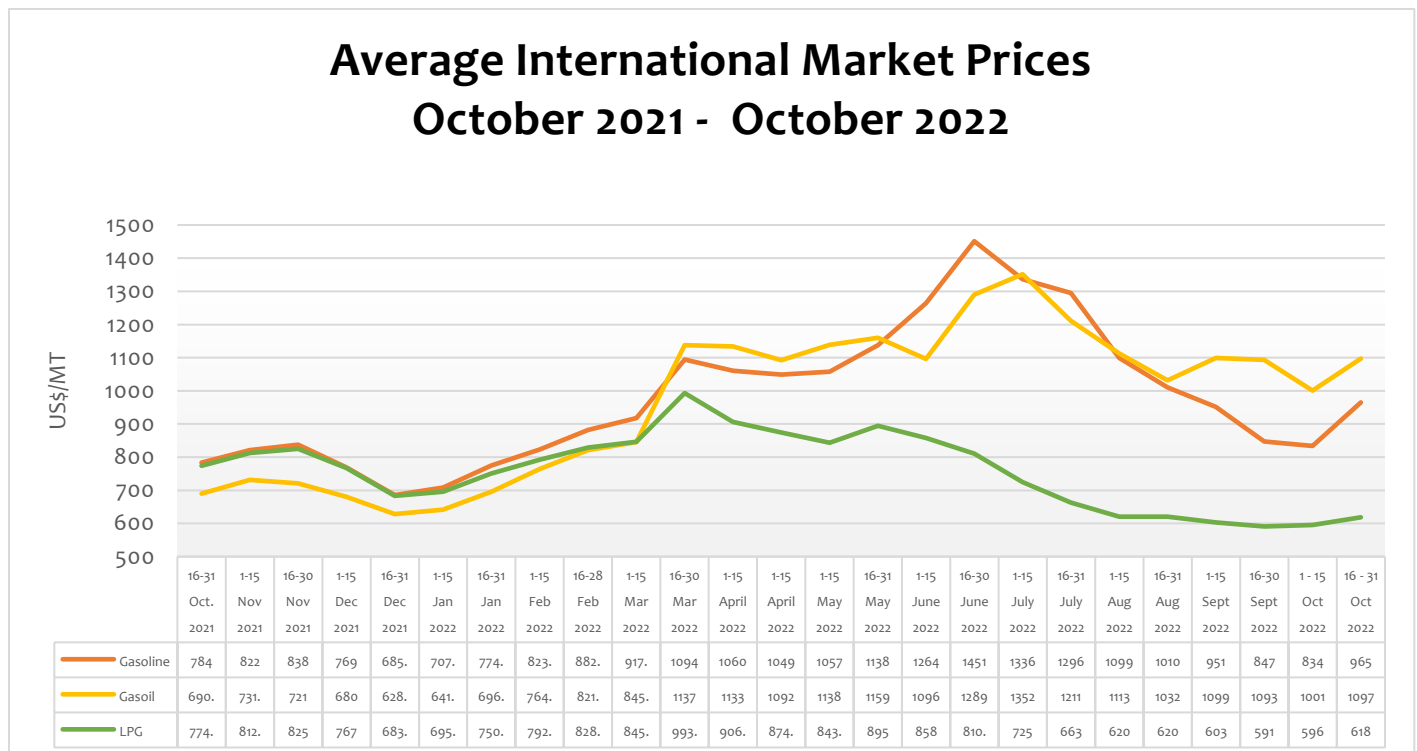


CBOD MARKET OUTLOOK

16th to 31st October 2022 Pricing Window

Refined Products Review and Outlook

The international market prices of refined petroleum products in the 27th September to 11th October 2022 international pricing window, which are premiums applicable to the selling window of 16th to 31st October 2022, surged significantly as petrol, diesel, and LPG prices ascended by 15.72%, 9.60%, and 3.81% respectively relative to the previous pricing window of 12th to 26th September 2022. Oil prices in the international market have been tumbling since it peaked in June 2022 amid concerns of a global economic slowdown and a stronger US dollar due to the rising interest rates in the US and Europe. The rise in the interest rate is expected to adversely impact the demand for petrol and diesel. However, the recent announcement by OPEC+ to slash production by about 2 million barrels per day, the largest reduction since 2020 has resulted in the recent hikes in the prices of petroleum products.



