CBOD
GHANA CHAMBER OF BULK OIL DISTRIBUTORS

# 2023

## Ghana Petroleum Industry Report


2023
GHANA PETROLEUM
INDUSTRY
REPORT
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# Acknowledgment

The 2023 edition of the Ghana Petroleum Industry Report was prepared by a team of industry experts in the upstream and downstream petroleum sectors. The Ghana Chamber of Bulk Oil Distributors would like to acknowledge and appreciate the insightful contributions of the following:

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Excellent recommendations and extensive inputs were also received from, Board members, Government officials, Heads of Banks and other Petroleum Service Providers. Their diligence and assistance contributed immensely to making this report possible.

# List of Abbreviations and Definitions

| | | |
|---|---|---|
| **AfCFTA** | - | African Continental Free Trade Area |
| **ABB** | - | All Buoy Berth |
| **ABFA** | - | Annual Budget Funding Amount |
| **AGPP** | - | Atuabo Gas Processing Plant |
| **APD** | - | Accra Plains Depot |
| **BDC** | - | Bulk Distribution Company |
| **BoG** | - | Bank of Ghana |
| **BOST** | - | Bulk Oil Storage and Transportation |
| **BRV** | - | Bulk Road Vehicle |
| **COMPANIES ACT** | - | The Companies Act, 2019 (Act 992) |
| **CBOD** | - | Ghana Chamber of Bulk Oil Distributors |
| **CWM** | - | Cash Waterfall Mechanism |
| **CREPT** | - | Credit Rating in Practice |
| **DWCTP** | - | Deepwater Cape Three Points |
| **DWT** | - | Deepwater Tano |
| **ESLA** | - | Energy Sector Levies Act |
| **ESRP** | - | Energy Sector Recovery Programme |
| **FPSO** | - | Floating Production Storage and Offloading |
| **FOB** | - | Free on Board |
| **GHF** | - | Ghana Heritage Fund |
| **GIPC** | - | Ghana Investment Promotion Centre |

| | | |
|---|---|---|
| **GPS** | - | Global Position System |
| **GSF** | - | Ghana Stabilisation Fund |
| **IMP** | - | International Market Price |
| **INCOME TAX ACT** | - | Income Tax Act, 2015 (Act 896) |
| **IOC** | - | International Oil Company |
| **LPG** | - | Liquified Petroleum Gas |
| **MGO** | - | Marine Gasoil |
| **NPA** | - | National Petroleum Authority |
| **OCTP** | - | Offshore Cape Three Points |
| **OMC** | - | Oil Marketing Company |
| **OTC** | - | Oil Trading Company |
| **Petroleum Commission Act** | - | Petroleum Commission Act, 2011 (Act 821) |
| **PHF** | - | Petroleum Holding Fund |
| **PIAC** | - | Public Interest and Accountability Committee |
| **PITL** | - | Petroleum Income Tax Law 1987 (PNDCL 188) |
| **PPM** | - | Price Parity Margin |
| **PMS** | - | Premium Motor Spirit |
| **PRMA** | - | Petroleum Revenue Management Act, 2011 (Act 815) |
| **PSP** | - | Petroleum Service Provider |
| **RFO** | - | Residual Fuel Oil |
| **SPT** | - | Special Petroleum Tax |
| **UPPF** | - | Unified Petroleum Price Fund |
| **WAGP** | - | West African Gas Pipeline |
| **WCTP** | - | West Cape Three Points |
| **WTI** | - | West Texas Intermediate |

# Units

| | | |
|---|---|---|
| **BBLS** | - | Barrels |
| **BCF** | - | Billion cubic feet |
| **bn** | - | Billion |
| **GHS** | - | Ghana Cedis |
| **ltrs** | - | Litres |
| **mmscf** | - | milliion standard cubic feet |
| **mn** | - | Million |
| **mt** | - | Metric tonnes |
| **ppm** | - | Parts per million |
| **USD** | - | US Dollar |
| **$** | - | US Dollar |

# Executive Summary

The Ghana Petroleum Industry Report, produced annually by the Ghana Chamber of Bulk Oil Distributors (CBOD), provides comprehensive analyses and insights into Ghana's upstream and downstream sectors. The Report offers an extensive review of Ghana's upstream and downstream sectors, reviewing relevant policies and highlighting key industry trends and risks. The Report aims to equip industry players, policymakers, academics, and business leaders with the necessary information to make informed decisions regarding business, investment and policy.

The 2023 edition of the Ghana Petroleum Industry Report is organized into seven chapters, with the first three focusing on the upstream sector and the remaining four on the downstream sector.

Ghana's Upstream Petroleum witnessed a slower than expected recovery after the devastating impact of the Covid-19 pandemic outbreak. This sluggish recovery is the sector is highly attributed to the global shift from fossil fuels to green energy investments and programmes, the relatively small sizes of Ghana's oil blocks and the poor quality of exploration data. Experts in the industry also blames Ghana's inability to attract new investment into the upstream sector to lack of regulatory predictability manifested in what is described as capricious interpretation and application of rules and new fiscal impositions.

In line with the Ghana's National Energy Transition Framework (NETF) which was developed and unveiled in 2022 in response to the energy transition, the Ministry of Energy undertook steps to develop policies towards the attainment of the NETF's 2030 net-zero targets. The National Fuel Quality Policy (NFQP) followed a pre-feasibility study on biofuel supply and usage in Ghana. The aim of the NFQP is to considerably reduce products of incomplete combustion of fuel in vehicles, lifecycle greenhouse gas (GHG) emissions, particularly CO2, which have persisted and continue to rise alarmingly. The goal of the policy is to reduce carbon intensity from transport fuel by at least 5% per unit of energy by 2035, relative to average life cycle GHG emissions from fossil fuels in 2019. This will also phase out the use of MTBE as a gasoline additive and reduce gas flaring at extraction sites.

Ghana's climate is projected to become hotter and drier in the next few decades. Data shows that temperatures in Ghana have risen by approximately 1°C since the 1960s (an average increase of 0.21°C per decade) and are projected to increase between 1.4 - 5.8°C by 2080. This indicates a high likelihood that annual retail fuel temperatures in Ghana will continue to be warmer than NPA's new reference standard of 20°C. The Fuel Temperature Compensation Policy being developed by the Ministry aims to provide the framework for the development of guidelines, standards and regulations to build climate adaptability of activities related to fuel storage, distribution and use.

Due to improved efforts to increase LPG consumption in the country, about 40.2% of the national population uses LPG as a primary source for cooking while urban population's access to LPG also increased from 51.3% to 56.1%. Likewise in the rural population, the use of LPG increased from 14.8% in 2021 to 16.5% in 2023.

The number of BIDECs has risen by about 156% in a decade from 18 BIDECs in 2013 to 46 BIDECs in 2023.

The top 10 BIDECs imported about 80% of the petroleum products consumed in 2023. Although the number of OMCs reduced from 235 in 2022 to 201 in 2023, the trend shows that the number of OMCs has increased by about 69% from 2013 to 2023. The decrease in the number of OMCs in 2023 notwithstanding, the market share of the top 10 OMC declined from 65% in 2022 to 61% in 2023, indicating the sector is gradually becoming competitive.

The number of retail outlets has grown considerably since 2015, increasing from 3,038 in 2014 to 5,046 in 2023, representing an increase of 66%. Given the number of retail outlets and the total national consumption of petrol and diesel, the productivity of retail outlets dropped significantly by 22% in 2020 due to the decrease in consumption owing to the Covid-19 lockdowns.

Total national consumption of petroleum products rose by 6% in 2023 from 4.22 mn mt in 2022 to 4.49 mn mt. A total of 4.48 mn mt was consumed by the non-power sector representing 99.8% of the gross consumption while 0.2% was consumed by the power sector (fuel oil and gasoil for power). The 4.48 mn mt consumed by the non-power sector was a 6% increase from the 4.21 mn mt consumed in 2022, attributed to a relative decline in pump prices experienced in 2023 due to the stability of the cedi and the IMF bailout. Gasoil and Gasoline recorded increases of 4% and 7% respectively from 2022 to 2023.

The consumption of LPG increased from 305,076 mt in 2022 to 317,465 mt in 2023 representing an increase of 4%. The increase in consumption in 2023 is largely attributed to the general recovery in economic activities in 2023 compared to 2022. LPG consumption declined significantly in 2022 due to the surge in pump prices as a result of the cedi's depreciation in 2022. A cursory analysis of LPG monthly consumption vis-à-vis average monthly prices indicates that generally the relationship between LPG consumption and prices is inversely related. The price of LPG also increased by 84.6% from January to December 2022. This trend will most likely slow down the government's quest for a national LPG penetration goal of 50% by 2030.

The government's indebtedness to Premix Fuel suppliers had a significant toll on Premix Fuel supply in 2023, resulting in low consumption of the product. Consumption in 2023 declined by 13% from 2022.

A total of 174 OMCs/LPGMCs operated in 2023. Goil PLC continued its dominance in the market for the 9th consecutive year. Goil commanded 16% of the total market in 2023 compared to 20% in 2022. Star Oil moved to second from fifth in 2022, gaining 2.5% share in 2023 to 8.4%.

Go Energy continued to dominate the BIDECs space although its market share reduced from 20% in 2022 to 16% in 2023 due to a decline in its gasoil distribution. This could also be attributed to the impact of BOST in the importation of petroleum products through the G4O program.

The Greater Accra Region maintained its place as the largest consuming region with 1/3 of national consumption. This highlights the overconcentration of economic activities in the national capital. However, consumption in the Upper East, Upper West, and Northern regions recorded increases of 86%, 35%, and 32% respectively. This raises concerns about potential smuggling of petroleum products in these border regions.

Ghana witnessed a 59% increase in total refinery output in 2023, having recorded a 54% fall in 2022. The rise in local refinery output was mainly driven by the coming onstream in November 2023 of the Sentuo Oil Refinery.

Imports of crude oil and refined products increased significantly by 23% in 2023 from 2022. Total imports of crude oil and refined products reached 5.145mn mt in 2023 from 4.199mn mt in 2022. However, just a total of 314,234mt of refined products were exported in 2023, representing a rise of 8% from 2022 to Burkina Faso, Mali, Niger, and Togo. Of the total exports, Sonabhy transited 97% while the BDCs exported 3%.

The BOG auction to BIDECs was reviewed to US$40mn monthly from an average of about US$97mn monthly in 2022. This was an attempt by the BOG to increase its foreign exchange reserves which had declined in 2022 to 2.7 months of import cover. BOG's allocation to BIDECs declined by about 50% from about US$1,166mn in 2022 to US$578mn in 2023. The BOG auction rate depreciated by about 23% in 2023, from an average of GHS9.3450/USD to GHS11.4729/USD.

An analysis of the unaccounted stock position using official records of the NPA revealed that in 2023, about 284.14mn litres of gasoline delivered into the country were not accounted for and may have evaded Ghana's tax regime by about GHS551.23mn. The loss of this unaccounted stock is largely attributed to illegal activities in the sector despite the automation and other initiatives by the Regulator.

Some key recommendations in this report include.

- Bank of Ghana should increase the FX allocations to BIDECS through the special biweekly auction for petroleum product importation.
- The government should implement policies that will stabilize the Cedi to reduce pump prices of petroleum products.
- The government should remove the burdensome taxes and levies on LPG to promote affordability and increase LPG consumption.
- The NPA should implement policies that will promote the exportation of products by BIDECS to neighboring countries.
- Stakeholders should construct a pipeline to interconnect the private Depots with the Sentuo Oil Refinery.
- Government should remove the subsidy on premix and redirect the use of the funds of the subsidy to other social development projects in the fishing communities.

# Board of CBOD

**IVY APEA OWUSU**
*- Chairman*

Ivy Apea Owusu is the Chief Executive Officer of Cirrus Oil Services Limited. In this role, she has been instrumental in the successful implementation of the downstream sector deregulation policies and has also spearheaded a wide range of health and education related community activities. She has over 20 years' experience in the Energy Sector. An energy expert with over 20 years' experience in the energy sector, Ivy previously worked with GE Capital in the US and UK in Energy Structured Finance specializing in both Debt and Equity financing in the Oil & Gas, Power Generation, Renewable and Ancillary Energy Services Sectors.

Ivy is the board chairman for the Chamber of Bulk Oil Distributors (CBOD) and also sits on the boards of Woodfields Energy Resources Ltd and Legacy Bonds Ltd. She is a member of the Executive Women's Network and a Corporate Executive in Residence for University of Ghana Business School (UGBS) Department of Accounting. She served as a founding board member of the Women in Energy Ghana Board as well as an advisory board member of the 2019 Africa Oil Week in South Africa. Ivy has held numerous speaking engagements including Guest Speaker at the 2022 University of Ghana School of Humanities Graduation Ceremony, 2020 ABSA Bank Ghana International Women's Day, African Refiners Association South Africa and CWC Energy Ghana.

Ivy holds leadership certificates from both Harvard and Stanford Business Schools in the USA, an MBA from Vanderbilt University in TN, USA and a BA Admin (Accounting) from the University of Ghana, Legon.

Ivy has won numerous awards including the Exceptional Woman in Oil award at the 2021 Instinct Woman Awards and the 2018 Oil and Gas personality of the year at the GOGA Awards. In January 2022, she was named by African Shapers as one of the 100-outstanding female executives in the African Oil and Gas Industry.

Ivy is married with two children.

**PATRICK KWAKU OFORI, Ph.D.**

*- Chief Executive Officer*

Dr. Ofori assumed office as the Chief Executive Officer of CBOD on August 1, 2022. Prior to his appointment at CBOD, he was the Crude Product Marketing Manager at the Ghana National Petroleum Corporation, performing commercial negotiations on crude oil and gas, including negotiations with off-takers and trading houses, overseeing market research, trading, and branding to promote GNPC and Ghana Crude Oil. He also monitored the effective implementation of commercial agreements and ensured product-backed funding was adhered to. He previously worked as the GNPC's Institutional Reporting Manager, where he facilitated dialogue with the Corporation's business leaders and coordinated engagements with external agencies such as the Public Interest and Accountability Committee (PIAC), EITI, NRGI, International Finance Corporation (IFC) World Bank, and rating agencies. Also included developing and elevating strategic partnerships and engaging relevant stakeholders.

He has more than sixteen years of varied executive professional experience spanning Higher Education, Sports and the Oil and Gas industry.

He holds a Ph.D. in Sports Psychology from the University of Stirling, Scotland and an MSc in Accounting and Finance from the University of Ghana. He is a Commonwealth Scholar and an International Convention on Science, Education and Medicine in Sports (ICSEMIS) Scholar.

Dr. Ofori is also the Founding Head of the Department of Sports Science at the University of Cape Coast.

**GIFTY ASHILEY**

*- Member*

Gifty Ashiley is a Risk Analyst with over twelve years of experience in Oil and Gas Management. She currently serves as the Chief Risk and Compliance Officer for Juwel Energy Limited.

She holds an MBA in Finance from the University of Ghana Business School and a BSc in Mechanical Engineering from Kwame Nkrumah University of Science and Technology.

Her career spans a variety of roles in the Upstream and Downstream petroleum sectors, both locally and abroad, in companies such as Schlumberger, Oando PLC and GECAD Inc, partners of General Electric, USA.

**YVETTE AYELE SELORMEY**

*- Member*

Yvette Ayele Selormey is the Managing Director for Downstream at Sahara Energy Group. She manages three (3) Companies under the Group in Ghana: PWSL, SO Energy, and SO Aviation.

She has extensive experience in Marketing and Business Development with over 13 years' hands-on experience in crude oil and petroleum product marketing, purchasing, and trading in the Upstream and Downstream sectors.

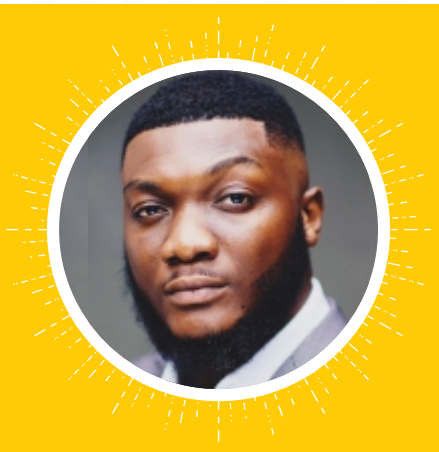
**NANA ADWOA S. KUMA-DUAH**

*- Member*

Nana Adwoa Serwaa Kuma-Duah is a Chartered Accountant with over 17 years' experience in finance and petroleum.

She is the Chief Finance Officer and Head of Stocks at the Tema Fuel Company Ltd.

She holds an MSc in Energy, Trade and Finance from Cass Business School, UK and a BSc in Accounting from the University of Ghana Business School, Legon.



**DAVID JONES-MENSAH**

*- Member*

David Jones-Mensah is the Managing Director of Dominion International Petroleum Limited and also serves as an Executive Director of the Sidalco Group of companies.

He holds LLB and LLM degrees in International and Commercial law (Oil & Gas specialist) from the University of Buckingham, UK and a Master of Science (MSc) degree in business management from Imperial College London.

**KINGSLEY SARPONG**

*- Member*

Kingsley Sarpong is an established Energy, Oil and Gas Professional with an extensive trajectory built on over ten years of commended industry experience.

His work experience prior to joining Chase Petroleum Ghana Limited in 2010 has been in Banking sales, Logistics Management, Travel and Tour Management and Broadcast journalism.

His career with Chase Petroleum Ghana Limited started as a Marketing Executive before he moved on to become the Head of Commercial. Today, Kingsley serves as the company's Managing Director. He has led the way on several reforms and structural changes in the company and introduced many of the newer business initiatives responsible for driving the company forward.

Ever the advocate for personal progression and holistic contributions to any given workforce, Kingsley has undertaken a plethora of development courses and seminars pertaining to the areas of Customer Relationship Management, Credit Control Management, Oil and Gas Trading and Operations, Solution Selling, Corporate Growth strategy, as well as having strengthened his approach to leadership as an alumni at institutions such as Sales Performance International, CITAC, Harvard Business School, Yale School of Management, Temple University and North- Eastern University.

Kingsley is a director on the board of Chase Petroleum, was recently elected board member of the Chamber of Bulk Distributors (CBOD).

He holds an EMBA in Marketing from the University of Ghana Business School and an MSc. in Economics - Energy and Natural Resource Economics (KNUST) a Postgraduate Certificate in Marketing (Central University College), and BSc. (Hons) in Physics from (KNUST).

He was awarded Global Excellence Business Leader Award in 2020 by Swiss School of Business and Management (SSBM).

**ELTON DUSI**

*- Member*

Elton Dusi is the CEO of Maranatha Oil Services Limited. He is a Chemical Engineer and an Entrepreneur with over 17 years experience in the oil and gas industry.

Prior to Maranatha, he served as the CEO of Ebony Oil & Gas and held managerial roles in Oando Ghana.

