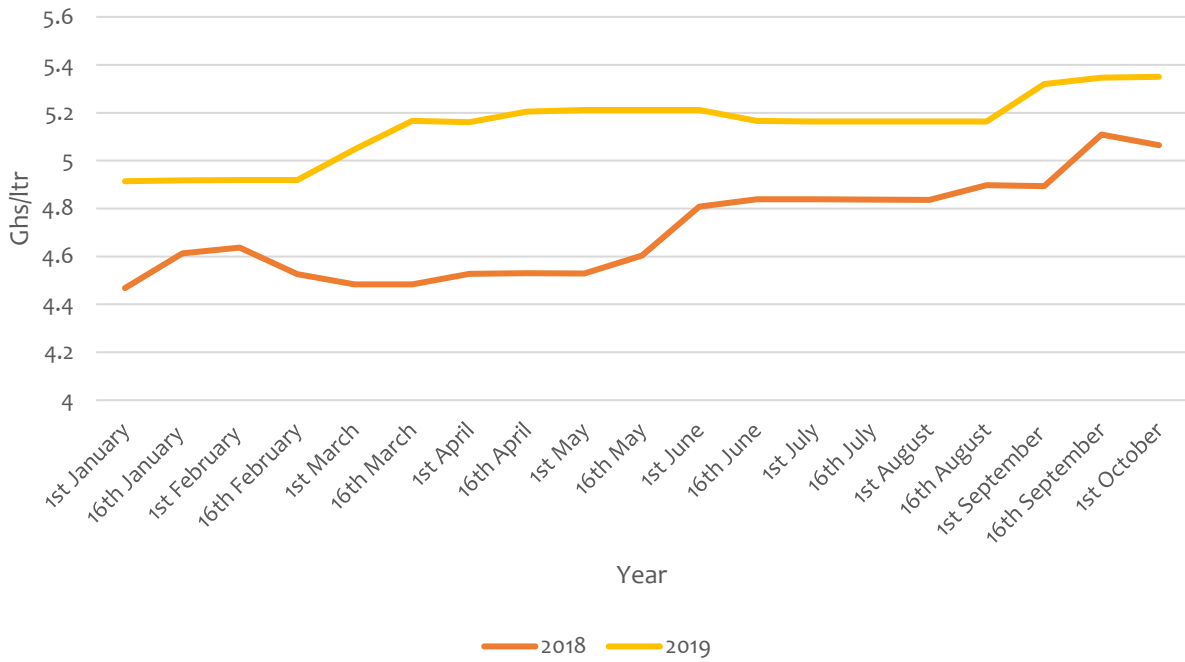
PRICE COMPONENT	PMS	AGO
Average World Market Price (US\$/MT) 27 th September to 11 th October Pricing window	605.11	582.02
CBOD Benchmark Breakeven Premium (US\$/MT)	90	90
FuFex30 (GHS/USD)	5.60	5.60
Volume Conversion Factor (ltrs/mt)	1324.50	1183.43
Ex-ref Price (Ghs/ltr)	2.939	3.180
Price Tolerance	+1%/-1%	+1%/-1%

OMC Pricing Performance

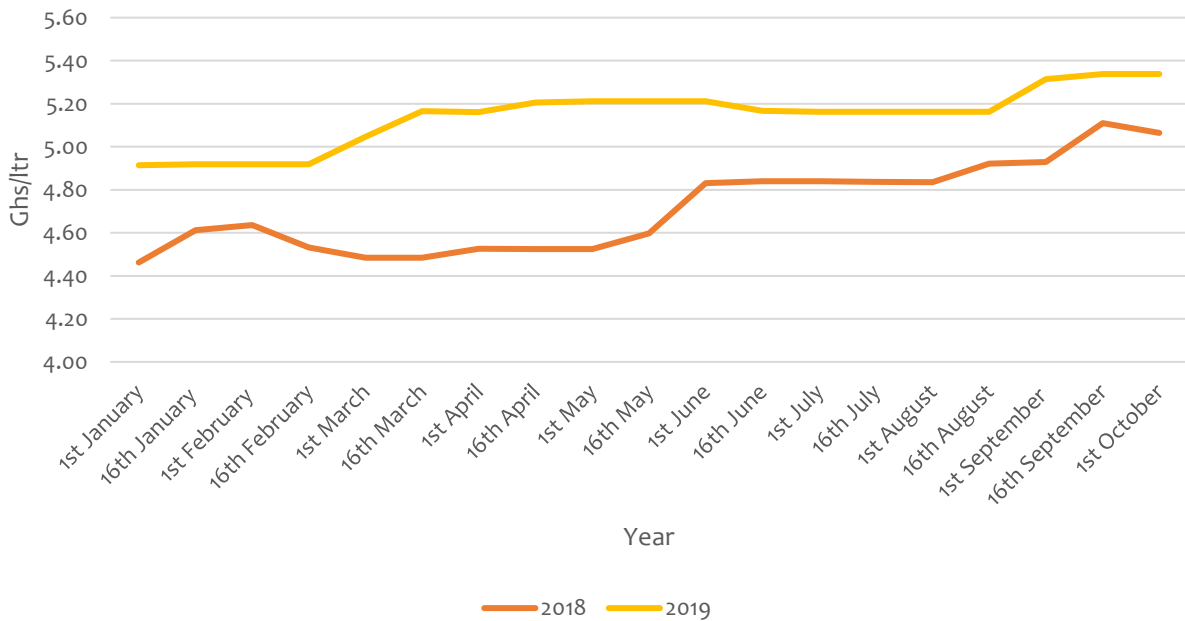
The average ex-pump prices for gasoline and gasoil for the first selling window of October (1st to 15th October) were up by 0.12% and 0.01% respectively from Ghs5.346/ltr to Ghs5.353/ltr for gasoline and Ghs5.337/ltr to Ghs5.338/ltr for gasoil. Average ex-pump prices of gasoline and gasoil have increased by 9% year-to-date, compared to the 13% increase same period last year and a year-on-year increase of about 5% for gasoline and gasoil respectively.

Ex-pump prices for gasoline and gasoil are expected to decrease by about Ghp1/ltr and Ghp10/ltr respectively in the next selling window (16th to 31st October), all other things being equal, as a result of the changes in the international market prices of gasoline and gasoil.

2018 vs 2019 Average Gasoline Pump Price



2018 vs 2019 Average Gasoil Pump Price



OMC Pricing Performance

Out of the top 10 OMCs, Vivo Energy Shell, Goil and Total displayed the highest prices at their pumps. For the first selling window of October (1st to 15th) the top three highest selling OMCs sold gasoline and gasoil at an average price of Ghs 5.383/ltr and Ghs5.370/ltr respectively. Frimps displayed the lowest price at the pump for both gasoline and gasoil, with a price of Ghs 5.320/ltr for gasoline and Ghs5.300 for gasoil at its pumps.

Average Ex-Pump prices for 1st to 15th October 2019 (Ghs/ltr)

OMCs	Gasoline	Gasoil
Vivo Energy Shell	5.385	5.385
Total	5.385	5.385
Goil	5.380	5.340
Star Oil	5.360	5.300
Petrosol	5.350	5.320
Radiance	5.350	5.320
Allied Oil	5.340	5.330
Glory Oil	5.339	5.379
Puma Energy	5.320	5.320
Frimps Oil	5.320	5.300

NB: Table is arranged in descending order, from the highest priced OMC to the lowest priced OMC