In absolute terms, the international market prices for petrol, diesel, and LPG rose from US\$833.68/mt, US\$1,001.05/mt, and US\$596.40/mt in the previous window to US\$964.75/mt, US\$1,097.18/mt, and US\$618.34/mt in the pricing window under consideration.

Due to the recent hikes in petroleum products prices at the international market, the year-to-date changes in the international market prices of petroleum products stand at 36%, 71%, and -11% for gasoline, gasoil, and LPG respectively.

Moreover, compared to the same period last year (27th September to 11th October 2021), the international prices of gasoline and gasoil are up by 23% and 59%, while that of LPG has tumbled by 20%.

FuFeX30

The Fufex30¹ is a 30-day forward GHS/USD FX rate for the petroleum downstream industry. It is estimated using the average quoted indicative forward forex rate from major oil financing banks adjusted by the covered-interest parity pricing model. The Fufex30 for the first selling window of October (16th to 31st October 2022) is estimated at GHS14.0000/USD, which is the weighted average of quoted indicative 30-day forward forex rate from major oil financing banks as monitored on the market and the Bank of Ghana FX auction rate to the BIDECS.

SUMMARY REPORT OF BANK OF GHANA FX AUCTIONS TO BIDECS		
Window	Percentage Offered	Auction FX Rate (GHS/USD)
1 st – 15 th Apr 2022	85%	7.3886
16 th – 30 th Apr 2022	50%	7.4995
1 - 15 May 2022	50%	7.5014
16 th – 31 st May 2022	29%	7.5547
1 st – 15 th June 2022	24%	7.6144
16 th – 30 th June 2022	21%	7.7451
1 st – 15 th July 2022	21%	7.9252
16 th – 31 st July 2022	27%	7.9756
1 st – 15 th Aug 2022	42%	8.2620
16 th – 31 st Aug 2022	29%	8.8192
1 st – 15 th Sept 2022	30%	9.7554
16 th – 30 th Sept 2022		9.8409
1 st – 15 th Oct 2022	50%	10.1716
16 th – 31 st Oct 2022	40%	10.7907

¹ The Fufex30 is a 30-day Ghs/USD forward fx rate used as a benchmark rate for BIDECS ex-ref price estimations.

The Ex-refinery Price Indicator (Xpi)

The Ex-ref price indicator (Xpi) is computed using the referenced international market prices usually adopted by BIDECS, factoring the CBOD economic breakeven benchmark premium for a given window and converted from USD/mt to Ghs/ltr using the *FuFex30*.

$$XPI = \frac{(\text{International Market Price} + \text{CBOD Benchmark Premium}) \times \text{Fufex30}}{\text{Conversion Factor}}$$

Ex-ref Price Effective 16th to 31st October 2022

PRICE COMPONENT	Petrol	Diesel	LPG
Average World Market Price (US\$/MT)	964.75	1,097.18	618.34
CBOD Benchmark Breakeven Premium (US\$/MT)	120	230	170
FuFex30 (GHS/USD)	14.0000	14.0000	14.0000
Volume Conversion Factor (ltr/mt)	1324.50	1183.43	1000
Ex-ref Price (Ghs/ltr)	11.4658/Ltr	15.7006/Ltr	11.0368/kg
Price Tolerance	+1%/-1%	+1%/-1%	+1%/-1%

Taxes, Levies, and Regulatory Margins

The National Petroleum Authority (NPA) reviewed the Unified Petroleum Pricing Fund (UPPF) Margin effective 16th August 2022 and advised Oil Marketing Companies (OMCs) and Liquefied Petroleum Gas Marketing Companies (LPGMCs) to apply the new margins in their price build-up effective 16th August 2022. Therefore, total taxes, levies, and regulatory margins for the 1st to 15th October 2022 selling window stood at Ghp244/ltr for petrol, Ghp242/ltr for diesel, and Ghp162/kg for LPG, accounting for 22%, 17%, and 15.0% of ex-pump prices of petrol, diesel, and LPG respectively for the 1st to 15th October 2022 selling window.