He holds an MBA from the Ghana Institute of Management and Public Administration (GIMPA) and a BSc. in Chemical Engineering from the Kwame Nkrumah University of Science and Technology (KNUST)

**YAW KODUAH-SARPONG**

*- Member*

Yaw is the Founder of NYKS Group Ltd. and has a background in Accounting, Finance and Taxation with over 18 years' experience in the Oil and Gas sector. He serves as CEO of SA Energy Ltd, an affiliate Bulk Distribution Company. He holds directorships in several companies including Paradise Havens Estate Ltd, Ladybird Logistics Ltd and Transroyal Commodities Ltd.

He is also a Director of the Chamber of Bulk Oil Distributors (CBOD), Legacy Bonds Ltd. and an advisory board member of Sarpong Capital Ltd. Yaw is a Chartered Accountant and holds certificates in "Negotiation and Competitive Decision-Making" and "Influence and Negotiation Strategies" from the Harvard Business School and Stanford University, respectively.

Before his work in the Oil and Gas sector, Yaw was a Tax and Legal Consultant at Ernst & Young Ghana.

**EDEM BONI**

*- Member*

Edem Boni is Terminal Director at Tema Tank Farm. He joined TTF as the Engineering and Project Manager in November 2011 and rose through the ranks into his current role.

Edem obtained his bachelor's degree in electrical engineering from KNUST, Ghana, and his master's degree in Instrumentation and Automation Engineering from PTC, Orbe Switzerland. As a PMP Certified Project Professional, he was the first choice for Project Manager in the construction of both CLL Phase II and CLL Phase III Tank Farms, the building of the Adinkra Tank Farm, and the Gantry Expansion project tailored to further increase loading efficiency at the TTF Depot.

His passion for bringing projects to successful completion is evident throughout his career. Prior to joining Tema Tank Farm, he worked as an Electrical, Instrumentation and Automation Engineer and then Project Lead for Instrumentation and Automation for Infant Cereals at Nestle Ghana, where he served in many key projects between 2008 and 2011.

Edem has faithfully served in his career within the Food Sector and O&G Industry. He firmly believes in supporting women in engineering and creating opportunities for persons (young and old) to learn and develop their skills.

# 1

# UPSTREAM POLICY AND REGULATORY REGIME

## 1.0 Overview

The year under review witnessed some sluggishness in the post-covid recovery in Ghana's upstream petroleum sector. Three plausible reasons account for the development. First is the global shift from fossil fuels to green energy investments and programmes such as the EU Taxonomy, which are encouraging EU-registered companies to invest in clean energy rather than hydrocarbons. The second reason which became known following the exit of ExxonMobil in 2021 is the relatively small sizes of Ghana's oil blocks, and thirdly the poor quality of exploration data.[1]

Some industry players have also attributed Ghana's inability to attract new investments into the upstream sector to lack of regulatory predictability manifested in what is described as capricious interpretation and application of rules and new fiscal impositions, which disregards stability provisions granted the companies.[2]

The policy, legal, and regulatory regime over the period remained largely intact, with no new Petroleum Agreement (PA) entered into. This brings to a total of five years in a row without any new PA.

However, following the exit of ExxonMobil Exploration and Production Ghana (Deepwater) Limited, ExxonMobil's participating interest of 80 percent was transferred to Goil Offshore Ghana Limited (now Goil Upstream Ghana Limited (GUL), the indigenous Ghanaian Company in the PA. The transfer of interest was at the request of GUL. This resulted in GUL controlling 85 percent stake in the block, while GNPC holds the remaining 15 percent. In December, 2023 GUL signed a farm-out agreement and a Joint Operating Agreement with Planet One Oil and Gas Limited to support the execution of the remaining obligations of the contractor under the DWTCTP Petroleum Agreement. The transaction was approved by the Minister for Energy in February, 2024 in line with the provisions of the sector law and its regulations.

Another Petroleum Agreement over Block GH_WB_02 was progressing well as at the close of the reporting year.

A third Petroleum Agreement with Explorco and Tristar Upstream Oil and Gas Limited was nearing conclusion as at the close of 2023.

Table 1 below provides a summary description of the main legislations that regulated the upstream oil and gas sector in 2023:

**Table 1: Main Legislations of the Upstream Sector**

| LEGISLATION | OBJECT |
|---|---|
| 1992 Constitution | Vests ownership of all natural resources, including hydrocarbons, in the president, held in trust for the people of Ghana. |
| Ghana National Petroleum Corporation (GNPC) Law, 1983 (P.N.D.C. Law 64) | Grants GNPC the mandate to undertake sustainable exploration, development, production, and disposal of the petroleum resources of the Republic of Ghana. |

[1] Natural Resource Governance Institute, Ghana Oil and Gas for Inclusive Growth, CSOs Oil and Gas Working Group, Report on Ghana's First Oil Blocks Bid and Licensing Round, 2020

[2] Ghana Upstream Petroleum Chamber, Energy Transition – Policy Options for Ghana's Upstream Petroleum Industry, 2022.

| LEGISLATION | OBJECT |
|---|---|
| Companies Act, 2019 (Act 992) | Provides the legal basis for the incorporation and registration of all companies (including private, public, external, and non-Ghanaian companies) in Ghana. It also provides the basis for all types of companies (including those limited by shares, limited by guarantee, unlimited, and external companies) to collect and submit their beneficial ownership information to the Registrar of Companies. |
| Petroleum (Exploration and Production) Act, 2016 (Act 919) | Replaced the Petroleum (Exploration and Production) Law, 1984 (P.N.D.C.L. 84) as the primary law that governs the conduct of petroleum activities in Ghana. Section 70(1)(a) of Act 919 mandates that, for a company or its subsidiary to operate in Ghana's upstream petroleum industry, it must first be incorporated in Ghana. Section 70(1)(a)(i) stipulates that the incorporated company must be the legal entity for the purposes of granting of licence and signatory to a Petroleum Agreement. All other activities in the upstream sector are regulated under Act 919. |
| Model Petroleum Agreement (MPA) | Provides a template based on the Petroleum (Exploration and Production) Act to guide the negotiation process (including terms and conditions) in a Petroleum Agreement between the Government of Ghana and GNPC on one side, and the oil companies on the other. |
| Petroleum Revenue Management Act, 2011 (Act 815) as amended by Act 893 | Governs the collection, management, savings, and expenditure of upstream petroleum revenues in Ghana. |
| Income Tax Act, 2015 (Act 896) as Amended: Act 896 | Provides the legal basis for income tax in Ghana. Part VI of the Act covers taxation of upstream oil and gas activities, specifically, petroleum income tax, royalties, withholding tax, capital gains tax, dividend tax and capital allowance. It replaces the Petroleum Income Tax Law, 1987 (P.N.D.C.L.188). |
| Ghana Revenue Authority (GRA) Act, 2009 (Act 791) | Amalgamates the Internal Revenue Service (IRS), Customs, Excise and Preventive Service (CEPS) and the Value Added Tax (VAT) Service into a unitary organization for better coordination in the administration of taxes. In relation to the upstream oil and gas sector, Act 919 assigns GRA additional responsibility for the collection of surface rental on behalf of the state, beyond the collection of corporate income tax, and other petroleum sector fiscal imposts. |
| Petroleum Commission Act, 2011 (Act 821) | Provides the Petroleum Commission with the legal authority to regulate petroleum activities in Ghana, and to ensure optimum and sustainable exploitation of the resources for the benefit of the people of Ghana. |
| Earmarked Funds Capping and Realignment Act, 2017 (Act 947) as amended by the Earmarked Funds Capping and Realignment (Amendment) Act, 2019 (Act 994) | Legally mandates the government to ensure tax revenues are not encumbered by Earmarked Funds. In the upstream oil and gas sector, the Act empowers the Minister for Finance to cap petroleum revenue transfers to GNPC to achieve the object of Act 947. |
| Environmental Protection Agency (EPA) Act 1994 (Act 490) | Establishes the Environmental Protection Agency as a body corporate to manage issues relating to the environment. |

| LEGISLATION | OBJECT |
|---|---|
| Energy Sector Strategy and Development Plan | Covers strategies, programmes and projects intended to support the national economic development agenda of the Government of Ghana in the following areas of the Energy Sector: Energy Sector Institutions, Power Sub-sector, Petroleum Sub-sector, Renewable Energy Sub-sector, Waste-to-Energy and Energy and Gender. |
| Gas Master Plan (GMP) | Provides a medium to long-term strategy for infrastructure development priorities that will contribute to the development of the country's natural gas resources and security of energy supply |
| Guidelines for the formation of Joint Venture companies in the upstream petroleum industry of Ghana | Developed, pursuant to Regulation 43(1) of the Petroleum (Local Content and Local Participation) Regulations17, 2013 (L.I. 2204) to guide upstream petroleum industry players on the formation and structuring of joint venture companies. |
| Ghana Growth and Sustainability Levy Act, 2023 (Act 1095) | Enacted to impose a special levy known as the Growth and Sustainability Levy (GSL) to raise revenue for growth and fiscal sustainability of the Ghanaian economy. The Act imposes a one percent (1%) levy on gross production of mining and upstream oil and gas projects. The levy is not an allowable deduction for the purpose of ascertaining the chargeable income of an entity under the Income Tax Act, 2015 (Act 986). |

## 1.1 Ongoing Policy and Regulatory Reforms

Some work on previously initiated policy and regulatory reforms continued during the period. These are:

### *1.1.1 Review of Model Petroleum Agreement*

The review of the Model Petroleum Agreement initiated following the exit of ExxonMobil in 2021 continued. This is intended to align the model agreement, which serves as a template for the negotiation of PAs, with changes brought about by the Petroleum (Exploration and Production) Act, 2016 (Act 919).

### *1.1.2 Overhaul of the EPA Act and Development of Regulations for the Upstream Sector*

The Environmental Protection Agency Act, 1994 (Act 490) was under review to consolidate all the fragmented environmental management provisions in other enactments across other sectors, as well as to empower the Agency to deal competently with complex emerging environmental challenges associated with upstream petroleum exploration and production, and issues such as plastic and electronic waste management, climate change, biodiversity conservation, and air pollution.

The new EPA bill, when passed, will broaden the scope of the Agency's mandate, and grant it powers of an Authority, to enable it exercise greater independent decision-making powers, and to perform quasi-judicial functions.

Furthermore, to comprehensively address specific issues relating to environmental

assessment and management of the upstream oil and gas sector, the EPA in 2023, continued work on draft Regulations on environmental management in oil and gas development. ..

### *1.1.3 Harmonisation of Extractive Industry Fiscal Regime*

The Tax Policy unit of the Ministry of Finance continued working on the harmonisation of the extractive industry fiscal regime during the period. The essence is to ensure equal treatment of the fiscal items for both petroleum and mining.

## 1.2 The Upstream Petroleum Industry Fiscal Regime

Just like the upstream policy, legal and regulatory framework, the upstream fiscal regime remained stable in 2023. A summary of the main fiscal terms assigned to petroleum agreements in accordance with previous and current legislations are presented in table 2 below.

Table 2: Fiscal Regime for Upstream Oil and Gas Sector

| Fiscal Terms | Current Terms | Pre-Act 919 | Post – Act 919 |
|---|---|---|---|
| Royalty Oil | **Biddable/Negotiable** | 5.0% – 12.5% | 10.0% |
| Royalty Gas | **Biddable/Negotiable** | 3.0% – 5.0% | 5.0% |
| Initial Participation (GNPC pays production cost only) | **Minimum 15%** | 10.0% - 15% | 15.0% |
| Additional Participation (GNPC pays development and production costs) | **Biddable/Negotiable** | 2.5% - 5.0% | Biddable/Negotiable |
| Commercial Interest | **Negotiable** | 4% - 24% | Optional & pre-emptive rights available to GNPC during disposal of petroleum rights |
| Additional Oil Entitlement | **AOE is based on Contractor after tax-inflation-adjusted rate of return exceeding a specified level in a Petroleum Agreement** | 4-tier varying by PA | 4-tier specified in legislation (L.I. 2359) |
| Bonus Payments | **Biddable/Negotiable (Signature or Production bonus)** | None | Biddable/Negotiable |
| Income Tax | **35% (based on Income Tax Act, 2015)** | 35% | 35% |
| Surface Rentals (Onshore) | **US$225- US$900/ sq.km/year depending on stage of operation** | NA | US$225-US$900/sq.km/year depending on stage of operation |
| Surface Rentals (Offshore) | **US$150-US$600/ sq.km/year depending on stage of operation** | US$30US$200/ sq.km/year depending on stage of operation | US$150-US$600/sq.km/year depending on stage of operation |
| Indirect Taxes | **Exempt** | Exempt | Exempt |

| Fiscal Terms | Current Terms | Pre-Act 919 | Post – Act 919 |
|---|---|---|---|
| Local Content Fund | **As set out in Petroleum Agreement 1% of all subcontracts** | Nil | 1% of all subcontracts |

Source: **Petroleum Commission**

## 1.3 Developments in the Upstream Sector

### *1.3.1 Deep Water Tano / Cape Three Points (DWT/CTP) Field*

Citing the US-led sanctions on Russian business interests across the world, Aker Energy on account of Lukoil's interest in the DWT/CTP (which it deemed as a risk to planned investments), sought and obtained two extensions to its work programme in 2022.[3] A further extension was granted for the submission of the Pecan Field PoD, (of which Lukoil is a party) to April 2023. The Deepwater Tano Cape Three Points (DWTCTP) Block Partners, including GNPC, prepared and submitted the PoD to the Minister on 14th April 2023 and approval was received on 27th June 2023. The entire shares of Aker Energy AS, who was the beneficial owner of Aker Energy Ghana Limited, were offloaded to AFC Equity Investments (AFCEI) in April 2023. This implies that AFCEI is now the indirect holder of all the participating interest of Pecan Energies Ghana Limited in the DWT/CTP Block. Through the transaction, AFC has become the sole shareholder of Aker Energy, and through that, has come to own 50 percent of the Deepwater Tano Cape Three Points (DWT/CTP) block offshore Ghana. The asset comprises discoveries of 450-550 million barrels of oil equivalents, including the Pecan field. Following the approval of the PoD, Pecan has proceeded to submit its Environmental Impact Assessment as part of a regulatory requirement for field development, a Public Hearing was held from 27th to 31st May, 2024.

### *1.3.2 South Deepwater Tano (SDWT) Block*

In March 2023, AGM Petroleum Ghana Limited, the operator of the SDWT Block, served notice of its decision not to enter into the First Extension Period as provided for in its PA, and therefore relinquished in full, its interest in the block. With the relinquishment of the SDWT Block by the contractor parties, the SDWT contract area reverts to the State.

### *1.3.3 West Cape Three Points Block 2*

The legal tussle between ENI, the operator of the OCTP Block, and Springfield, operator of West Cape Three Points Block 2 which began in 2020, following a directive issued by then Minister for Energy, Hon. John Peter Amewu, seeking to compel to ENI to enter into unitization negotiations with Springfield, who had contended that its Afina-1x Cenomanian reservoir and ENI's Sankofa Cenomanian reservoir communicated with each other. While Springfield sought to enforce the directive in the Ghanaian courts, ENI and its partner, Vitol, resorted to international arbitration, challenging the validity of the directives at the Arbitration Institute of the Stockholm Chamber of Commerce, Sweden as provided for by the OCTP PA. The arbitration hearing came off in August 2023, with the verdict delivered in the third quarter of 2024. The arbitration panel upheld ENI's position that, the April 2020 and October 2022 directives on unitization were not consistent with Ghanaian law, international best practices, and relevant contractual agreements, but deferred to the Government of Ghana to remedy the breaches.

[3] Lukoil is a Russian multinational oil and gas company with substantial interests in many countries, including the U.S. None of its assets in the U.S. has been encumbered by the U.S. imposed sanctions, and it is on the basis of this that, observers deemed Aker's fears unfounded.

### *1.3.4 Voltaian Basin Project*

As at the close of 2023, having acquired 1,180-line km of 2D seismic data in the Northern Sector of the Voltaian basin, a further 400-line km of 2D seismic data was acquired in the south and dispatched for processing. GNPC went on to seek approval from the Minister to drill a stratigraphic well to better understand the sub-surface strata.

### *1.3.5 Saltpond Field Decommissioning Project*

The Saltpond Field decommissioning project progressed into 2023, with the Trident VIII Jack-up rig required for the plugging and abandonment scope delivered on 25th September 2022. The plugging and abandonment operations were completed on 1st May 2023 and the Trident VIII rig was demobilised. Dismantling and removal of the platform by the LB Fugar Barge was in progress by the end of 2023.

# 2

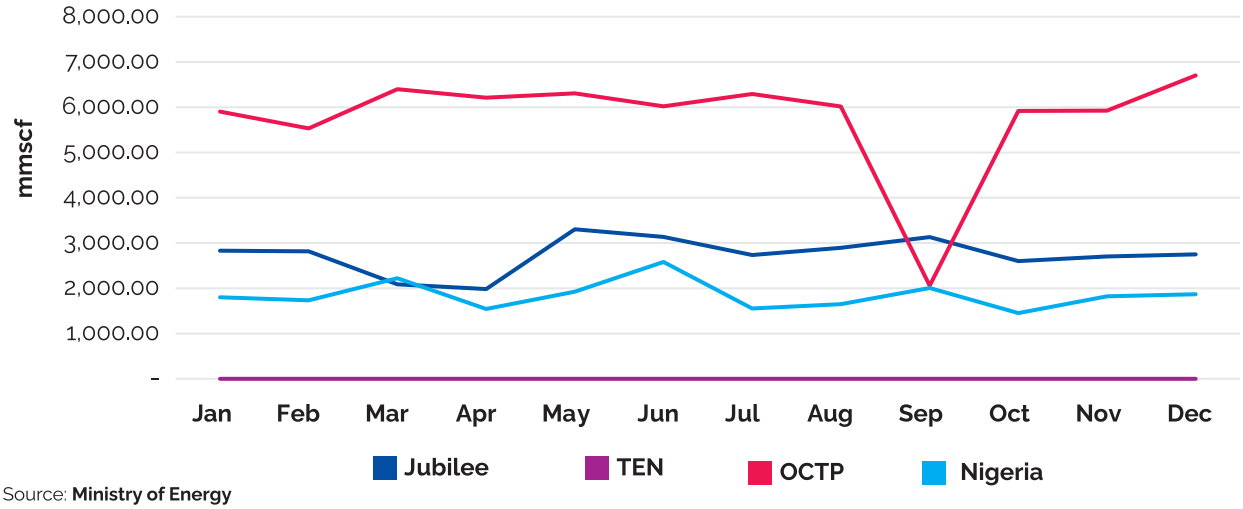
# GAS SECTOR OVERVIEW

## 2.0 Overview of Gas Sector

A total of 124,427.93 mmscf of lean gas was supplied to all consumers in the year under review, representing a 1.29% increment as compared to that of the previous year. This indicated an average daily supply of 353.34 mmscf. Domestic supply (Jubilee, TEN and OCTP) represents 82.19% of the total supply, whilst the rest was imported from Nigeria through the West African Gas Pipeline (WAGP). Domestic supply, however, dropped by 2.64% as compared to that of the previous year, while gas import from Nigeria increased by about 23.54%.