Window 1st to 15th October 2022

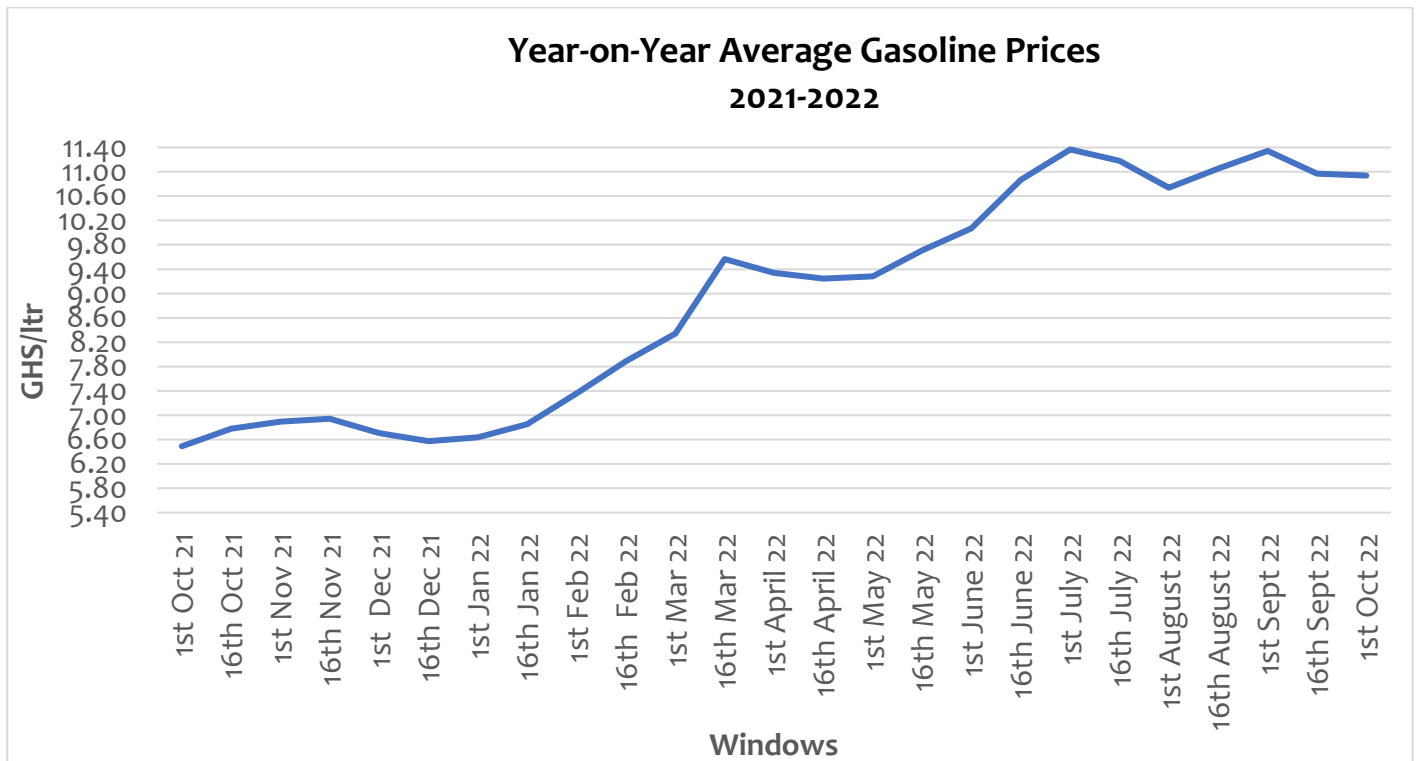
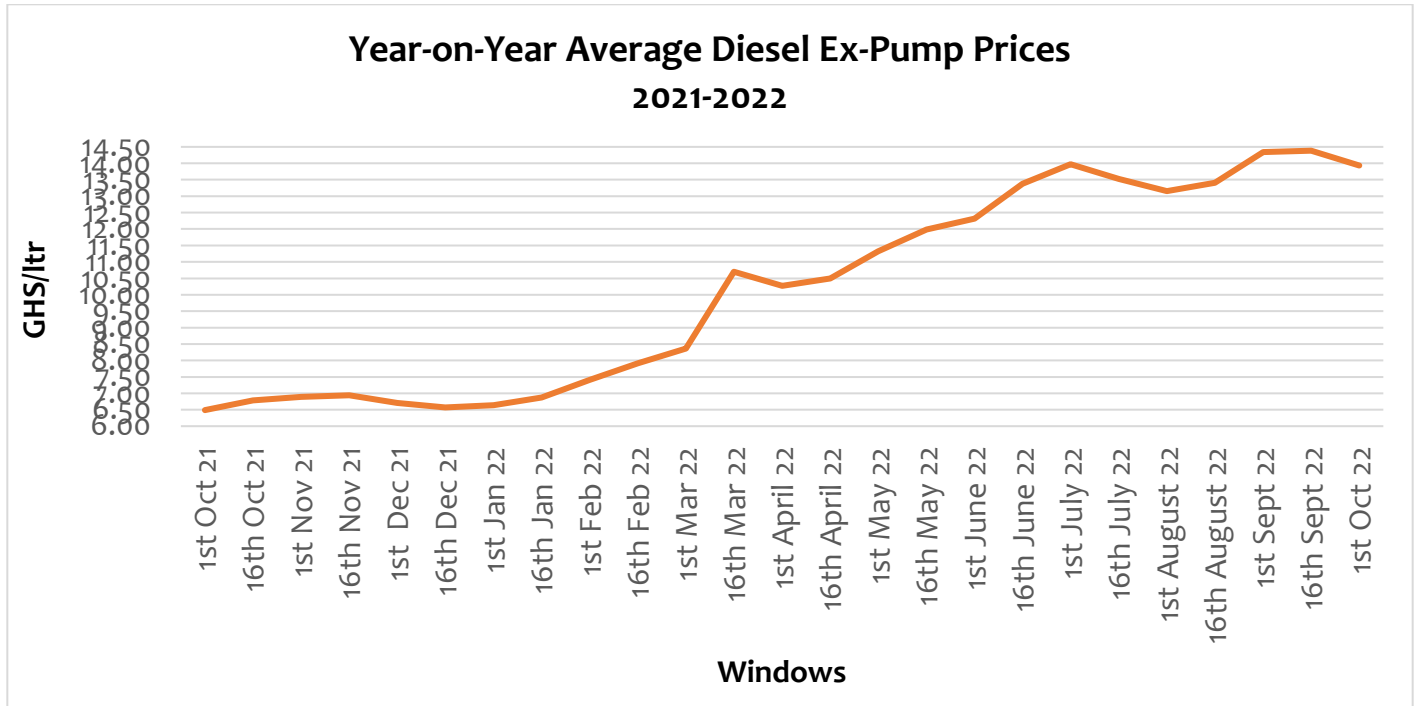
TRM Components	Gasoline (GHp/ltr)	Gasoil (GHp/ltr)	LPG (GHp/KG)
ENERGY DEBT RECOVERY LEVY	49	49	41
ROAD FUND LEVY	48	48	-
ENERGY FUND LEVY	1	1	-
PRICE STABILISATION & RECOVERY LEVY	16	14	14
SANITATION & POLLUTION LEVY	10	10	-
ENERGY SECTOR RECOVERY LEVY	20	20	18
PRIMARY DISTRIBUTION MARGIN	7	7	-
BOST MARGIN	7	7	-
FUEL MARKING MARGIN	4	4	-
SPECIAL PETROLEUM TAX	46	46	48
UPPF	36	36	36
DISTRIBUTION/PROMOTION MARGIN	-	-	5
TOTAL	244	242	162

OMC Pricing Performance: 1st to 15th October 2022

Pump prices for petrol and diesel within the 1st to 15th October 2022 selling window declined by an average of 0.3% and 3.3% respectively relative to the previous window (16th to 30th September 2022) pump prices. Because of the BOG's auction of \$60 million to the BDCs for the purchase of petroleum products, the GHS/USD exchange rate was relatively stable, which contributed to the drop in pump prices in the window. Furthermore, gasoline and diesel pump prices decreased because of the decline in petroleum product prices on the global market. The primary determinants of the Ex-refinery and Ex-Pump Prices are the GHS/USD exchange rate and the price of petroleum products on the global market. As a result, fluctuations in the GHS/USD exchange rate and global petroleum product prices directly affect the prices of petroleum products at the pumps in Ghana. Due to waning optimism about a worldwide economic recession and Chinese lockdowns associated with COVID-19, which are reducing fuel demand, gasoline prices are continuing to fall on the international market. The decision by OPEC+ to reduce supply, however, is likely to result in higher gasoline prices at the pump in the upcoming selling windows.

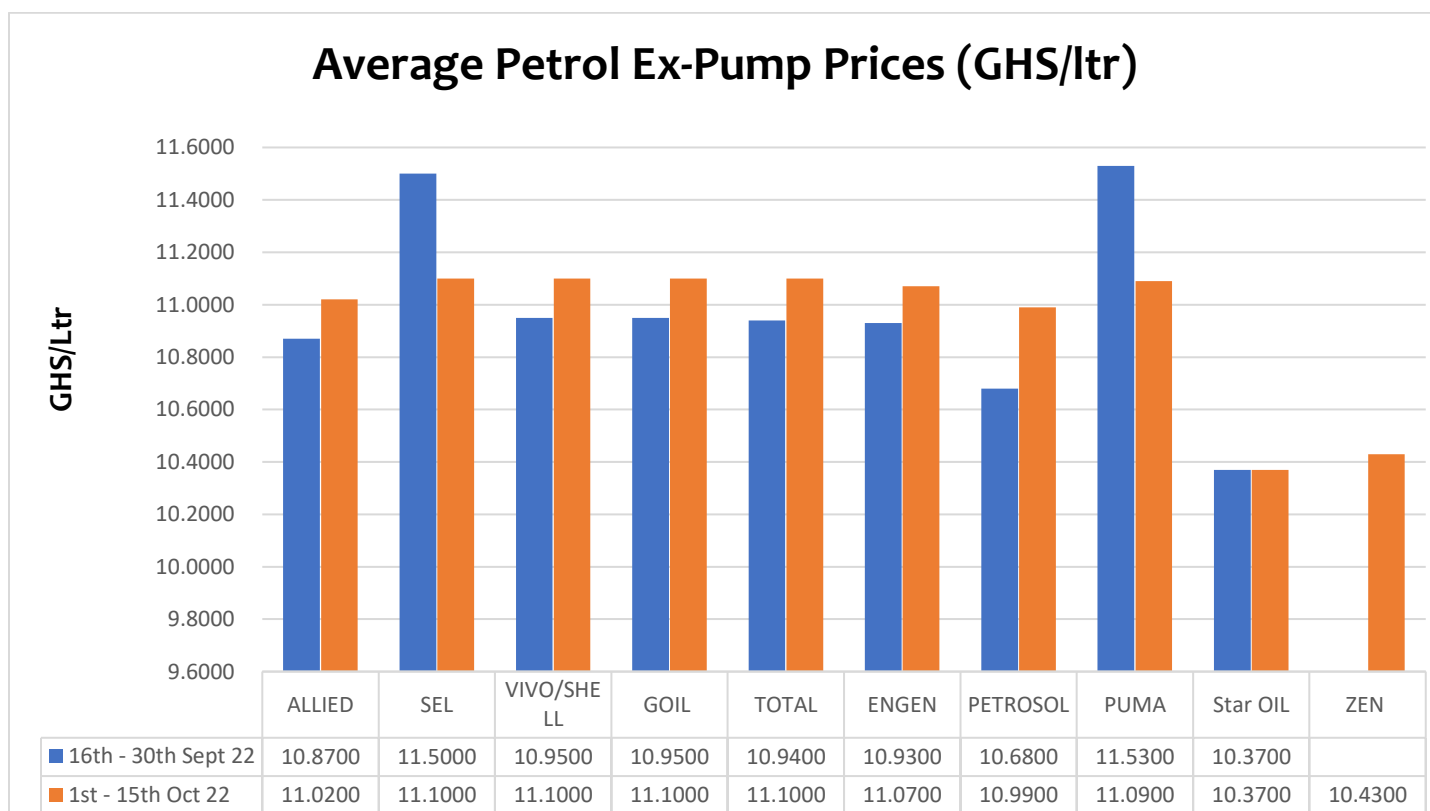
The pump price of petrol and diesel declined from an average of GHS10.9690/ltr and GHS14.3978/ltr in the previous selling window (16th to 30th September 2022) to GHS10.9370/ltr and GHS13.9290/ltr. On a year-on-year basis, pump prices of petrol and diesel experienced about 69% and 115% increases over the period. This is an indication that from the beginning of the year until now, the ex-pump prices of