Natural gas is used by the power sector for thermal generation. It is also supplied to ceramic manufacturing companies in both the western and the eastern enclaves. According to the Energy Commission, in 2023, Ghana's energy mix consisted of oil (37.7%), natural gas (26.4%), biomass (29.8%), and hydro (6%). Solar power accounted for less than 1% of the total energy supply.[4]

**Figure 1:** Gas supply from various Sources



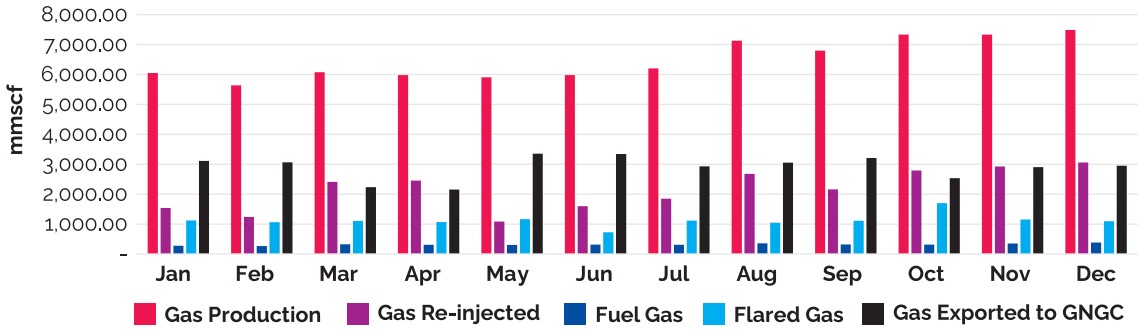

Source: **Ministry of Energy**

## 2.1 Raw Gas production from various domestic fields

### *2.1.1 Jubilee Field*

A total of 77,900.05 mmscf of raw gas was produced from the Jubilee field in 2023. Out of this, 33.09% was re-injected, 4.90% was used as fuel gas, 17.29 % was flared and 44.71% was sent to GNGC for processing (See figure 2).

**Figure 2:** Jubilee Gas Production for the year 2023



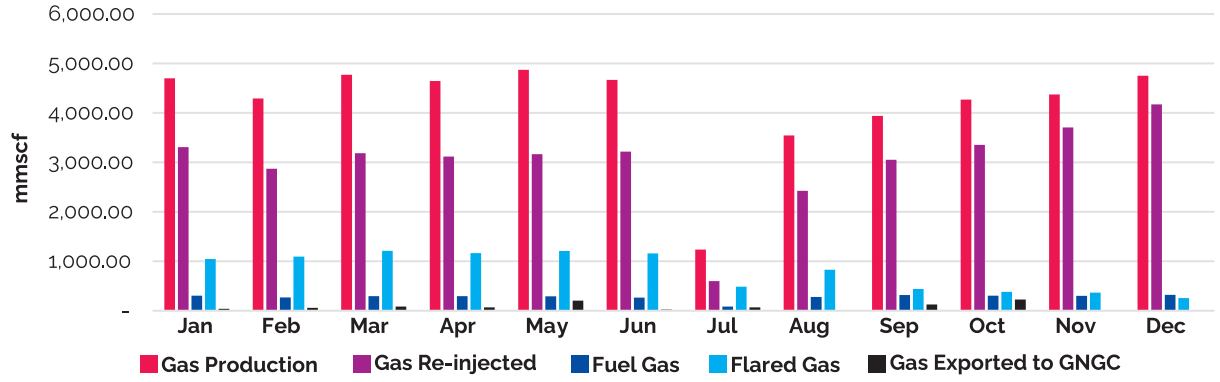

Source: **Ministry of Energy**

[4] 2023 Energy Statistics Report

### 2.1.2 *TEN Field*

A total of 50,068.90 mmscf of gas was produced from the TEN field in 2023. Out of this, 72.24% was re-injected, 6.66% was used as fuel gas, 19.26% was flared and 1.84% was sent to Ghana Gas.

Figure 3: TEN Gas Production for the year 2023



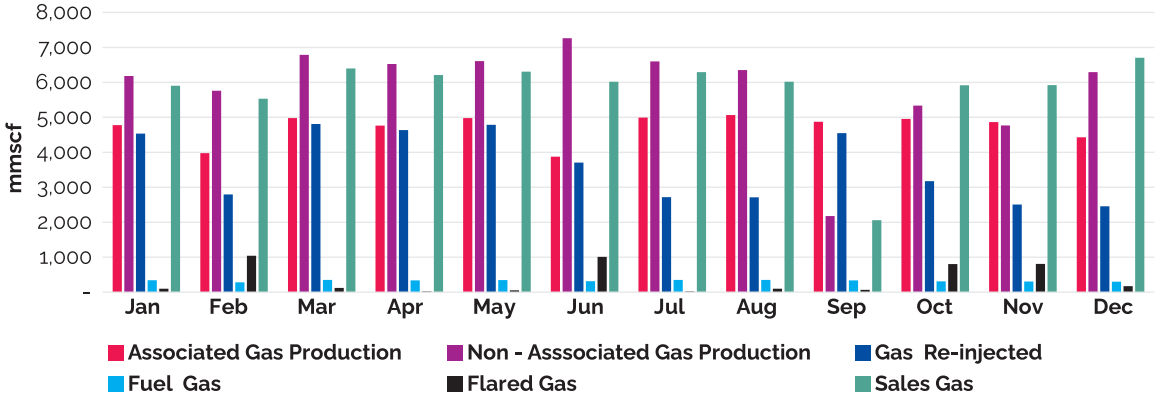

Source: **Ministry of Energy**

### 2.1.3 *OCTP/ Sankofa-Gye Nyame Field*

The OCTP field is made up of Associated Gas (AG) and Non-Associated Gas (NAG) reserves. A total of 56,544.28 mmscf of AG was produced and that of NAG was 70,658.74 mmscf in 2023.

The amount of gas re-injected in the field was 43,388.08 mmscf, representing 76.73% of AG. A total of 3,917.59 mmscf, representing 7.64% of AG was used as fuel gas. Total sales of gas from the field was 69,286.85 mmscf (See figure 4).

Figure 4: OCTP Gas Production for the year 2023

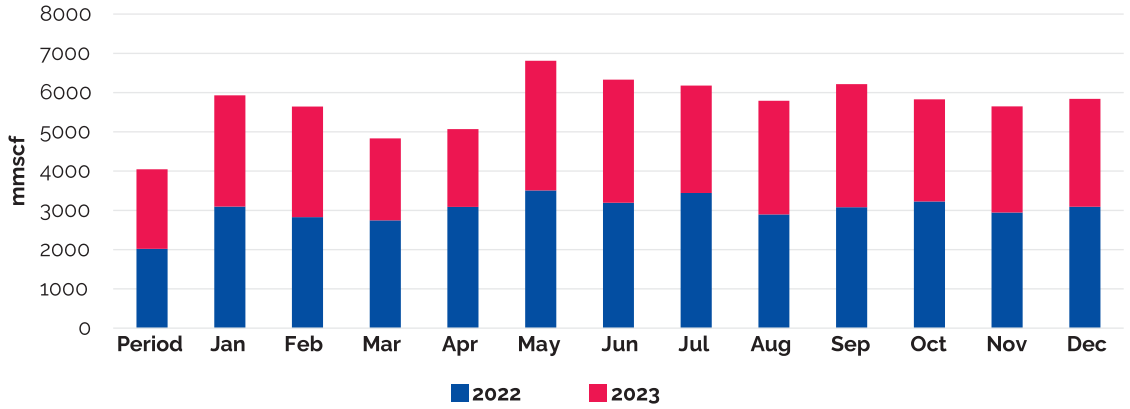



Source: **Ministry of Energy**

## 2.2 The Atuabo Gas Processing Plant Output

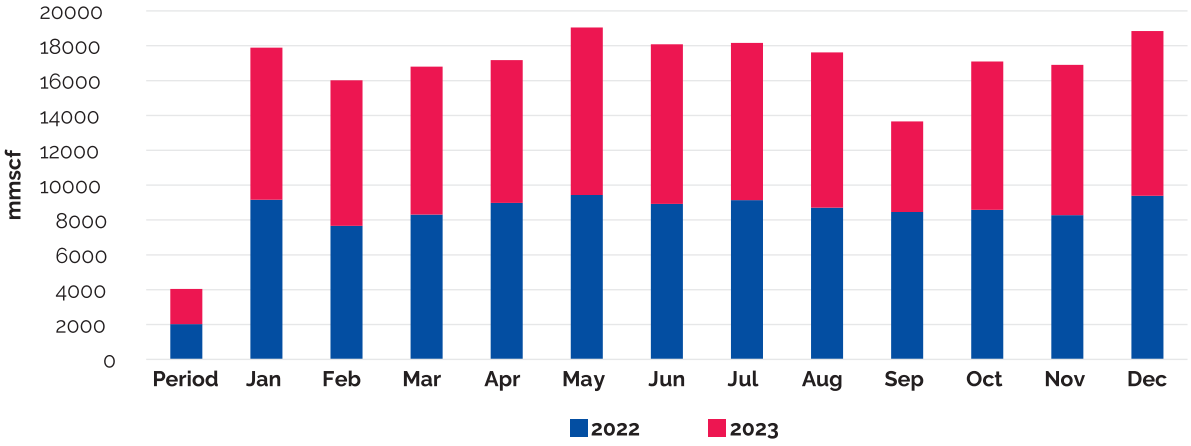
The Atuabo Gas Processing Plant (GPP) supplied a total of 32,977.52 mmscf of lean gas. This is about 11.21% reduction in the GPP output as compared to the previous year (See figures 5&6).

Figure 5: GPP Output - 2023 vrs 2022




Source: **Ministry of Energy**

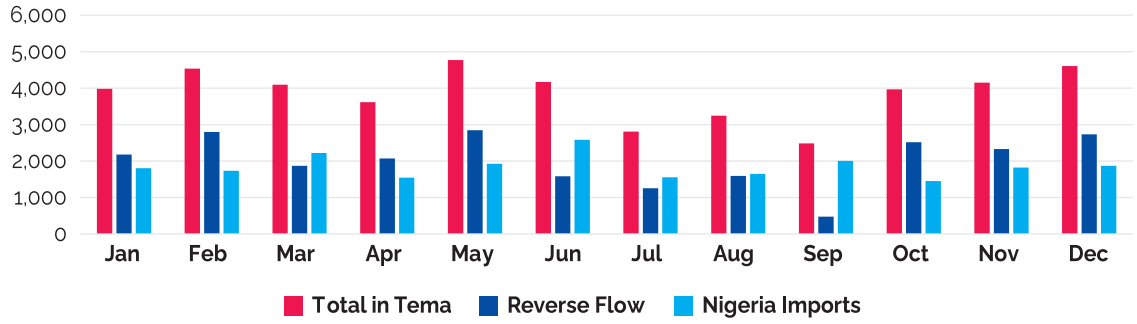
Figure 6: TOTAL DOMESTIC SUPPLY – 2023 vrs 2022




## 2.3 WAPCO'S Gas transportation services

A total of 46,401.51 mmscf of gas was transported by the West African Gas Pipeline Company Limited (WAPCo) to Tema and Takoradi, from Nigeria. The amount of gas transported from Nigeria to Tema was 22,163.56 mmscf. The total amount of gas transported by WAPCo within the period represents a 5.64% decrease as compared to that of the previous year. However, gas supply from Nigeria increased by about 20%, implying a significant decrease in reverse flow volumes over the period (See figure 7).

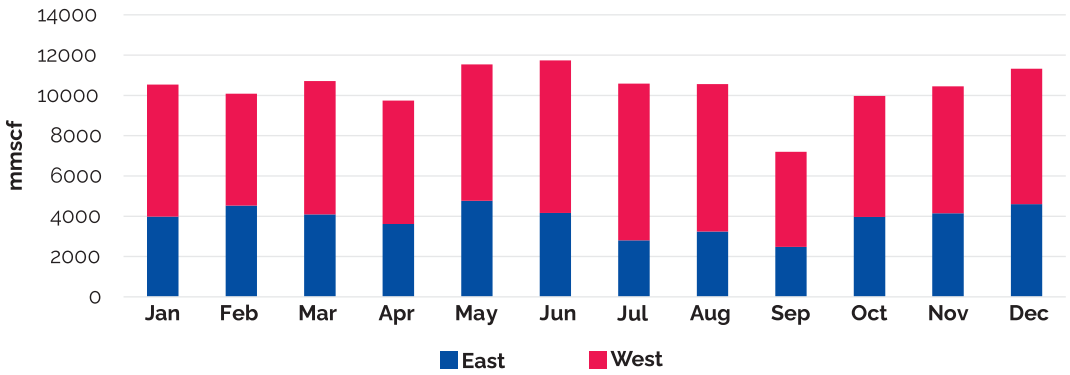
Figure 7: WAPCO'S Gas transportation



## 2.4 Total Gas Supply: East vrs West

Out of the total 124,427.93 mmscf of lean gas supplied from the various sources for both power and non-power consumption in the country, about 63% was supplied to the West (Takoradi), whilst the rest was supplied in the East (Tema) (See figure 8).

Figure 8: Total Gas Supply: East Vrs West




Source: **Ministry of Energy**

## 2.5 Global developments in the gas industry

The year 2023 has been a significant period for the global natural gas industry, marked by technological advancements, geopolitical shifts, and a strong push towards sustainable energy solutions (See figure 9). Some of the key developments in the industry in the year include:

### *1. Geopolitical Dynamics*

The lingering effects of the Russia-Ukraine conflict have continued to reverberate through the natural gas sector. European countries, traditionally reliant on Russian gas, significantly diversified their sources in 2023. The European Union (EU) ramped up imports from the United States, Qatar and other middle Eastern countries. This shift was facilitated by enhancing liquefied natural gas infrastructure and increasing storage capabilities.

### *2. Technological Innovations*

Technological advancements have been at the forefront of the natural gas industry's revolution. In 2023, major breakthroughs in Carbon Capture Utilization and Storage (CCUS) have been realized, marking the extraction and use of natural gas more environmentally friendly. Companies like Shell and ExxonMobil have invested heavily in CCUS technologies to mitigate the carbon footprints of natural gas operations. Additionally, digitalization, the adoption of AI and predictive maintenance have optimized operational efficiencies and have advanced the reliability and safety of gas recovery and transportation.

### *3. Sustainability and Decarbonisation (Green) Initiatives*

The push for sustainable energy has led to a notable increase in the development of "green gas." Biogas and Renewable Natural Gas (RNG) have gained traction as viable alternatives to conventional natural gas. In 2023, several countries, particularly in Europe and North America, have introduced policies and subsidies to encourage the production and use of RNG. Denmark for example has made significant strides in converting agricultural waste to biogas, aiming to become a net exporter of RNG by 2030.

### *4. Market Dynamics and Pricing*

Global natural gas prices have experienced volatility due to fluctuating demand, supply chain disruptions, and geopolitical tensions. However, the market has shown signs of stabilization towards the latter part of the year. Increased production from non-traditional sources, such as shale gas in the United States and offshore gas fields in East Africa, has helped to cushion the market against supply shocks.

LNG has also played a critical role in the market dynamics. The construction of new LNG terminals in Asia and Europe has expanded the market, providing a buffer against regional supply disruptions and contributing to price stabilization.

### *5. Policy and Regulation*

Governments worldwide have continued to shape the natural gas landscape through policy and regulation. In 2023, the EU introduced new regulation aimed at reducing methane emissions from the natural gas sector, reflecting a broader commitment to environmental sustainability. Similarly, in the United States, the Inflation Reduction Act (IRA) has provided incentives for clean energy projects, indirectly benefiting the development of low-carbon, natural gas technologies.

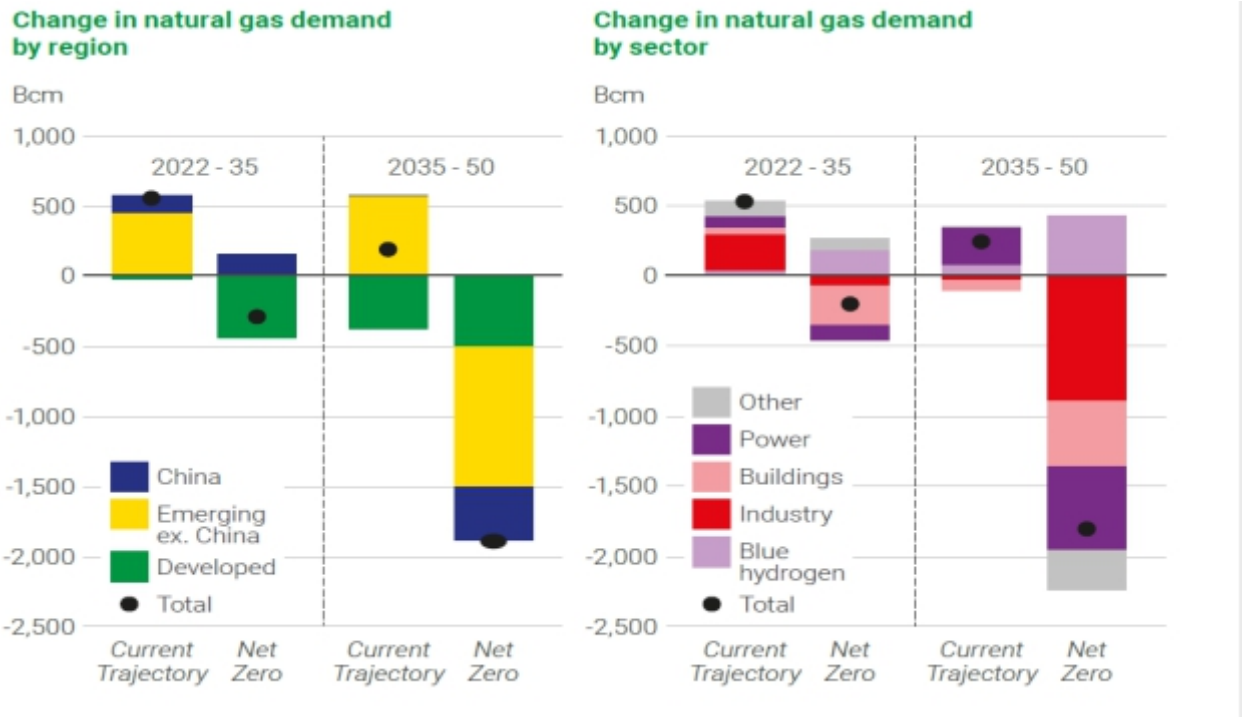
Regulatory frameworks have also been adapted to ensure energy security. Countries in Asia, such as India and China have implemented policies to build strategic reserves and diversify their import sources, thereby reducing dependence on any single supplier.

### *6. Investment and Finance*

Investment in the natural gas sector has seen a significant increase in 2023. Despite economic uncertainties, the industry has attracted substantial capital from both public and private sectors. Key investments have been directed towards LNG infrastructure, CCUS technologies, and green gas projects. Investment firms are increasingly incorporating Environmental, Social, and Governance (ESG) criteria into their portfolios, aligning financial interests with sustainable development goals.

In summary, the natural gas industry in 2023 has navigated a complex landscape of challenges and opportunities. Advances in technology, shifts in geopolitical alliances, and a growing emphasis on sustainability are reshaping the market. With the current trajectory, it is predicted that by 2030, natural gas demand will increase by 40% above the year 2022 level. However with the adoption of energy transition policies (net zero), demand is expected to increase by 30% above that of same reference year.

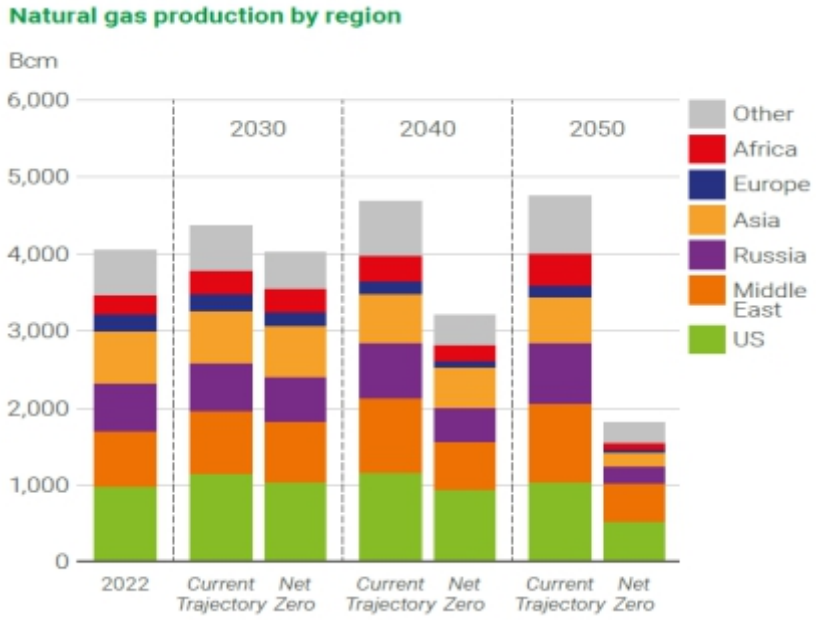
Figure 9: Global developments in the gas industry




Source: **BP World Energy Outlook: 2024 Edition**

Global production of natural gas is currently driven by the need to support the growing LNG market. The United States and the Middle East account for majority of the growth in production, to make up for the stagnation in supply from Russia resulting from issues related to the war with Ukraine. However, it is projected that production post 2030 will be led by the Middle East, Africa and Russia (as the impact of international sanctions lessen) (See figure 10).

Figure 10: Natural Gas Production by Region




Source: **BP World Energy Outlook: 2024 Edition**

## 2.6 Recommendations for Ghana's Gas Sector

- Gas demand for various uses is on the rise, with demand occasionally outstripping supply. This calls for the need to increase gas supply in the country. This can be done either by scaling up domestic sources through further investments or by increasing imports (Nigeria or Liquefied Natural Gas).
- Liquidity challenges remain an existential threat to the entire gas to power sector value chain. It is important that ECG's revenue mobilization efforts be strengthened to improve the cashflows of the sector players.
- Gas prices must be cost-reflective with all forms of subsidies removed. In areas where subsidies will be necessarily required, the appropriate sources of funding these subsidies must be identified.

# 3 UPSTREAM SECTOR LEGAL REVIEW

## 3.1 Revenue from Jubilee oil Holding limited: The ongoing saga

### *3.1.1 Overview*

The Jubilee Oil Holdings Limited (JOHL) was incorporated in Cayman Islands by Anadarko Offshore Holding Company LLC to hold the seven percent (7%) interest in the Jubilee and TEN Fields, operated by Tullow Ghana. Ghana's national oil company, Ghana National Petroleum Corporation (GNPC), with the aim of increasing reserves, acquired a hundred percent (100%) stake in JOHL in April 2021[5] after Anadarko announced plans to sell its interest in the Fields.[6] Thus, GNPC acquired seven percent (7%) interest in respect of the Jubilee and TEN Fields from Occidental Petroleum, formerly known as Anadarko, for $199 million through a "share purchase" agreement.[7] The acquisition by the State was deemed good news especially as it was in line with GNPC's strategy of increasing its stake in viable oil blocks but the decision to incorporate JOHL in Cayman Islands, a tax haven, was viewed with suspicion as it was perceived in many quarters as a mechanism to elude transparency and provide a conduit for the diversion of funds to private accounts.

GNPC indicated that the transaction was funded by a $164 million loan from the government.[8] This interest acquired, which was to be held by JOHL, was to be transferred to GNPC's subsidiary, Explorco, as part of the approval conditions by the Ministry of Energy, which assignment has since been completed. Explorco now owns the interest directly. The commercial interest makes JOHL/Explorco part of the contractor party of the two fields.[9]

The first lifting of 944,164 barrels of oil in the Jubilee Field in the first half of 2022 realized the sum of US$100,748,907.95. In 2022, the sum of $272,652,208.95 was realized from JOHL's liftings in the Jubilee and TEN Fields but the money was not paid into the Petroleum Holding Fund (PHF)[10] but at the direction of the State, paid by the buyer of the crude into an account held at Ghana International Bank in London, classified as an "offshore account." The Public Interest and Accountability Committee (PIAC) noted this development of monies not being paid into the PHF and drew public attention to the matter.

This became a subject matter of dispute with GNPC and PIAC particularly, holding opposing views on the matter. Whilst GNPC defended this action, many entities such as civil society organizations and PIAC were opposed to this action.

It was contended by the Minority in Parliament - that sought to censure the Minister for Finance, Ken Ofori-Atta - that the Minister made illegal payments of oil revenues into offshore accounts in flagrant violation of Article 176 of the Constitution.[11] Article 176 states:

[5] The original directors were directors of Anadarko but when the company was acquired, they had to be replaced by GNPC appointed directors.

[6] As enumerated by GNPC in a Press release in response to assertions by the Africa Centre for Energy Policy (ACEP), Anadarko Offshore Holding Company LLC ("Anadarko Offshore") set out to wind up its operations in Ghana and its subsidiary, Anadarko WCTP Company (Anadarko WCTP), an offshore company registered in the Cayman Islands that held Anadarko's interest in Jubilee, Deepwater Tano (DWT) and West Cape Three Points (WCTP) was to be sold to Kosmos Energy Holdings Ghana Limited. GNPC expressed an interest in acquiring part of Anadarko WCTP's interest in the DWT and WCTP petroleum agreements and upon notifying the Ministry of Energy, the parties entered into negotiations to determine GNPC's share, and concluded with an offer to GNPC to purchase the commercial interest of seven percent (7%). GNPC notes that to enable the negotiations with Kosmos for the sale of Anadarko WCTP to proceed, Anadarko Offshore incorporated Jubilee Oil Holdings Limited (JOHL) in the Cayman Islands to hold the 7% commercial interest in the interim whilst the parties negotiated and finalized on the commercial terms of the transaction. The sum of $199 million was quoted as the headline price as at 1st April 2021 but adjusted to $165 million effective 30th September 2021 following adjustments for taxes, cash calls and other expenses incurred as well as sales made by Anadarko WCTP during this period.

[7] Civil society groups such as African Centre for Energy Policy (ACEP) and Imani Africa argued that the transaction amounted to an international transaction – which would require Parliamentary approval - and that it had no Parliamentary approval. Appearing before an ad hoc Committee in Parliament, Adwoa Wiafe, the then General Manager, Legal, at GNPC noted that, there had been cases which had ruled on what business transactions are such as Felix Klomegah v GPHA, which made a distinction between state-owned businesses set up for commercial purposes, and in that particular transaction, the transaction was between GNPC and Anadarko and not Anadarko and the government so was not an international business transaction for which approval wa required.

[8] As Joe Dadzie, GNPC's Deputy CEO explained when he appeared before an ad hoc Committee in Parliament, GNPC did not have the funds to pay. The purchase price was about $199 million but because the assets were producing during the period when negotiations were going on, there were liftings and cash calls that were being made so when the parties agreed and the agreement was executed, they had to reconcile figures, that is, make a reconciliation of payments and receipts made by JOHL so after the reconciliation was made, the amount to be paid was $164 million.

[9] GNPC is not a contractor party.

[10] Public Interest and Accountability Committee, 2022 Annual Report, 39

[11] This is titled "The Consolidated Fund."

(1) There shall be paid into the Consolidated Fund, subject to the provisions of this Article –

(a) all revenues or other moneys raised or received for the purposes of, or on behalf of the Government; and

(b) any other moneys received in trust for, or on behalf of the Government.

(2) The revenues or other moneys referred to in clause (1) of this article shall not include revenues or other moneys –

(a) That are payable by or under an Act of Parliament into some other fund established for specific purposes; or

(b) that may, by or under an Act of Parliament be retained by the department of Government that received them for the purposes of defraying the expenses of that department.

PIAC on its part, repeatedly emphasized its position that the monies be paid into the PHF and maintained the same line of argument.

### *3.1.2 Case of the Public Interest and Accountability Committee*

PIAC asserted that in its view the proceeds realized by JOHL from oil liftings should have first been paid into the PHF and not any other account. PIAC contended that the money formed part of petroleum revenue and ought to have been paid into the PHF, basing its position on Section 6(e) of the *Petroleum Revenue Management Act*, 2011 (Act 815) as amended, which states that any amount received by government directly or indirectly from petroleum revenues must form part of gross receipts into the PHF. It further relied on Sections 6 and 7 of the *Petroleum Revenue Management Act* which provides as follows:

**Section 6 – Petroleum Holding Fund Receipts**

The following shall constitute the gross receipts of the Petroleum Holding Fund:

(a) royalties from oil and gas, additional oil entitlements, surface rentals, other receipts from any petroleum operation and from the sale or export of petroleum

(b) any amount to receive from direct or indirect participation from the Government in petroleum operation

(c) corporate income taxes in cash from upstream and mainstream petroleum companies.

(d) any amount payable by the National Oil Company as corporate income tax, royalty, dividends or any other amount due in accordance with the laws of Ghana; and

(e) any amount received by Government directly or indirectly from petroleum resources not covered by paragraphs (a) to (d) including where applicable capital gains tax derived from the sale of ownership, exploration, development, and production rights

**Section 7 – Carried and Participating Interest**

(7) Revenue due from the direct or indirect participation of the Republic in petroleum operations, including the carried and participating interest, shall be paid into the Petroleum Holding Fund.

Nasir Alfa Mohammed, the then Vice-Chairman of PIAC, who testified on behalf of PIAC, speaking before an eight (8) member ad hoc Parliamentary Committee on Thursday 17th November 2022,[12] noted;

[12] Ghana's Parliament, at its Eleventh Sitting held on Thursday 10th November 2022, considered a motion by the Minority, led by its Minority Leader, Haruna Iddrisu and its ranking member on Finance, Cassiel Ato Forson, calling for a vote of censure against Ken Ofori-Atta, the Deputy Minister for Finance in accordance with Article 82 of the 1992 constitution. The Speaker of the House constituted an eight (8) member AD-Hoc Committee of Parliament to investigate the grounds for the motion amongst which included the allegation that the minister had made an illegal payment of oil revenues into offshore accounts in violation of Article 176 of the constitution. The Minority relied on PIAC's 2022 Semi-Annual Report, which indicated that crude oil liftings by JOHL amounting to US$100.75 million had not been paid into the PHF. Thus, PIAC was invited as part of a three day public hearing on Thursday 17th November 2022 to provide evidence in respect of same. The Committeee was co-chaired by Kobina Tahir Hammond (MP-Adansi) and Dr. Dominic Akuritinga Ayine (MP – Bolga East), with the members being Kwame Anyimadu-Antwi, Patrick Yaw Boamah and Agyapa Mercer from the Majority side and Bernard Ahiafor, Samuel Okudzeto Ablakwa and Zenator Agyeman-Rawlings from the minority side.

> Mr. Chairman, as we indicated, PIAC took a lot of this into consideration in arriving at this conclusion. Now the portions of the Act I referred to; Section 6 and the amended version of Section 7, both indicate clearly that even revenues accruing to the Republic from the direct or indirect participation of the Republic shall, first and foremost, be paid into the Petroleum Holding Fund. Mr. Chairman, it is the considered view of the Committee that it matters not that other issues may be introduced into the whole conversation. What matters for us, our understanding of the law, is that the PRMA is the primary law that governs the utilization and management of the petroleum revenues, and it says that any revenue accruing to the State whether directly or indirectly, should first be paid into the Petroleum Holding Fund. Mr. Chairman, we also know that GNPC is the primary commercial arm of the Republic of Ghana in petroleum activities, and so, when this happens, we are dealing with GNPC per se. If we look at the whole JOHL transactions, it was GNPC that undertook those transactions. Therefore our position PIAC is that, whether that lifting was done by a 100 per cent subsidiary of GNPC or not, it ought to come first into the Petroleum Holding Fund from where disbursements can be made for whatever reason.[13]

Further, PIAC also contended that the assertion by officials of GNPC that it had followed advice from the Attorney General's office in a letter dated 6th July 2021 before it had undertaken the transaction, was inaccurate and the Attorney General did not say in the letter that the monies should not come into the PHF but even if that was the interpretation put on that, that would be wrong.

Thus, it was PIAC's position that the stance it had taken was guided by Section 7(1) of the *Petroleum Revenue Management Act* which stipulates that revenue due from the direct or indirect participation of the Republic in petroleum operations including the Carried and Additional Participating Interest ought to be paid into the PHF. PIAC thus noted in its 2022 Annual Report; "Crude oil receipts by JOHL should be paid into the PHF since it forms part of Ghana's petroleum revenue."[14] PIAC noted that despite calls from it that JOHL revenues constituted petroleum revenue and ought to be paid into the PHF, GNPC disagreed and continued to use JOHL lifting proceeds for other expenditures.[15]

### *3.1.3 Ghana National Petroleum Corporation's Position*

GNPC disagreed with PIAC's position that the oil liftings amounting to U$100,748,907.95 by JOHL were revenues that ought to have been paid into the PHF.[16] Its officials contended that JOHL, though a subsidiary of GNPC, was a separate legal entity whose operations were governed by its constitution and the *Companies Act*, 2019 (Act 992). GNPC's position was that the revenue streams due into the PHF from JOHL were dividends paid by the company to GNPC, which was the sole shareholder[17] and that the interest accrued through JOHL was a commercial interest and thus not held by the State. Flowing from that, it was argued that it was not mandated to pay the proceeds into the PHF.

GNPC contended that the company was registered under the *Companies Act* and as such, the terms and conditions, as well as JOHL'S constitution was governed by the Act. When Mr. Joseph Dadzie, its Deputy Chief Executive Officer of Commerce, Strategy and Business Development appeared before Parliament, he noted that, "Jubilee Oil Holding Limited must operate and if at the end of the day, it declares profit and the directors decide dividends must be paid, that money is paid to the GNPC for it to pay into the Petroleum Holding Fund." GNPC argued that

[13] Page 14 of the Verbatim Report of the Proceedings of the Committee on Thursday 17th November 2022.
[14] Public Interest and Accountability Committee, 2022 Annual Report, xix
[15] Ibid
[16] Report of the Ad Hoc Committee on the Motion of Censure Against the Hon Minister for Finance, Mr. Ken Ofori-Atta, 23rd November 2022, 18
[17] 18

JOHL as an external company under the Companies Act, 2019 (Act 992) was a separate legal entity distinct from GNPC and had its commercial operations regulated by the Companies Act and not by the Ghana Petroleum Corporation Act, 1983 (PNDCL 64). It was further argued on behalf of GNPC that Section 29 of the Ghana National Petroleum Corporation Act, requires subsidiaries to be established under the *Companies Act*, 1963 (Act 179) now *Companies Act*, 2019 (Act 992) therefore the *Companies Act*, and not the GNPC Act governed JOHL's governance and operational structure.[18]

It was noted that the second premise argued against GNPC's position was that under Section 7(1) of the PRMA, "revenue due" from the Republic of Ghana's direct and indirect participation in petroleum operations is payable into the PHF and that the activities of GNPC and its subsidiaries fall within the scope of indirect participation in the Republic. GNPC however contended that because the "revenue due" to be paid into the PHF as required by Section 7(1) of the *Petroleum Revenue Management Act* from GNPC's subsidiaries must be determined in accordance with the *Companies Act*, the revenue payable by JOHL to GNPC in its capacity as the shareholder of JOHL is dividend. It was contended that GNPC was not entitled to the direct revenue or proceeds from each JOHL lifting and its operations. Thus, by extension, revenue payable into the PHF by JOHL through GNPC is dividend declared by JOHL and not proceeds from each JOHL lifting. In response to an enquiry from Zanetor Agyeman-Rawlings,[19] a member of the ad hoc Committee, Adwoa Wiafe, the then GNPC Manager, Legal, noted:

> When you look at the PRMA, it says 'revenue due to the Republic from the direct and indirect participation' and we are talking about, and I said the important words, key words there were 'revenue due.' What is due a shareholder from its subsidiary? And that is determined by the Companies Act and that says that it is the dividends from the subsidiary that goes to the shareholder.

GNPC addressed the third ground raised against it thus; that the third ground according to the facts was that "payment of dividends from JOHL by GNPC into the PHF is consistent with the PRMA." Officials of GNPC noted that Section 6 of the *Petroleum Revenue Management Act* recognizes that GNPC must pay dividends from its subsidiaries into the PHF. They contended thus that the PRMA therefore does not affect the application of the Companies Act and the company law of the Cayman Islands to the operations of JOHL as a limited liability company operated in Cayman Islands and registered as an external company in Ghana. They noted that it was however incumbent on them to ensure that GNPC complied with the requirement under the *Petroleum Revenue Management Act*, *Companies Act* and the company law of the Cayman Islands in respect of monies by JOHL to GNPC.

It was their last contention that, prior to executing the transaction, GNPC sought and received the Attorney General's opinion to the effect that proceeds from JOHL may be used to finance its acquisition, provide security for transactions and satisfy related costs. GNPC contended that it had acted accordingly and had used a portion of the revenue accrued as part-payment for the cost of the acquisition, pay off its cash calls and other expenditure. It was noted that considering GNPC's current costs and liabilities that no dividends would be due for payment to GNPC as of that time as payment into the PHF and that such dividends would be paid as soon as JOHL began to make profit and declare dividends.

[18] Willerforce Asare "Oil Money: JOHL Not Required to Deposit Proceeds into Petroleum Holding Fund" (Asaase Radio, 2022) <https://asaaseradio.com/oil-money-johl-not-required-to-deposit-proceeds-into-petroleum-holding-fund/> accessed 9 November 2024

[19] MP, Korle Klottey

### 3.1.4 *Conclusion*

GNPC's argument is legalistic and it is premised on how it is perceived that a business should operate on sound commercial lines. The argument in a nutshell is that the company is a limited liability company with GNPC as its shareholder. Under this arrangement, what it must pay to GNPC as a shareholder is dividends and not revenue. The *Petroleum Revenue Management Act* states categorically that it is "revenue due" and in this case, such revenue would be dividends. To the extent that such dividends have not been declared to be paid, there is no "revenue due" to be paid to the Republic.