gasoline and gasoil recorded an average of 65% and 110% increases respectively, with gasoline and gasoil prices both increasing from GHS6.637/ltr in the first selling window of 2022 (1st-15th January) to GHS10.937/ltr and GHS13.9290/ltr respectively in the first selling window of October 2022 (1st to 15th October).



Average Petrol Ex-pump prices (GHS/ltr)

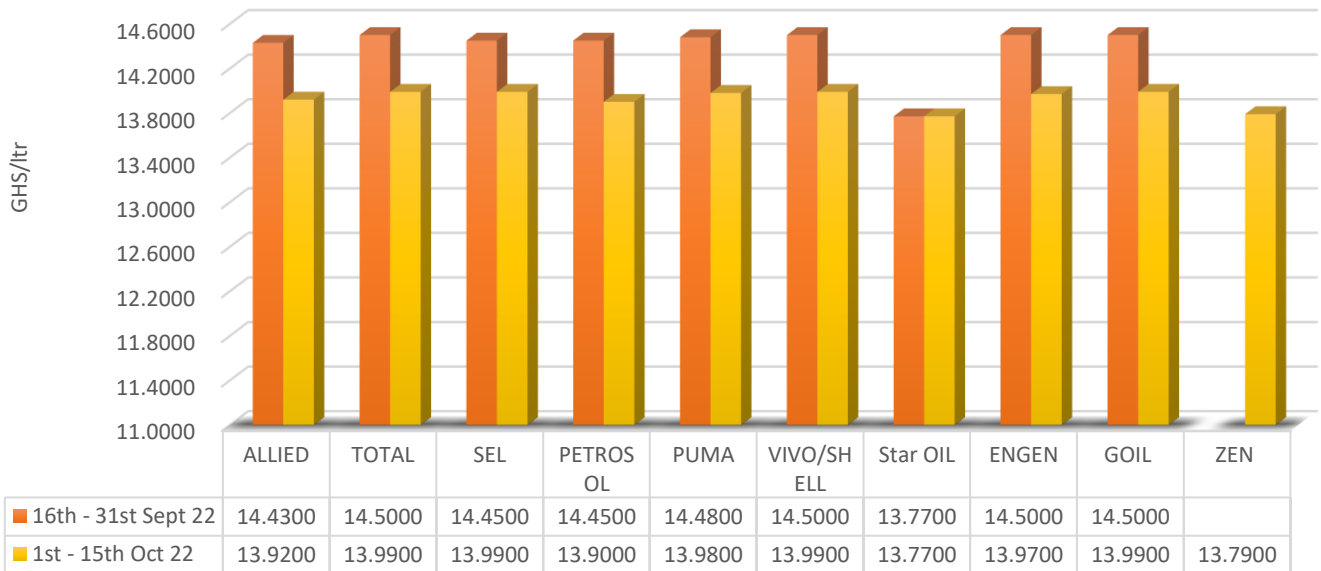
OMC	16th -30th Sept 22	1st - 15th Oct 22	% Change
ALLIED	10.8700	11.0200	1.4%
SEL	11.5000	11.1000	-3.5%
VIVO/SHELL	10.9500	11.1000	1.4%
GOIL	10.9500	11.1000	1.4%
TOTAL	10.9400	11.1000	1.5%
ENGEN	10.9300	11.0700	1.3%
PETROSOL	10.6800	10.9900	2.9%
PUMA	11.5300	11.0900	-3.8%
Star OIL	10.3700	10.3700	0.0%
ZEN		10.4300	
AVERAGE	10.969	10.937	-0.3%