This must be juxtaposed against the fact that the intendment behind the *Petroleum Revenue Management Act* is to ensure efficient management as well as accountability of all petroleum revenue. The preamble of the Act for instance states that it is "AN ACT to provide the framework for the collection, allocation and management of petroleum revenue derived from upstream and midstream petroleum operations." Towards this end of having all petroleum revenue accounted for under this rubric, Section 1(2)[20] states that;

Where there is any conflict between the provisions of this Act and

(a) Any other enactment or

(b) The terms, conditions and stipulations in a petroleum authorisation, on the collection, allocation and management of petroleum revenue, the provisions of this Act shall prevail.

It is no coincidence that the Section immediately following establishes the Petroleum Holding Fund "to receive and disburse petroleum revenue due the Republic."[21] It is toward this end of transparency and accountability that a provision was crafted to have all revenue deposited in one place – the Petroleum Holding Fund – before disbursement. Any other mechanism or interpretation, as sound as it may be, would go against the thinking and rationale, the very spirit of the law for how it was envisioned that petroleum revenue in this country be managed and could potentially open a pandora's box for all sort of endeavours that would provide lacunas for individuals to make their private kills.

## 3.2 The Unitization saga between GNPC, Ghana, And ENI, Vitol before the Stockholm Chamber of Commerce

### 3.2.1 *Introduction*

By a Notice of Arbitration dated 16th August 2021, ENI Ghana Exploration and Production Limited ("ENI")[22] and Vitol Upstream Ghana Limited ("Vitol")[23] hereinafter known as ("The Claimants") pursuant to Article 3 of the 1976 United Nations Commission on International Trade Law Rules (the "UNCITRAL Rules") have brought an action before the Stockholm Chamber of Commerce ("SCC") as appointing authority and administering body against the Republic of Ghana and Ghana National Petroleum Corporation (GNPC) through the law firm Herbert Smith Freehills LLP[24] requesting the Tribunal to:

i. DECLARE that the Purported 9 April [2020] Directive,[25] Purported 14 October [2020] Directive,[26] Purported 6 November [2020] Directive[27] and any other steps taken to

[20] Section 1 - Application

[21] Section 2 – Establishment of Petroleum Holding Fund

[22] Eni Ghana Exploration and Production Limited, Bradley Tower Building, William Tubman Road, Ridge, PMB KA 185 –Accra, Ghana

[23] Vitol Upstream Ghana Limited; Grand Oyeeman Building, Liberation Road, 5th Floor, Airport Commercial Area, KIA 9448 – Accra, Ghana

[24] Its counsel were Craig Tevendale, Andrew Cannon and Charlie Morgan of Herbert Smith Freehills LLP, Exchange House, Primrose Street, London.

[25] The Ministry of Energy directs Eni and Springfield to exchange relevant data, begin the unitization process within [30] days and furnish the Ministry of Energy with a draft UUOA for review and approval within 120 days

[26] Letter from the Ministry of Energy to Eni and Springfield imposing unitisation terms.

[27] Letter from the Ministry of Energy to Eni and Springfield attaching the 'Terms and Conditions for the Unitization and Unit Operations'

implement those directives represent a breach of contract under the Petroleum agreement;

ii. ORDER that the Respondents take no further action to implement the purported unitisation of the Sankofa Field and Afina Discovery on the terms of the 14 October Directive, the Draft UUOA sought to be imposed by the 6 November Directive or otherwise;

iii. ORDER the Respondents to pay damages in an amount to be quantified for the losses suffered by the Claimants arising out of the Respondents' breaches of the Petroleum Agreement, Ghanaian law and international law on a joint and several basis;

iv. ORDER the Respondents to pay all of the costs and expenses of this arbitration, including the fees and expenses of the Claimant's counsel and any witnesses and/or experts in the arbitration, the fees and expenses of the Tribunal and the fees of the SCC on a joint and several basis; and/or

v. ORDER such further or other relief as the Tribunal may in its discretion consider appropriate.

By a Statement of Claim[28] dated 16th February 2022 in a suit intituled *In the Matter of an UNCITRAL ARBITRATION BETWEEN ENI Ghana of Ghana; Ghana National Petroleum Corporation,* the Claimants seek the following reliefs on a joint and several basis or as the Tribunal sees fit:

i. ORDER that the First Respondent withdraw the Purported Directives.

ii. ORDER that the Respondents publish notices on the website of the Ministry of Energy, the Petroleum Commission and GNPC that the Purported Directives have been withdrawn

iii. ORDER that the First Respondent notify the High Court, Court of Appeal and Supreme Court of Ghana that the Purported Directives have been withdrawn.

iv. ORDER that the Respondents do not rely on the Purported Directives in any way to take any steps, whether purportedly in accordance with the Petroleum Agreement or applicable laws or otherwise (and be that in relation to OCTP or any other existing or anticipated rights or interests of the Claimants in Ghana);

v. ORDER that the Respondents take no further action to implement the purported unitization of the Afina Discovery and Sankofa Field on the terms of the Directives or otherwise without the Claimants' written agreement;

vi. ORDER that the Respondents do not procure or otherwise encourage any third party to take steps to enforce, implement or reply upon the Purported Directives or the unitization that they anticipate;

vii. ORDER the Respondents to pay damages in an amount to be quantified for the losses suffered by the Claimants arising out of the Respondents' breaches of the petroleum agreement;

viii. ORDER the Respondents to pay all of the costs and expenses of this Arbitration, including the fees and expenses of their counsel and any witnesses or experts in the arbitration, and fees and expenses of the Tribunal and the fees of the SCC

[28] As noted in Paragraph 16, the Claimants appointed as their party-nominated arbitrator, Judith Gill QC of 02-03 Maxwell Chamber Suites, 28 Maxwell Road, Singapore 069120

ix. ORDER the Respondents to pay compound interest on any and all sums awarded to the Claimants at such rates and at such rests as the Tribunal may consider appropriate, both in relation to the periods prior to and after the issuance of a Final Award; and

x. Such relief or further relief as the Tribunal may consider appropriate

### *3.2.2 Relevant Legislation*

The relevant legislation pertaining to this matter has been deemed by the Claimants to be Section 34 of the *Petroleum (Exploration and Production) Act*, 2016 (Act 919), and Regulation 50 of the *Petroleum (Exploration and Production) (General) Regulations*, 2018 (L.I. 2359).

Section 34 of Ghana's *Petroleum (Exploration and Production) Act*, 2016 (Act 919) states; "Where an accumulation of petroleum extends beyond the boundaries of one contract area into one or more other contract areas, the Minister in consultation with the Commission may, for the purpose of ensuring optimum recovery of petroleum from the accumulation of petroleum, direct the relevant contractors, to enter into an agreement to develop and produce the accumulation of petroleum as a single unit."

Regulation 50 of the *Petroleum (Exploration and Production) (General) Regulations,* 2018 (L.I. 2359) states;

(1) A unitisation and coordination agreement under subsection (1) of Section 34 of the Act shall be governed and construed by the laws of the Republic.

(2) A unitisation and coordination agreement under the Act shall be entered into in accordance with a model agreement provided by the Minister.

(3) A unitisation or coordination agreement and any amendment to the unitisation or coordination agreement shall be submitted to the Minister for approval.

(4) The relevant contractors shall submit to the Minister a draft unitisation and unit operating agreement or an agreement to coordinate and develop separate petroleum accumulations based on the model agreement described in subregulation (1) within six months after the finalisation of appraisal of the petroleum accumulation...

### *3.2.3 Background to Suit*

Springfield Exploration and Production Ltd., Ghana National Petroleum Corporation (GNPC) and its exploration company, Explorco, per petroleum agreement with an effective date of 26th July 2016, were granted a license to a contract area known as the West Cape Three Points Block 2 ("WCTP 2"). Springfield, with an interest of 84%, is the Operator of the Afina Field, which is within WCTP 2, with GNPC and Explorco, holding the remaining interest.

ENI Ghana Exploration and Production Ltd. and Vitol Upstream Ghana Ltd., per a petroleum agreement with an effective date of 5th May 2008, were granted a license over the contract area known as the Offshore Cape Three Points ("OCTP") Area, with ENI being the Operator and having 44.44% interest, Vitol, 35.36% interest, and GNPC, a combined carried and participating interest of 20%. Its Field, known as the Sankofa Field, began production in July 2017, through the FPSO John Agyekum Kufuor.

In March 2018, after acquiring 3D seismic data and conducting analysis on it, Springfield wrote to the Minister for Energy that per its analysis, the Sankofa Cenomanian Reservoir of ENI and

Vitol, extended into its WCTP 2 Contract area. It requested the Minister to direct the parties in both fields, to commence unitization discussions. According to Section 34(1) of the Petroleum (Exploration and Production) Act, 2016 (Act 919);

> Where an accumulation of petroleum extends beyond the boundaries of one contract area into one or more other contract areas, the Minister in consultation with the Commission may, for the purpose of ensuring optimum recovery of petroleum from the accumulation of petroleum, direct the relevant contractors, to enter into an agreement to develop and produce the accumulation of petroleum as a single unit."

By a letter dated 9th April, 2020, the Ministry of Energy informed the parties that the Petroleum Commission had confirmed to the Ministry that the petroleum accumulations of the two oil fields were the same, with the effect that, the Fields straddled each other. The Minister also noted in the said letter that, "It is worthy of note that prior to requesting the Commission to review Springfield's claim, the Ministry had, consequent to Springfield's earlier letter dated 20th March 2018, on this same subject matter, requested GNPC to furnish it with an independent opinion on the veracity or otherwise of Springfield's claim." It went on to state; "GNPC by a letter dated 5th June 2018, with an accompanying technical report, opined that based on interpretation of seismic data, the Sankofa Field extended into the WCTP-2 Contract area." The Minister went on to note that, "Based on this opinion, and to ensure that there was ample evidence to justify unitization, the Ministry advised Springfield to drill their side of the reservoir to confirm the seismic data interpretations...Per the post-drill data and analysis, the Afina-1x Cenomanian reservoir has identical reservoir and fluid properties as the Sankofa Cenomanian reservoir, thus proving further evidence that the two reservoirs are one and the same."

The Minister therefore, among others, directed that Springfield, ENI, and Vitol, begin the process of unitizing the two fields, Afina and Sankofa, and accordingly, furnish the Ministry with a draft Unitization and Unit Operating Agreement (UUOA) within 120 days from the date of the letter. On 18th May 2020, the Ministry wrote to ENI declining a request from the company on the basis of confidentiality, for copies of the Petroleum Commission's independent assessment and GNPC's Report, which formed the basis of the Directives. On 20th May 2020, by an email with a letter attached dated 18th May 2020, ENI and Vitol informed Springfield among other things that, based on data available to them, there was no existence of hydrocarbon communication between the two contract areas. Springfield in a swift response to this email, contended in a letter dated 20th May 2020 that the exchange of data was not a necessary pre-condition for commencing the unitization process and that the data exchange was to enable the parties determine what the structural extent and distribution was, between the respective contract areas.

On 2nd June 2020, ENI, in a letter to the Minister for Energy, stated that, "In fact, it is impossible to confirm whether an accumulation of petroleum extends beyond the boundaries of the OCTP Contract Area without the definitive establishment of hydrocarbon communication across the boundary of two contract areas." On 19th August 2020, the parties and the Ministry held a meeting to discuss the challenges and the way forward, and the Minister informed the parties that he would be issuing a second Directive. The Minister further informed the parties that he had appointed an independent third party to ascertain the parties' respective interest in the unitized field, and would impose the findings of the independent party on them if they failed to comply with the second Directive. The Minister issued a second directive to ENI and Springfield directing them to, among others, execute a confidentiality agreement and exchange data by 26th August 2020, complete each party's respective analysis by 2nd September, and submit a Report on their respective interests to the Minister by 18th September 2020.

On 28th August 2020, ENI informed the Minister for Energy via a letter that, it had been unable despite its best efforts to sign the confidentiality agreement with Springfield within the indicated deadline since there was "no alignment on the purpose of the agreement." On 8th September 2020, Springfield wrote to the Minister, requesting that he proceed to impose on the parties, the findings of GNPC in its Report dated 1st June 2018, as the terms and conditions for the unitization of the Afina and Sankofa Fields. On 14th October 2020, the Minister for Energy imposed terms and conditions on Springfield and ENI. Among others, the Minister stated:

- All rights and interests of the parties under the OCTP petroleum agreement and the WCTP 2 petroleum agreement insofar as they relate to the Unit Interval, the Unit Petroleum and the conduct of Operations in the unit area, were unitized.
- The Unit area would be the Sankofa Field in the Offshore Cape Three Points Area and the Afina Field in West Cape Three Points Block 2 Area. The Unit Internal would be all depths within the Unit area.
- The basis for unitization and for calculating the Tract Participation of the parties was Hydrocarbons Originally in Place (STOIIP). Based on the GNPC Independent Report, the in-place oil volumes for the WCTP tract was 642MMbbls and the OCTP tract, 535MMbbls. Consequently, the Initial Tract Participation of the WCTP 2 Tract and the OCTP Tract in the Unit Area would be 54.545% for the WCTP parties and 45.455% for the OCTP parties.
- All Unit petroleum produced and saved (including all volumes starting from the first hydrocarbon production of the Unit Area) would be allocated to the WCTP 2 Tract or the OCTP Tract in proportion to its Tract Participation.
- All expenditures properly chargeable to the Unit Account (including all costs starting from the development of either the Sankofa or the Afina side of the Unit Area) would be allocated to each Contract Group in proportion to its Tract Participation and among the parties in the applicable Contract Group in proportion to their Group Paying Interests.
- As the Sankofa Field was already in production, ENI would issue to the Parties a Schedule indicating past expenditures for Unit Operations prior to the Effective Date and a schedule indicating past production of Unit Petroleum and reserves derived from sale of such Unit Petroleum from the Unit Area prior to the Effective Date.
- The Parties would reconcile the amount of each Party's aggregate surplus or deficiency of such actual net expenditures and also reconcile the amount of each Party's aggregate surplus or deficiency of such revenue of such Unit Petroleum as if this directive had been in effect prior to the Effective Date. The Parties would set off any aggregate deficiency in past net expenditures against any aggregate surplus in revenue from past production and would only make payment of the outstanding balance, if any, after set-off immediately after such reconciliation.
- As the Sankofa Field was already in production, the past expenditure of the Sankofa Field was to be netted off against the past revenue from the sale of hydrocarbon produced from the Sankofa Field, and any party with a positive balance was to be paid immediately.
- The Parties were to undertake a redetermination exercise within eighteen (18) months of the date of the letter; and
- ENI would be the Unit Operator of the Unit area.

On 28th October 2020, ENI and Vitol wrote to the Ministry of Energy questioning the imposition of the terms and conditions, and to a large extent, rejecting them. ENI and Vitol indicated that

despite repeated requests for data to ascertain whether the fields straddled, data relating to the Afina discovery of Springfield had not been availed to them at all, nor an appraisal of the discovery. They asserted that the approach taken by the Ministry constituted a violation of their rights under Ghanaian law, international law and the OCTP petroleum agreement.

By letter dated 24th November 2020, ENI and Vitol stated that they did not see any legal basis for the UUOA "given that the Ministry's unilateral attempt to impose conditions for the unitization of OCTP and WCTP2 is invalid." They asserted that should the Ministry continue on that path as well as failing to provide them with the requested data, they would have no option "but to take steps to commence enforcement of their rights under Ghanaian law, international law and pursuant to Article 24 of the OCTP Petroleum Agreement." They indicated that this step would not be necessary if by the 2nd of December 2020, they received confirmation of the withdrawal of the Ministry's terms and conditions, and assurances that it would "continue to seek discontinuation by Springfield of the court proceedings" brought against them.

On 4th December 2020, ENI and Vitol sent a Notice of Dispute to the Republic of Ghana, via the Minister for Energy, and later provided GNPC with a Dispute Notice pursuant to Article 24.1 of their petroleum agreement in respect of the Offshore Cape Three Points Area. They lay out their claim as follows:

> ...2. In reliance on GNPC's 'technical report' and 'independent opinion' dated 5th June 2018, which ENI and Vitol have not received but which are referred to in the MoE's letter of 9th April 2020, and the GNPC Report, the Republic of Ghana, acting through the MoE, has sought to impose terms and conditions for the unitization of the Afina Discovery in the West Cape Three Points Block 2 Area and the Sankofa Field in the Offshore Cape Three Points Area ('the purported unitization.')
>
> 3. The Republic of Ghana, acting through the MoE, has by virtue of the purported unitization breached the Petroleum Agreement...
>
> 4. By virtue of producing the 'technical report' and 'independent opinion' dated 5th June 2018 and the GNPC Report, GNPC has enabled the MoE's unlawful conduct in relation to the purported unitization. In doing so, GNPC has also breached the Petroleum Agreement.

They noted that if the dispute was not resolved within the 30 day consultation and negotiation period under Article 24.1, they reserved their right to proceed to refer the Dispute to arbitration in accordance with Article 24 of the Agreement without further notice.

By a Notice of Arbitration dated 16th August 2021, ENI Ghana Exploration and Production Limited ("ENI") and Vitol Upstream Ghana Limited ("Vitol") hereinafter known as ("The Claimants") pursuant to Article 3 of the 1976 United Nations Commission on International Trade Law Rules (the "UNCITRAL Rules") brought an action before the Stockholm Chamber of Commerce ("SCC").

### *3.2.4 Claimants' Claim*

ENI asserts that the Notice relates to a claim for breach by Ghana, the First Respondent of the petroleum agreement dated 2nd March 2006 in respect of Blocks Offshore Cape Three Points Basin, Ghana. ENI asserts that Ghana's national oil company, Ghana National Petroleum Corporation, the Second Respondent, has enabled Ghana's breaches of the Agreement, in breach of its own obligations under and in relation to the petroleum agreement.[29]

[29] Notice of Arbitration -In the Matter of an UNCITRAL ARBITRATION BETWEEN Eni Ghana Exploration and Production Limited; Vitol Upstream Ghana Limited (Claimants) and The Republic of Ghana; Ghana National Petroleum Corporation (Respondents): Par 2

ENI contends that the case "concerns an unjustified attempt by Ghana, facilitated by GNPC, to impose a unitization of the Sankofa Field with the Afina Discovery without first satisfying the mandatory preconditions for the imposition of unitisation terms under Ghanaian law, international law or best international oilfield practice, and in breach of the petroleum agreement."[30] They further note that as a result of Ghana's apparent decision not to require Springfield not to discharge its obligations as operator of WCTP2, there is insufficient data from the Afina Discovery to substantiate a technical case for unitization between the Afina discovery and the Sankofa Field – a unitization between a producing asset and an undeveloped discovery (Brown-Green unitization)."[31]

ENI further asserts that its Sankofa Field is part of the USD$10.6 billion OCTP Project supported by the World Bank and of which USD$6.05 billion has been invested to date and is producing petroleum in large volumes. It contends that in contrast, the Afina Discovery comprises a single exploration well which has neither been appraised nor developed with no evidence that the discovery is capable of producing commercially.[32] The Claimants contend that no appraisal was carried out on the Afina discovery, with only limited data available. They assert that the analysis of that data supported by the First Expert Report of Matthew Wilks,[33] show that the two central requirements for unitization – dynamic communication across the contract area boundary, and of commerciality – have not been met.[34]

The Claimants further contend that the unitization terms that Ghana has sought to impose on them bear no correlation to the data that exists and that despite all the evidence that suggests that the Afina discovery is unlikely to be capable of producing oil at commercially viable rates, those terms unjustifiably seek to transfer a majority interest in the Sankofa Field to the WCTP 2 partners.[35]

The Claimants, referring to the First Export Report, lay out what they consider to be "best international oilfield practice."[36] Drawing from the Expert Report, they note that unitization can occur in three types of scenarios, that is, Green-Green where the straddling petroleum accumulation is undeveloped or 'greenfield in all the tracts; 'Brown-Green' where at least one tract is under production ('brownfield') and at least one Tract is undeveloped ('greenfield') and 'Brown-Brown' where the straddling petroleum accumulation is under production in all tracts. They note that the Sankofa Field has been producing oil since 2017, whereas the Afina is a discovery undeveloped, untested for flow of hydrocarbons, yet to be appraised and yet to be established or declared as commercial.[37] Referring to the First Expert Report, they comment that "brown-green (and brown-brown) unitization or post production unitization is problematic and rarely applied"[38] as it is "very difficult to make a brown-green unitization pareo-optimal" [39] and in circumstances where this cannot be achieved "should be avoided."[40] Drawing again from this Report, they note that, further, according to international best practice;

> [T]he threshold of proof of dynamic communication and economic viability of reserves is much higher for the greenfield Tract in a brown-green unitization[41] [and] any green field in this situation

[30] Statement of Claim (n 5) Par 11
[31] Ibid Par 21
[32] Notice (n 6) Par 4
[33] SLR Consulting
[34] Statement of Claim (n 5) Par 12
[35] Ibid 13
[36] Statement of Claim (n 5) Par 56
[37] Ibid Par 58
[38] Ibid referring to MW1 S 55
[39] Ibid Par 15
[40] Ibid referring to MW1 S 58
[41] MW1 Section 61

> must demonstrate conclusively that there is dynamic Communication, that its hydrocarbon volumes are economically viable and that either a revised development plan or standalone development plan would permit their recovery.[42]

Commenting further and drawing from the First Expert's Report, they contend that, as such, in a brown–green context, "a PUA/UOA will be complex to negotiate – the equitable rebalancing of capital costs and proportionate share of historic capex and opex is a challenging and difficult task. The implications are that the UUOA negotiations in these circumstances can be protracted."[43] Flowing from this, they assert that "As a result, there have been very few examples of brown-green unitizations globally and, like in most other jurisdictions, Ghana's legislation does not address this scenario."[44] They further comment that the AIEN[45] model forms are drafted for a green-green unitization[46] rather than the more complex and rare brown-green[47] unitizations. They conclude later by stating:

> Given the disparity of the data available for the Sankofa Field on the one hand and the Afina Discovery on the other, and the difficulties in rebalancing any historic capex and opex costs in operating the Sankofa Field, robust evidence for each of the substantive requirements would be needed to proceed with the unitization in the two fields.[48]

The Claimants contend that by the force of directives which are not in compliance with the country's own law, Ghana seeks to compel the Sankofa Field to be combined with the Afina discovery and where Springfield with its "untested and unappraised discovery"[49] is granted "a staggering 55.45%"[50] equity interest in the prime asset."[51]

The Claimants assert that the events giving rise to the dispute demonstrate a flagrant disregard by representatives of Ghana and GNPC to the contractual commitments to them and for the harm that their actions stand to cause to them and other OCTP project stakeholders.[52] They note that the other stakeholders include the Respondents themselves, given the risk that continued production from the Sankofa Field and the wider OCTP project could be negatively impacted, thus impacting Ghana's gas supply from the OCTP project as well as the revenues for the Respondents from production of condensates and oil.[53]

The Claimants note that on the face of it, the direct beneficiaries of Ghana's directives are the WCTP Contractors,[54] and primarily Springfield,[55] which holds an eighty-four percent (84%) interest in the Afina discovery. The Claimants contend that evidence will be required from the Respondents about their links with Springfield and their motives for seeking to transfer to the WCTP2 Partners a 54.545% interest in the Sakofa Field based on the limited technical data available from the Afina discovery.[56] They note that Springfield had no prior upstream experience before being awarded Operatorship and an 84% interest in WCTP. They note that reflecting Springfield's lack of prior experience, the WCTP 2 petroleum agreement requires

[42] Statement of Claim (n 5) Par 60 referring to MW 1 s 63
[43] Ibid
[44] Statement of Claim (n 5) Par 61
[45] Association of International Energy Negotiators
[46] They explain that in their Statement of Claim (n 5) Para 62 as "Where neither side of the accumulation to be unitized has been developed and, as such, no production from either contract area has yet occurred."
[47] They explain that in their Statement of Claim (n 5) Par 62 as "the unitization of a non-developed discovery with a producing asset, as would be the case with the Sankofa Field and the Afina Discovery."
[48] Statement of Claim (n 5) 194
[49] Notice (n 6) Par 4
[50] Ibid
[51] Ibid
[52] Statement of Claim (n 5) Par 14
[53] Ibid
[54] The WCTP partners are Springfield (84% interest), GNPC (11% interest) and GNPC Exploration and Production Limited (a GNPC subsidiary known as Explorco) with 5% interest.
[55] They note that Springfield is a Ghanaian company which they understand to be owned indirectly by Ghanaian national, Kevin Okyere, its founder and CEO, and Geena Malkani Punjabi, its COO.
[56] Statement of Claim (n 5) Par 15

Springfield to "assign a material portion of its participating interest to an entity which shall be the technical partner and joint operator of the Contract area."[57] They further comment that the "technical partner" is described as "an entity with the requisite technical and financial capability to undertake petroleum operations."[58]

Commenting further, they note that as far as they are aware, almost six years after the WCTP 2 Petroleum Agreement was signed, Springfield has still not complied with this requirement. They note that Springfield has failed to identify a "technical partner" willing to farm in to WCTP 2 and take on joint operatorship with Springfield as well as a material interest in the Block despite several marketing attempts by Springfield, both before and after drilling the Afina-1x exploration well.[59] They assert that "this failure underlines the evidence of the Claimants' facts and expert witnesses submitted with this Statement of Claim, that WCTP 2 does not appear to be an attractive investment proposition and, based on the Afina Data, does not meet the commercial threshold for unitization."[60]

They go on to express grave concerns about Springfield's financial position which they deem as perilous. They note that it is their understanding that Springfield has not made a number of payments required under the WCTP2 contract, including for example, trainee and technology support payments of at least USD 7 million and that work performed by Springfield in relation to the Afina-1X well has resulted in several claims and judgments against Springfield for unpaid debts.[61] They note further of an awareness of other debts owed by Springfield, including an unpaid judgment debt to Vitol.[62] They assert that "It appears that Springfield's financial position has become increasingly fraught and that it is pursuing a strategy of 'funding through unitization,' which is apparent from documents produced for potential investors."[63]

Flowing from these assertions, the Claimants go on to assert that;

> Ghana has shown no intention to hold Springfield to its contractual obligations in relation to the development of WCTP2. Instead, Ghana, facilitated by GNPC, has been actively supporting Springfield in a scheme intended to enable Springfield to defer further investment in WCTP2 until a unitization between the Sankofa Field and the Afina Discovery has been imposed upon the Claimants on terms that would see a majority interest in the Sankofa Field transferred to Springfield at the expense of the Claimants (and a significant liability imposed on the Claimants for further investment to appraise and, subject to the outcome of that appraisal, to develop the Afina Discovery.[64]

The Claimants thus contend that Ghana – supported and facilitated by GNPC – continue to take steps to impose a unitization based on the Minister of Energy's directives and as a result of their conduct in this regard, Ghana and GNPC are in breach of Ghanaian and international law and the petroleum agreement. They contend that by issuing and maintaining the directives, Ghana has communicated and continues to communicate an intention not to comply with the Petroleum Agreement, in clear breach of it. They further contend that the actions also represent a clear breach of the stabilization provisions of the petroleum agreement and that GNPC, by facilitating Ghana's conduct, is itself in breach of its obligations under the petroleum agreement.[65]

[57] Statement of Claim (n 5) Par 16 making reference to WCTP Petroleum Agreement, Article 2.12 [Exhibit C-8]
[58] Notice (n 6) Par 4
[59] Statement of Claim (n 5) Par 17
[60] Ibid
[61] Ibid
[62] Ibid
[63] Ibid Par 19
[64] Ibid Par 20
[65] Ibid Par 23

The main contention of the Claimants is that Ghana has sought to impose unitization upon them in direct contravention of their rights, applicable law and best international oilfield practice. They further assert that this has been done in wanton disregard for the necessary technical preconditions for unitization and relying blindly on the assertions made by Springfield without technical basis.[66] The Claimants note that they are not opposed to unitization in principle but are not prepared to agree to a unitization without access to data and without confirmation that the requisite preconditions have been made out on the basis of the relevant data and in accordance with the steps required by Ghanaian law and international best practice.[67]

The Claimant's position is that "Without dynamic communication and hence competition for the same reserves from either side of the contract area boundary within the lifecycle of a development, from a technical perspective, unitization will not be justified."[68] In the absence of communication or even static communication between two discoveries, hydrocarbons will not flow from one area to the other because of geological barriers between the two areas and in such circumstances a unitization would not optimize petroleum recovery.[69] The Claimants note that the need to evidence dynamic communication is very fundamental and a basic requirement.[70]

After the main thrust of their claim, the Claimants contend firstly that Ghana has not complied with the requirements for unitization under Ghanaian law. They contend that though the Ministry of Energy purported to order the unitization based on the Petroleum Act, 2016 and the Petroleum Regulations, 2018, it issued the directives for unitization despite the substantive requirements for unitization not being satisfied and without observing the prescribed statutory procedure.[71] They contend that they further exercised their powers in a way that was arbitrary, capricious, biased and in breach of the law[72] and the Minister for Energy did not satisfy himself of the requirement for unitization being met before issuing directives that the mandatory preconditions had been met. Further to that, they contend that even in the face of clear data that substantive requirements for unitization have not been made out, the Minister has chosen to escalate his commitment to it and refused to engage meaningfully with them.[73] It is the position of the Claimants that the Minister for Energy has "made a spurious decision to impose unitization and then sought to contrive a basis to support the decision, rather than making a reasoned decision on the basis of the available evidence and the substantive requirements for unitization."[74]

The Claimants also contend that the Minister for Energy has not complied with the procedure for unitization prescribed by the Petroleum Regulations, 2018, basic principles of good governance and due process, and industry best practice.[75] The Claimants assert that the Afina Discovery has not yet been appraised despite the requirement of Ghanaian law and the WCTP2 Petroleum Agreement, such that the requirement to submit a draft unitization agreement could not have been triggered. Regulation 50(4) of the Petroleum (Exploration and Production) (General) Regulations, 2018 (L.I. 2359)[76] states; "The relevant contractors shall submit to the Minister a draft unitisation and unit operating agreement or an agreement to coordinate and

[66] Statement of Claim (n 5) Par 36
[67] Ibid Par 99
[68] Ibid Par 41
[69] Ibid
[70] Ibid Par 43
[71] Ibid Par 173
[72] Ibid
[73] Ibid Par 189
[74] Ibid Par 192
[75] Ibid Par 198
[76] Regulation 50 – Co-ordination of petroleum activities and unitisation

develop separate petroleum accumulations based on the model agreement described in the subregulation within six months after the finalisation of appraisal of the petroleum accumulation." Further, the Claimants contend that the Ministry of Energy has obstructed and/or denied the Claimants access to the relevant data on which the Ministry has relied.[77] Further to that, it is noted that the Ministry of Energy sent a proposed Unitization Agreement but only after the Directives seeking to impose unitization terms had been issued.[78] It is the Claimants' position that in any event, even if the preconditions for issuing the 9th April directive had been made out – which the Claimants deny – the timeframes stipulated therein could not comply with the requirements of the Petroleum Act or the Petroleum Regulations, 2018.[79]

The Claimants also assert that the Ministry of Energy has failed to act in a reasonable, fair and transparent manner towards them. In this regard, the Claimants note that the Minister for Energy has consistently fallen short of the standards required of him and his position under the Ghanaian constitution and the Petroleum Act in relation to the directed unitization and in his broader dealings with the Claimants. The Claimants in illustrating this, note that the Minister for Energy did not require Springfield to complete an appraisal for the Afina Discovery, contrary to the requirements of the West Cape Three Points (WCTP 2) Agreement, Ghanaian law, industry practice and what is expected from other operators active in Ghana.[80] They contend that, having drilled the Afina-1X exploration well in 2019, their understanding is that Springfield is yet to submit an appraisal programme in relation to the Afina discovery, and that Springfield has not appraised any of the 'existing discoveries' within WCTP2, contrary to the terms of that petroleum agreement.[81] They further note that in reliance on the insufficient and incomplete data provided by Springfield, the Minister for Energy issued unitization orders without satisfying the substantive requirements of the Petroleum Act and observing the procedure stipulated in the Regulations, 2018.[82] The Claimants argue that in doing so, the Minister for Energy relied on reports produced by GNPC, which was "purportedly"[83] appointed as an independent third party even though it is obviously not independent given that it is controlled by Ghana and a party to both the WCTP2 and OCTP Agreements.

It is also asserted that despite the requests of the Claimants, GNPC has not disclosed its analysis of June 2018 to them or the JMC. They note that they have however been able to review the GNPC Report which reached conclusions which are "tendentious and unsubstantiated to the extent that GNPC must have known them to be flawed from a technical perspective"[84] and its CEO's attempts to distance himself from the Report confirms same.[85] The Claimants assert that the GNPC Report on which the purported Directives are based are "methodologically and technically flawed"[86] and does not support the case for unitization. The Claimants go on to assert that nonetheless, after providing the Ministry of Energy with their Internal Technical Report setting out some of the flaws in the GNPC Report, the Ministry has failed to engage meaningfully with them.

Still under the same heading of argument, the Claimants note that the Ministry has consistently acted in an opaque manner and refused or obstructed the Claimants' access to the underlying data on which the decision for unitization is based and is required to properly assess the case for

[77] Ibid
[78] Ibid
[79] Ibid
[80] Ibid Par 198
[81] Ibid Par 18
[82] Ibid
[83] Ibid
[84] Ibid Par 214
[85] Ibid
[86] Ibid

unitization.[87] They assert that the data has not been shared with them to date and has not been shared voluntarily by the Ministry and it was only through Discovery in the Ghanaian courts that they have had access to this data, or provided, subject to strict confidentiality requirements, and demanded back again in short order by Ghana pursuant to the terms of the confidentiality agreements, and only produced in arbitration after months of correspondence and under threat from them of an application to the Tribunal.[88]

The Claimants further contend that contrary to the assurance by the Minister to the Claimants in August 2020 that he had engaged an independent third party of international repute to consider the case for unitization, no such independent third party has been ever engaged or if was, that information has not been shared with them.[89] Further arguing out their case that the Ministry has failed to act in a fair, reasonable manner, the Claimants contend that when certain information that the Ministry tried to keep from the claimants was eventually shared - for example through disclosure in court proceedings – it was apparent that the Ministry had misrepresented the contents of relevant documents. Citing an instance, the Claimants comment that in the 9th April Directive, the Ministry relies on a 2nd April 2020 letter from the Petroleum Commission and assert that it had come to the conclusion that the Afina discovery accumulations and Sankofa Field are "one and the same."[90] However, when the letter was eventually disclosed to the Claimants - despite the Ministry's attempts to withhold it - the summary of the letter turned out to be untrue and rather what the letter did show was that the Petroleum Commission had noted that GNPC was not "independent" and informed the Ministry that the preconditions for unitization according to Ghanaian law and best international oilfield practice had not been made out.[91] The Claimants conclude by asserting that both points were and continued to be ignored by Ghana in an apparent goal to see the WCTP 2 partners led by Springfield, being transferred a majority interest in the Sankofa Field.[92]

The Claimants highlight at least two more instances which in their view the Ministry has tended to act capriciously and further note that the Minister for Energy in a series of meetings which took place between February and October 2021 displayed his personal hostility and bias against the Claimants by making repeated threats along with accusations.[93]

The Claimants note that Springfield appear to put forth that it is the Claimant's burden to make out the case that unitization is not warranted and assert that, it is rather the case of Springfield.[94]

The Claimants assert that the practical effect of Ghana's "unlawful unitization" is playing out in the Ghanaian courts and Springfield, emboldened by the State's actions is suing the Claimants seeking to enforce its alleged rights in the Sankofa Field.[95] The Claimants note that on 25th June 2021, "notwithstanding the clearly baseless nature of Springfield's claim,"[96] Ghana's High Court of Justice, Accra, ordered the Claimants to pay 30% of their revenue from the Sankofa Field into an interest bearing account with a bank to be agreed between the parties pending the final resolution of the matter.[97] The Claimants thus contend that the directives – "imposed by Ghana and relied upon by Springfield" are causing them to suffer "material prejudice"[98] in Ghana with

[87] Ibid Par 198
[88] Ibid
[89] Ibid
[90] Ibid
[91] Ibid
[92] Ibid
[93] Ibid
[94] Ibid 19
[95] Notice (n 6) Par 6
[96] Ibid, Par 7
[97] Ibid
[98] Ibid

the likelihood of suffering "significant further prejudice"[99] if additional steps are taken to implement the said directives and unitization enforced.[100]

#### *3.2.4.1 Ghana being in breach of the Petroleum Agreement*

The Claimants assert that Ghana has indicated and continues to indicate its intention not to perform obligations under the petroleum agreement. They note that the Ministry's conduct amounts to a breach of the petroleum agreement, supported and facilitated by GNPC, in breach of its own obligations.[101] Enumerating their rights and obligations in the Petroleum Agreement, they state them as:

a. Their right to conduct Petroleum Operations in the OCTP area (which includes the Sankofa Field).[102]

b. The agreed distribution of the gross production of crude oil between them, GNPC and the State; They note that Article 10 of the Agreement sets out the specific entitlements, and order of entitlement of GNPC and the State.[103]

c. The preservation of confidentiality of data and information provided by them to Ghana and GNPC.[104]

d. Their ownership of the oil distributed to them pursuant to the terms of the petroleum agreement.[105]

e. Their entitlement to receive and utilize freely abroad all foreign currency obtained from the sale of petroleum that have been assigned to them under the petroleum agreement.[106]

f. Their ability to manage the OCTP operations under the guidance of the Joint Management Committee;[107] though required to submit work programmes to the JMC for advice and concurrence, the JMC's approval is not required to carry out such operations.