Average Diesel Ex-pump prices (GHS/ltr)

OMC	16th - 31st Sept 22	1st - 15th Oct 22	% Change
ALLIED	14.4300	13.9200	-3.5%
TOTAL	14.5000	13.9900	-3.5%
SEL	14.4500	13.9900	-3.2%
PETROSOL	14.4500	13.9000	-3.8%
PUMA	14.4800	13.9800	-3.5%
VIVO/SHELL	14.5000	13.9900	-3.5%
Star OIL	13.7700	13.7700	0.0%
ENGEN	14.5000	13.9700	-3.7%
GOIL	14.5000	13.9900	-3.5%
ZEN		13.7900	
AVERAGE	14.3978	13.9290	-3.3%

Average Diesel Ex-Pump Prices (GHS/ltr)



Weekly Petroleum Stock

The total petroleum stocks available in the country at the beginning of the week, Monday 10th October 2022, comprised Gasoline, Gasoil, LPG, ATK, Kerosene, Premix, and RFO. The breakdown of the total stocks and expected weekly consumption in the country is presented below.

Product	Total Stocks (Million Lts)	Forecasted Weekly Consumption (Million Lts)	Week-to-Last	Cargoes at anchorage (Million Lts)	Week-to- Last including cargoes at anchorage
Diesel	287.7	53.0	5 weeks 2 days	0	5 weeks 2 days
Petrol	96.8	49.0	2 weeks	96.0	4 weeks
LPG*	14.9	7.5	2 weeks	0	2 weeks
ATK	41.6	5.0	8 weeks 2 days	0	8 weeks 2 days
Kero**	6.7	0.15	45 weeks	0	45 weeks
Premix	0.92	2.1	2 day	0	2 day
RFO	0.45	1.7	2 day	10.1	6 weeks 1 day

**LPG figures are in million kilograms *High Kerosene stocks are from previous productions by TOR / Woodfields*

Expected Cargoes in Week 41 (10th to 16th October 2022)

A total of about 95.96 million liters of gasoline are expected this week, as two (2) gasoline vessels are currently at anchorage ready to discharge. However, no gasoil vessel is expected this week.

Atuabo Gas Processing Plant

The Gas Processing Plant (GPP) at Atuabo is currently producing LPG at an average rate of about 311.85MT/day.

Tema Oil Refinery

The RFCC unit at TOR remains shut down due to reconstruction whiles CDU is also shut down due to a lack of Crude Oil.

Liquefied Petroleum Gas (LPG) Imports

There is no LPG vessel expected this week.

Fuel Oil Import

MT Bonito is currently at anchorage with 10,000 MT of Fuel Oil on Behalf of Maranatha Oil Services.

Aviation Turbine Kerosene (ATK) Imports

There is no ATK vessel expected this week.

Expected Cargoes in Week 41 (10th to 16th October 2022)

NO.	BIDEC	Laycan	Volume Diesel (Lts)	Volume Petrol (Lts)	Vessel Name	Status
2	TBC	Best Efforts	-	47,350,875	Sea Clipper	Anchorage
3	TBC	Best Efforts	-	48,609,150	Nave Equinox	Anchorage
Total			-	95,960,025		
Expected weeks to last			-	1 week		

Source: National Petroleum Authority