They note that in the 14th October Directive, the Ministry imposed terms and conditions of unitization to take effect from the date of the letter. Those terms they claim, directly cut across their rights under the petroleum agreement and therefore indicates the country's intention not to perform its obligations under the petroleum agreement.[108] They further contend that the Ministry compounded this breach a few weeks later in a 6th November Directive, which enclosed the Draft UUOA imposing "further terms and conditions" that would "govern all unitization and unit operations within the Unit Area."[109]

It is their contention that the UUOA seeks to alter the rights and obligations of the parties under the petroleum agreement, by among other things, stipulating in line with the 14th October Directive that all rights and interest of the WCTP2 and OCTP parties under the petroleum agreement as they relate to the unit have been unitized, that the produced oil ("unit substances") will be allocated in proportion to the parties' tract participation set by the Ministry,[110] that all unit operations will be carried out in accordance with and subject to the

[99] Ibid
[100] Ibid
[101] Ibid Par 201
[102] Ibid
[103] Ibid
[104] Ibid
[105] Ibid
[106] Ibid
[107] Ibid
[108] Ibid Par 202
[109] Statement of Claim (n 5) Par 203
[110] Ibid

provisions of the UUOA[111] and granting each party a "perpetual, royalty-free, irrevocable, non-exclusive license to use the data and information..."[112] The Claimants however assert that any data from the Sankofa Field falling within the scope of this provision would be contrary to the petroleum agreement's confidentiality terms.[113] The Claimants also note that though this provision is said to be subject to the petroleum agreement, this safeguard is practically moot as it will be impossible to operate the unitized fields without data sharing.[114]

They further assert that the Ministry breached this Agreement by providing that the wells, facilities and other real property and tangible personal property be deemed to be unit facilities and the parties holding existing right in such property transfer their rights to the parties collectively in proportion to their unit interests.[115]

The Claimants also make reference to the establishment of a Unit Operating Committee (UOC) consisting of a representative of each party to "provide for the overall supervision and direction of Unit Operations"[116] and which has the power to approve or reject the Unit Development Plan and Development Work Programme and budget. The Claimants contend that this is contrary to the terms of the petroleum agreement which stipulates that the JMC carry out this function with respect to the OCTP Work Plan, which includes the Sankofa Field.[117]

Further, they argue, whereas the Claimants have the right to conduct exploration operations without the JMC's express approval under the petroleum agreement, the Draft UUOA takes away this right and provides that "No Exploration Operation or Appraisal Operation shall be conducted unless it is approved by the [UOC]."[118] They further argue that under the draft UUOA, the Claimants are required to share in the expenses of the Unit and can be held in default if such expenses are not paid.[119] They note that a defaulting party under the UUOA loses its entitlement to its share of the oil production and other proceeds as well as other rights including its right to attend and vote at meetings and to request a redetermination of Tract participation – until the amounts owed are set off. It is thus their argument that the provisions are liable to alienate their rights to their share of the gross production of crude oil under the petroleum agreement in a way not provided for by the Agreement and, indeed, can curtail their management of the Sankofa Field altogether.[120]

They further argue that under the draft UUOA, they will be constrained not to amend the OCTP Petroleum Agreement to the extent such amendment will impact upon unit operations. They note that these constraints will negatively impact them for example if amendments to the petroleum agreement that will benefit the overall OCTP integrated project are blocked by the WCTP2 partners to prioritize oil production from the unitized area.[121]

They note that the Draft UUOA can be read to require that if Springfield's share of costs in relation to the ongoing costs have to be financed from external sources, they will be required also to participate in any relevant fundraising.[122] They contend that in contrast, the 'neutral' 2020 AIEN model form does not require the parties to engage in shared financings.[123] They assert

[111] Ibid
[112] Ibid Par 203; Annexure J was in placeholder form in the draft circulated to the Claimants.
[113] Ibid Par 203
[114] Ibid Par 203
[115] Draft UUOA, Article 4.7(a) [exhibit C-38]
[116] Draft UUOA, Article 8.2 [Exhibit C-38]
[117] 58 Par 203
[118] Draft UUOA, Article 9.1 (a) [Exhibit C-38]
[119] Statement of Claim (n 5) Par 203
[120] Ibid
[121] 59
[122] Ibid
[123] Ibid

that given the understanding of Springfield's "precarious financial position,"[124] such provisions are of grave concern to them and could materially impact upon the profitability of the venture.

They contend that in view of the above, Ghana has clearly communicated an intention not to comply with the obligation under the petroleum agreement.[125]

The Claimants also go on to argue that Ghana has breached the stabilization regime in Article 26 of the Petroleum Agreement by issuing the Directives. They note that the agreement contains a freezing, economic equilibrium and an intangibility clause. The claimants assert that on a plain reading of the intangibility and freezing clauses, Ghana is in breach of the Petroleum Agreement if directly or through its agencies or departments, takes action which prevents or impedes the performance of the obligations and rights under the agreement, modifies, alters or supplements the obligations and rights in the petroleum agreement, including by way of an administrative or legislative act, fails to preserve the stability of the conditions and terms of the petroleum agreement as at the Effective Date, including those based or subject to Ghanaian regulations and laws.

Further, they argue, the purported directives seek to impose conditions and terms with immediate effect for the unitization of the Sankofa Field and Afina Discovery without an agreement in writing executed by the parties and that those conditions and terms will "dramatically modify, amend, alter and supplement the Claimants' rights in the Petroleum Agreement" which are protected by the freezing and intangibility clauses.[126] Contending further, they note that there can therefore be no doubt that the Ministry has failed to guarantee the stability of the conditions and terms of the Petroleum Agreement and that the purported directives are amending, modifying, altering or supplementing the rights and obligations in the petroleum agreement.[127] They note that by issuing the Directives, and by virtue of every step taken by Ghana since then to mandate a unitization, Ghana has committed multiples breaches of the stabilization provisions contained in the petroleum agreement.[128]

The Claimants thus contend that Ghana has facilitated breaches of the petroleum agreement and Ghanaian and international law. They note that the Petroleum Agreement provides for the cooperation between GNPC and the Claimants in relation to operations of the OCTP Field "by GNPC in association with Contractor."[129] They thus note that whilst ENI as Operator carries out day-to-day operations of the Sankofa Field, GNPC has had an active role under the Petroleum Agreement as well[130] and that the Petroleum Agreement provides that GNPC "shall at all times participate in the management of Petroleum Operations"[131] and that the Joint management Committee - of which GNPC is a member – which was established so that the parties would cooperate in the implementation of operations is tasked with "overseeing and supervising the petroleum operations."[132] They further note that the unitization directly affects the development and production of petroleum in the Sankofa Field and is accordingly an activity related to petroleum contemplated under the Agreement. However, they argue, it has transpired that GNPC has actively taken steps to advance or justify the unitization of the Sankofa Field and Afina Discovery without ever raising the issue at the JMC.[133]

[124] Ibid
[125] Ibid Par 204
[126] Statement of Claim (n 5) Par 207
[127] Ibid Par 208
[128] Ibid Par 209
[129] Petroleum Agreement, Article 2.1 [Exhibit C-1]
[130] Statement of Claim (n 5) Par 212
[131] Petroleum Agreement, Article 2.2 [Exhibit C-1]
[132] Petroleum Agreement, Article 6.1 [Exhibit C-1)
[133] Statement of Claim (n 5) Par 213

The Claimants assert that it is clear that contrary to the collective framework provided by the Petroleum Agreement, GNPC has taken an active role in facilitating breaches of the Agreement and Ghanaian and international law, forming a course of conduct that has led to the issuance and continued reliance by the Ministry on the Directives.[134] It is their position that Ghana and GNPC are obviously collaborating "to reach a shared objective,"[135] which it deems as unsurprising given that Ghana ultimately owns and controls GNPC. Flowing from that, they note that "Of course, it is fanciful to suggest that the GNPC analysis from June 2018 or the GNPC Report are 'independent,' or that GNPC could ever produce an independent report in the circumstances."[136]

Further, it is contended, at the time GNPC produced the Report, Ghana had already indicated being set on unitization, including by way of the 9th April Directive and subsequent correspondence, and Springfield had commenced the proceedings seeking to compel unitization through the courts.[137] The Claimants assert that "GNPC produced the technically flawed GNPC Report"[138] without informing the JMC or consulting the parties, "which appeared to mirror information produced by Springfield as presented to potential third party investors months earlier than the GNPC Report, in order to provide (albeit spurious and flawed) technical credence to the MoE's prior conclusion that unitization should take place."[139] They continue on to assert that "GNPC then continued to toe the line even in the face of technical evidence undermining the GNPC Report, and refused to share the data on which the GNPC Report was based."[140] They assert that these actions breached the Petroleum Agreement and directly facilitated breaches of the petroleum agreement, Ghanaian and international law.[141]

The Claimants go on to assert that Ghana and GNPC are jointly and severally liable for breaches of the petroleum agreement, Ghanaian and international law.[142] Particularizing this, they note that in keeping with the relationship of control between Ghana and GNPC, the Petroleum Agreement[143] contemplates that the country and the national oil company act as a unit in relation to the obligations and rights under the Agreement.[144]

The Claimants further contend that the said breaches of the petroleum agreement and Ghanaian and international law are causing and will continue to cause them significant loss[145] and other serious harm and that in particular, they will suffer "immediate and enduring losses."[146] They assert that they will suffer significant harm if the unitization is imposed on the terms of the Directives.

#### *3.2.4.2 Adverse Effects Asserted by the Claimants*

Commenting on the adverse effect of the unitization on them, the Claimants assert that their exclusive rights to the exploitation of the Sankofa Field under the petroleum agreement will be lost and further, will be deprived of a 43.636% interest in the Sankofa Field and incur a potential

[134] Ibid Par 215
[135] Ibid
[136] Ibid
[137] Ibid
[138] Ibid
[139] Ibid
[140] Ibid
[141] Ibid
[142] Ibid Par 220
[143] Articles 24.1, 26.1 and 26.7
[144] Statement of Claim (n 5) Par 219
[145] Ibid Par 221
[146] Ibid

liability for 36.364% of costs to be incurred in relation to the appraisal and development of the Afina Discovery.

Contending further, the Claimants assert that the UUOA which Ghana has sought to impose on them will force them into an unwarranted collaboration with Springfield, about which they have, "for good reasons, serious concerns in terms of (lack of) experience, reputation, financial position and reliability."[147] They note that in fact they are engaged in court proceedings brought against them by Springfield in which the latter has been "making spurious claims…entirely unfounded in law and in fact."[148] They note that further, affiliates of the Claimants have unpaid debts owing from the Springfield Group and they are aware of a number of outstanding judgments against Springfield and its affiliates. [149]

It is further the contention of the Claimants that Springfield will accrue contractual rights at their expense. Citing as an example, they refer to the fact that certain infrastructure such as wells, facilities, real property and tangible personal property in which they have invested more than USD$6 billion in total and which have been used by them for the development of the Sankofa Field and OCTP gas project could be deemed as shared Unit facilities and given the tract participations set by Ghana and GNPC, will require them to transfer the majority of their interests to the WCTP2 parties.[150]

The Claimants further contend that they will lose the majority of the revenue of the Sankofa Field, to which they are entitled under the Petroleum Agreement as the WCTP2 parties would have about a 55% claim to the unit revenues. They assert that there is no indication that Springfield or the Ghanaian High Court – should it eventually uphold Springfield's claim for the implementation of the Directive – intend for Springfield first to reimburse them for the pro rata share of the unrecovered sums expended on the Sankofa Field, claiming it to be USD$2 billion on a 54.545% interest. They note that this retroactive adjustment on costs and revenues represents a basic feature of any unitization process and that it is unclear how Springfield will be able to fund this payment itself or raise such significant financing from third parties in order to do so, particularly given the company's failed attempts in the past to attract investors for its project as well as its record of unpaid debts.[151]

It is further their contention that Springfield will have a blocking vote in the Unit, which it can use to deadlock the Sankofa Field operations,[152] which will have a significant impact on their operations in light of the resulting decline in operational activities. They assert that such deadlock will prevent them from meeting ongoing financial obligations to third parties, including external lenders of Vitol as well as multilateral agencies, exposing them to reputational and financial harm.

Noting that even if the deadlock does not occur, the Unitization will have a material impact on their operations beyond the Sankofa Field, they assert that the OCTP project is an integrated one, consisting of oil and gas operations with shared facilities and infrastructure and that if Springfield is to have a controlling interest and blocking vote in respect of the use of that infrastructure, resources currently used for both the OCTP oil and gas projects could be redirected from gas operations (in which Springfield would not have an interest) to oil operations (in which Springfield would have an interest) and that theoretically Springfield could

[147] Ibid
[148] Ibid
[149] Ibid Par 222
[150] Ibid
[151] Ibid
[152] Ibid

block their usage for gas.[153] They note further that the unitization will conflict with the existing project financing and therefore cause serious challenges for the continued operation of the OCTP project as a whole.[154]

The Claimants further assert that their cash flow, capital expenditure and reinvestments could be impacted in a way that will echo through their future operations as the Unit will inherit Springfield's budget and authorizations for expenditure for the Afina Discovery as part of the Unit's work programme. It is their position that they will thus incur a significant share of the costs of the WCTP operations in relation to the Afina discovery which remains undeveloped, unappraised and yet to be declared commercial. [155]

Commenting further on the risk they will supposedly assume, they note that they will assume the risk for Springfield's operational and environmental liabilities in relation to work carried out in WCTP2. They classify this risk as "significant" noting that Springfield has no known experience in the subsurface industry – in which operations are inherently high risk and highly specialized – and they have no control over Springfield's operations in WCTP to date.

It is further their contention that the "forced unitization, without adequate technical justification[156]" will lead to a damage of their goodwill and reputation in the industry.

They estimate that the value of their potential loss if the dispute is further aggravated during the course of the arbitration could be in excess of USD$7 billion.

The Claimants go on to assert that in any event, the Directives and the continued possibility of imminent action by Ghana and/or unitization imposed by the courts in reliance on the said Directives caused by Ghana's refusal to suspend the Directives whiles the arbitration is pending has already caused them significant harm. They particularise these as;

Firstly, in light of the "further arbitrary action by Ghana", they are not able properly to utilize their rights under the petroleum agreement. They represent that they have already had to defer investment to convert a gas injector well into a production well, thus delaying approximately USD$50 milion in capital expenditure and resulting in losses of USD$12 million in sunk costs for them, which would have generated additional production for them in 2023 in the region of 3.5 Mbbls over the life of the well.

Secondly, in accordance with comments made by the Ministry on multiple occasions, the agreement of a petroleum agreement on WB Block 3 and the approval of an appraisal programme for the new discoveries by ENI and an affiliate of Vitol in CPT Block 4 appear to be delayed by Ghana for reasons linked to the unitisation dispute.

They canvass thirdly, that a significant amount of internal management time has been spent by them to address the ramifications of Ghana and GNPC's conduct, leading to wasted costs and associated opportunity costs.[157]

They further canvass as a fourth point, that compliance with the preservation of Funds Order subject to their appeal, will impose significant constraints on their ongoing use of funds derived from the OCTP Project. They contend that the requirement to deposit 30% of revenues from the Sankofa Field into Court will have a "considerable negative impact"[158] on their ability to meet future operational costs and their obligations under the Project Financing arrangements.[159]

[153] Ibid
[154] Ibid
[155] Ibid
[156] Ibid Par 222
[157] Ibid Par 224
[158] Ibid
[159] Ibid

They also note that there is no guarantee as things stand, that they will be able to recover those funds, even if they succeed in arbitration. Further, they note, Springfield recently made an application to expand significantly the scope of the (varied) Preservation of Funds Order, to require the Ministry and GNPC to pay into Court, all payments due in relation to the OCTP Agreement and a Gas Sales Agreement relating to the gas produced from OCTP. They note that it appears that the Ministry and GNPC have no intention to oppose the said application, further confirming their intention not to comply with their obligations under the petroleum agreement or uphold the rights of the Claimants under it.[160]

They canvass as a last point that, they have suffered reputational damage in Ghana and beyond as a result of press reports "incorrectly"[161] portraying them as unlawfully seeking to deprive the country and its citizens of revenues from the OCTP project.[162]

### *3.2.5 The Case of Ghana*

Ghana in response, in its Statement of Defence dated 7th September 2022 has requested the Tribunal to issue an Award, ordering and declaring that:

i. All of Claimants' claims are denied with prejudice in their entirety because they are inadmissible or otherwise impermissible.

ii. Should the Tribunal conclude that Claimants' claims are admissible, Respondents have not breached any obligation owed to Claimants and Claimants' claims are denied in their entirety with prejudice;

iii. Should Respondents be found to have breached any obligation owed to Claimants, (1) Claimants' request for damages is denied because Claimants' have not met their burden to prove actual loss proximately caused by the Respondents, and (2) Claimants' request for injunctive relief is denied because such relief improperly intrudes on the sovereignty of Ghana to manage its natural resources and because an award of injunctive relief would be unenforceable;

iv. Claimants have breached the OCTP petroleum agreement and violated Ghanaian law.

v. As a result of Claimants' breach of the OCTP Petroleum Agreement and violation of Ghanaian law, damages are due to Respondent in an amount to be quantified at a later stage of these proceedings;

vi. Claimants are ordered to adhere to the Ministry of Energy's lawfully-issued directives, including the April 2020, October 2020 and November 2020 Directives;

vii. Claimants are ordered to pay all costs and expenses related to this arbitration, including but not limited to the expenses and fees of the Tribunal, the administrative fees and expenses of the Stockholm Chamber of Commerce, and all costs of Respondents' legal representation, witnesses and expert assistance; and

viii. Granting any other or additional relief as may be appropriate under the circumstances or as may otherwise be just and proper

ix. Respondents' expressly reserve their rights, without limitation, to supplement or otherwise amend the above requests for relief, as Respondents consider necessary.[163]

[160] Para 224
[161] Ibid
[162] Ibid
[163] Statement of Defense dated 7th September 2022 – Government of Ghana and GNPC

### *3.2.6 Reply by Claimants*

In Reply to this Statement of Defence, the Claimants have requested the Tribunal to grant them relief on a joint and several basis on the terms enumerated below or as the Tribunal deems fit:

i. DECLARE that First Respondent has breached the Petroleum Agreement by virtue of its conduct in issuing and refusing to withdraw or prevent reliance by third parties on the Unitization directives;

ii. DECLARE that the First Respondent issued the Unitisation Directives without observing the requirements of Ghanaian law;

iii. DECLARE that Second Respondent breached the Petroleum Agreement by virtue of its conduct in support of the First Respondent's issuance and refusal to withdraw or prevent reliance by third parties on the Unitization Directives;

iv. ORDER that the First Respondent notify the High Court, Court of Appeal and Supreme Court of Ghana that the Unitization Directives were issued in breach of the Petroleum Agreement and without observing the requirements of Ghanaian Law;

v. ORDER that the First Respondent notify Springfield that the Unitization Directives were issued in breach of the Petroleum Agreement and without observing the requirements of Ghanaian law;

vi. ORDER the Respondents to pay damages in an amount of USD$851.6 million (or such other amount as the Tribunal sees fit), for the losses suffered by the Claimants arising out of the Respondents' breaches of the Petroleum Agreement;

vii. ORDER the Respondents to pay all the costs and expenses of this arbitration, including the fees and expenses of the Claimants' counsel and any witnesses and/or experts in the arbitration, the fees and expenses of the Tribunal and the fees of the SCC;

viii. ORDER the Respondents to pay compound interest on any and all sums awarded to the Claimants at a rate and at such rests as the Tribunal may consider appropriate, both in relation to the periods prior to and after the issuance of a Final Award;

ix. DISMISS all reliefs sought by the Respondents; and

x. DECLARE or ORDER such further or other relief to the Claimants as the Tribunal may consider appropriate.[164]

The matter remains ongoing.

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[164] Reply dated 6th February 2023 – ENI and Vitol

# 4

# DOWNSTREAM POLICY AND REGULATORY REVIEW

## 4.1 The Draft National Fuel Quality Policy (NFQP)

The Ministry of Energy took steps in the year under review to develop policies towards the attainment of the NETF's 2030 net-zero targets. This followed a pre-feasibility study on biofuel supply and usage in Ghana as well as a comprehensive stakeholder engagement. As of the end of the year, the Ministry was yet to submit Memorandum on the draft policy to Cabinet for consideration.

### *4.1.1 Policy Rationale*

While the National Petroleum Authority's (NPA) initiatives to improve transport fuel quality and enforce compliance have considerably reduced products of incomplete combustion in vehicles, lifecycle greenhouse gas (GHG) emissions, particularly CO2, have persisted and continue to rise alarmingly.

This is evidenced by the fact that the present national energy system relies primarily on fossil fuels, and there are sufficient economic fossil fuels to continue this trend throughout the twenty-first century. Continued economic development in Ghana in subsequent years will only guarantee further continued growth in energy demand. This is problematic because CO2 emissions exist in a steady state as a product of complete combustion, persist long-term, and accumulate in the atmosphere, thereby, compromising local and global efforts to ensure that the net anthropogenic carbon dioxide emissions decline to zero to stabilize the atmospheric CO2 concentration and tackle climate change. Moreover, the average concentration of particulate matter (PM2.5) in 2023 exceeded the World Health Organization's (WHO) annual guideline of 5µg/m3 by approximately seven times, highlighting the ongoing air quality concerns and further exacerbating the issue of global warming.

The use of renewable fuel components in petroleum products and/or alternative fuels with lower GHG intensity, etc. can address these challenges, allowing for carbon intensity management in the transport sector while also achieving climate goals set by the National Energy Transition Framework (NETF). However, this new approach to using relatively low-cost fossil fuel resources is associated with a comparative increase in energy costs.

This is because, aside from the relative maturity of the fossil-derived supply value chain, the external cost of climate change from transport GHG emissions is not reflected in the petroleum products' pricing formula. Therefore, Petroleum Service Providers (PSPs) on their own, are unlikely to undertake the necessary measures to reduce GHG emissions from the transport fuel supply pool, at least not in the near term. This is evidenced by the fact that current GSA fuel standards allow for renewable components in gasoline, diesel and ATK. Yet, periodic fuel quality monitoring has recorded no presence of them in the transport fuel pool.

The NFQ policy will seek to overcome this issue by expanding the focus of fuel quality standards and enforcement regime to include a lower carbon intensity framework for future fuels to be supplied and used in the petroleum downstream sector. This is expected to incentivize the supply of low-carbon fuels as well as biofuel blends for use in the country.

### *4.1.2 Vision*

The vision of the National Fuel Quality Policy (NFQP) is to ensure increased access and adoption of a cleaner transport fuel supply value chain to mitigate the effects of climate change and preserve public health.

### *4.1.3 Policy Goal*

The goal of the NFQP is to reduce carbon intensity from transport fuel supplied by at least 5% per unit of energy by 2035, relative to average life cycle GHG emissions from fossil fuels in 2019.

### *4.1.4 Key Objectives*

The NFQP has four (4) key objectives, namely:

a) Improve air quality;

b) Reduce carbon intensity from fossil fuel pathways;

c) Ensure access and promote the use of lower carbon-intensity fuels without any detriment to the natural ecosystem, biodiversity and food reserves of the country;

d) Optimize the GHG performance of renewable components to be introduced into conventional transport fuel.

### *4.1.5 Strategies/Policy Directions to Achieve the Key Objectives*

a) MTBE phase out as a gasoline additive and/or oxygenate

b) Implement the "National Low Carbon Fuel Promotion Scheme" (LCPS) to:

   i. ensure end consumers' access to sustainable biofuel blends and alternative fuels;

   ii. Promote natural gas use over fuel oil for refinery steam production and internal power generation; or

   iii. any other efficiency savings during the refining of crude oils that would lead to reductions in the GHG intensity of the final product;

   iv. incentivize Oil Marketing Companies and Tanker Owners to prioritize the use of BRVs powered by fuels of lower carbon intensity over gasoline/diesel-powered BRVs to distribute fuels to filling stations (secondary transportation);

   v. Encourage BOST to maximize the use of existing pipeline capacity over gasoline/diesel-powered Bulk Road Vehicles (BRVs);

   vi. incentivize private sector participation in the construction of new pipelines to displace more fuel distribution by road etc.

   vii. provide infrastructure development assistance for the respective supply chains of fuels recognized under the NFQP as renewable components and alternative fuels

c) Set up the Low Carbon Fuel Promotion Fund to support the activities related to the LCP Scheme.

d) Impose a "Duty of Care" provision on fuel suppliers for the re-export of petroleum products.

e) Develop a framework for sustainability control and certification for renewables to be introduced into fossil-derived fuels

## 4.2 Inter-Zonal Pipeline Infrastructure Tariff Policy

### *4.2.1 Policy Rationale*

The National Petroleum Authority (NPA) ensures that the prices of petroleum products include an element that represents the estimated cost of primary distribution. This is premised on the rate charged on pipelines, Bulk Road Vehicles (BRVs) and barges used for petroleum products transfer among BOST's zonal depots.

Since the installation of the TAPP and B2P3, the petroleum product pipeline distribution tariff has been benchmarked on the UPPF freight rate, at a level of twenty-five percent (25%) for the equivalent distance covered. Periodically, when the need arises, the freight rates are subjected to an upward revision, resulting in more revenue to complement the BOST margin revenue to manage the interzonal pipeline infrastructure network. The UPPF rate-making framework provides a high level of simplicity and ease of implementation for all stakeholders involved in the distribution of petroleum products. However, the framework is tied to the market-based freight rates for the most dominant fuel distribution mode, BRVs, for the secondary distribution of petroleum products. This rate-making framework does not accurately reflect the actual costs of pipeline operations and maintenance. It also has minimal flexibility to account for varying pipeline conditions or investment needs. Cumulatively, the framework makes it more difficult to justify and attract the necessary strategic partnerships from the private sector to finance large-scale, inter-zonal pipeline construction and expansion projects.

By way of policy, the Ministry shall seek to delink the current rate-making process for secondary distribution from that of inter-zonal pipeline distribution. Based on regulatory precedence, international best practices, pragmatism, and taking into account the diversity of the assets and the Ghanaian market it must serve, the PIT policy shall provide the principles, methodology and processes for determining and approving inter-zonal petroleum product pipeline tariffs.

### *4.2.2 Policy Goal*

Set out the principles, methodologies and processes by which the inter-zonal pipeline tariffs shall be determined and approved by the NPA.

### *4.2.3 Policy Development Status*

The Ministry of Energy put together a technical working group, chaired by the Chief Director, to prepare the inter-zonal PIT policy. The policy formulation process began with gathering data on the current pipeline infrastructure, then reviewing the existing tariff structure and determining its impact on the petroleum downstream market. International best practices and case studies were examined. This was followed by consultations with stakeholders and industry experts to better understand the various perspectives and concerns on the subject matter. Based on the information obtained, various tariff structure options were developed and assessed to determine the best fit for achieving the PIT policy's objective. The recommended option underwent a legal and regulatory review to ensure compliance with existing laws and regulations. Consequently, a draft policy was prepared and presented to BOST and the NPA for stakeholder feedback and policy refinement. Final adjustments are being made based on the inputs received.

## 4.3 Fuel Temperature Compensation Policy

### *4.3.1 Policy Rationale*

The mean maximum and minimum annual temperature for Ghana is 32.5˚C and 22.1˚C respectively, with higher temperatures generally exhibited in the north and during the country's dry season. The mean annual temperature for Ghana is 27.3˚C, with average monthly temperatures ranging between 25˚C–26˚C (June to September) and 28˚C–29˚C (February to April). Ghana's climate is projected to become hotter and drier in the next few decades, with a gradual increase in the average minimum and maximum temperatures in all agroecological zones of the country. Temperatures in Ghana have risen by approximately 1˚C since the 1960s (an average increase of 0.21˚C per decade) and are projected to increase between 1.4-5.8˚C by 2080. In terms of mean decadal averages, the maximum temperature is likely to increase beyond 34˚C. The number of very hot days (Tmax >35˚C) has increased by over 13% per year, and hot nights (Tmin >26˚C) increasing by 20% per year; with the most pronounced increase occurring between September and November. The frequency of hot days and nights is projected to exacerbate between 18-59% by 2060. The past, present and future ambient temperature patterns described above indicate a very high likelihood that annual retail fuel temperatures in Ghana will continue to be warmer than NPA's new reference standard of 20˚C. Therefore, Ghanaians will continue getting lesser energy content per litre of liquid fuel from retail outlets under a "Business As Usual (BAU)" scenario.

The fundamental principle of weights and measures is that the measurement of a quantity for trade is fair and just. The current and future situation regarding the delivery of fuel from retail outlets to end consumers shows that the legal framework does not match day-to-day market practice.

The government recognizes that as climate change leads to more extreme and unpredictable temperature variations, fuel temperature compensation becomes increasingly important for fairer fuel pricing, especially in areas experiencing more intense heat waves.

The government intends to ensure that the legal framework, moving forward, reflects the current and future methods of commerce, particularly retail fuel deliveries being exercised in a fair and just manner.

The Fuel Temperature Compensation (FTC) policy provides a framework for the adaptation response of the petroleum downstream sector to climate-induced temperature changes. The FTC policy considers options to achieve temperature compensation, build the resilience of the liquid fuel supply system and provide the basis for the development of guidelines, standards and regulations to ensure an effective and equitable system that benefits both consumers and the fuel industry.

### *4.3.2 Policy Goal*

Provides the framework for the development of guidelines, standards and regulations to build climate adaptability of activities related to fuel storage, distribution and use in the petroleum downstream sector.

### *4.3.3 Policy Development Status*

A working group, chaired by the Chief Director, was formed to put together the fuel temperature compensation policy. The drafting of the policy considered a thorough review of existing

temperature compensation practices in countries. This benchmarking exercise provided valuable insights into best practices and potential pitfalls. Simultaneously, an in-depth analysis of local climate data and temperature variations was undertaken to ascertain the extent to which the regional climate under which Ghana is situated is affected by the subject matter. The study included current terminal loading procedures and fuel dispensing practices and technologies. This exercise informed the streamlining of options for temperature compensation. Consultations were held with stakeholders, including industry experts and regulators on the selected options and to solicit inputs into the development of the policy. Legal considerations were made to ensure compatibility with existing laws while addressing potential legal challenges. An international trade assessment was carried out, focusing on regions with significant cross-border trade, to analyse any impact of this policy determination on business. Consequently, a draft policy was presented and presented to stakeholders for a final round of feedback, which is expected to be incorporated into the final policy by the end of the year.

## 4.4 Implementation of the National LPG Promotion Programme (NLPGPP)

The Ministry of Energy has been implementing the NLPGPP as part of efforts to ensure that at least 50% of Ghanaians have access to safe, clean, and environmentally friendly LPG for increased domestic, commercial, and industrial usage by 2030.

As of June 30, 2023, sixteen thousand (16,000) single-burner LPG cookstoves had been distributed across 7 Municipal, Metropolitan and District Assemblies (MMDAs) to incentivize households to switch to the use of LPG.

It is projected that by the end of the year 2023, an additional 20,000 households will benefit from the programme.

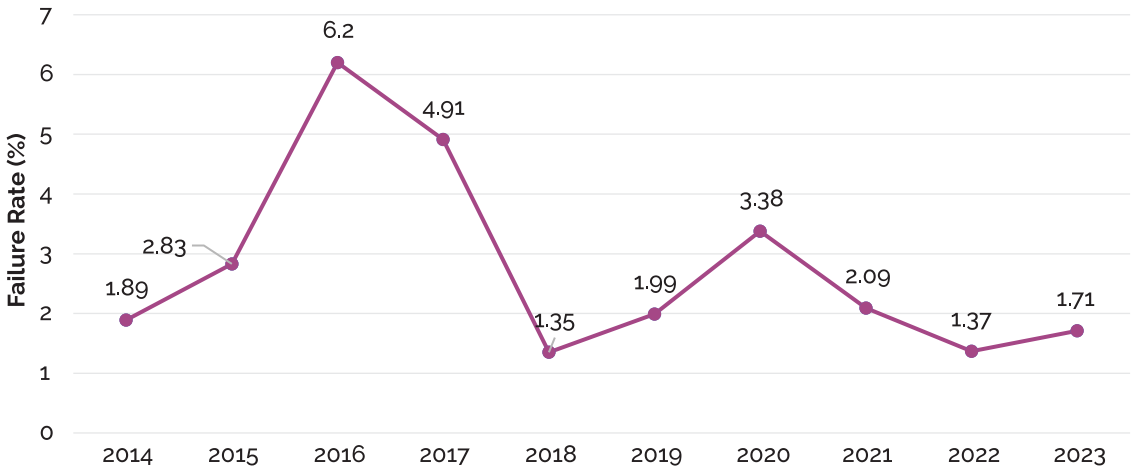
## 4.5 Petroleum Products Marking Scheme

### *4.5.1 Field Monitoring*

To address the increasing concerns of adulteration and smuggling, which impact negatively on government tax revenue and breakdown of vehicles, the NPA introduced the petroleum products marking scheme in 2013. The scheme provides a foundation for an effective quality monitoring system by introducing a marker in trace quantities into BRVs loaded with petroleum products at the depots before distribution onto the market. Every month a field monitoring exercise is carried out to ascertain the marker concentration in petroleum products.

A total of twelve (12) rounds of monitoring exercises nationwide were conducted at 30,252 retail outlets in 2023. Of this figure, 89% of the outlets were operational, while 11% were not operational. The average pass rate of retail outlets for 2023 was 0.34% lower than in 2022 while the average failure rate increased by 0.34% to 1.71% in 2023. The average product failure rate was 0.89%. The diesel and petrol average failure rates were 0.92% and 0.87% respectively (See figure 11).

Figure 11: Trend of Failure Rate of Retail Outlets




### 4.5.2 *Volumes Marked*

A total of 4,471,979,800 litres of petroleum products was marked at all operational depots nationwide in 2023, up 4% from 2022. Regular tax fuel accounted for 97% while low tax fuel accounted for 3% of the total volume of petroleum products marked. Petrol accounts for 52% of regular tax fuel marked while diesel accounted for the remaining 48%.

### 4.5.3 *Marker Usage*

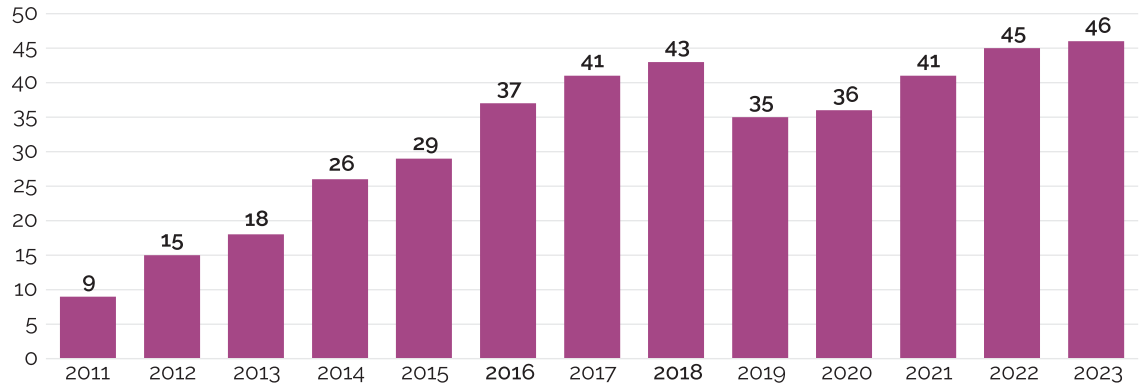
A total of 44,719,798 ml of marker was used in the marking of petroleum products across the country in 2023, representing an increase of 4% over the 2022 figure. Out of this quantity, 97% was used for regular tax products while the remaining 3% was used to mark subsidized or low tax products.

## 4.6 Licensing

### 5.6.1 *Bulk Import Distribution and Export Companies (BIDEC)*

As at the end of 2023, the total number of BIDECs stood at forty-six (46) compared with forty-five (45) in 2022 (see Figure 12).

Figure 12: Number of BIDECs (2011–2023)



Analysis of petroleum products import outturn by the BIDECs in 2023 revealed that a total of 4.72mn mt of petroleum products was imported into the country, representing a 13% increase compared to 2022 (See figure 14). The top ten (10) imported 80% of the total petroleum products imported while the remaining 20% was imported by the rest of the BIDECs (see Figure 13). Comparative analysis of BIDECs' import activities in 2023 vis-à-vis 2022 indicates that import activities increased in 2023. The improved import activities witnessed in 2023 could be attributed to the recovery in the economy in 2023.

**Figure 13:** Top 10 BIDEC import of petroleum products, 2023

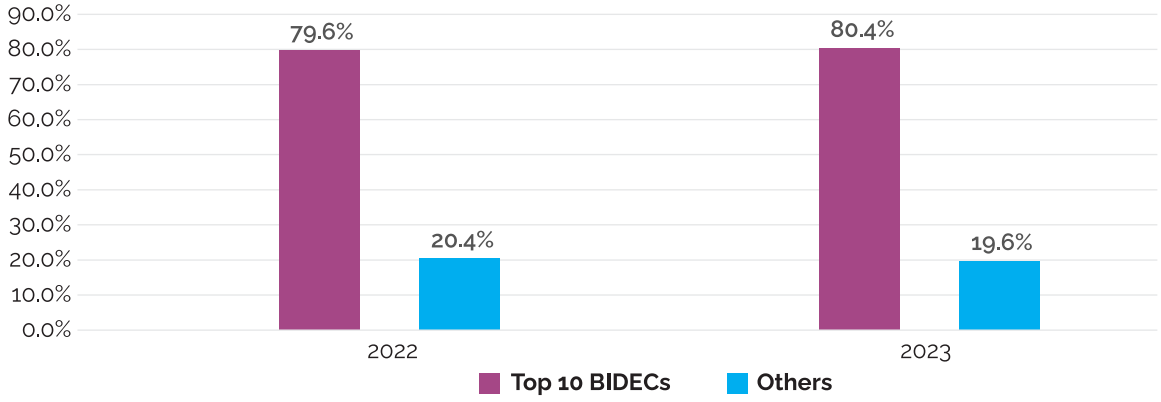
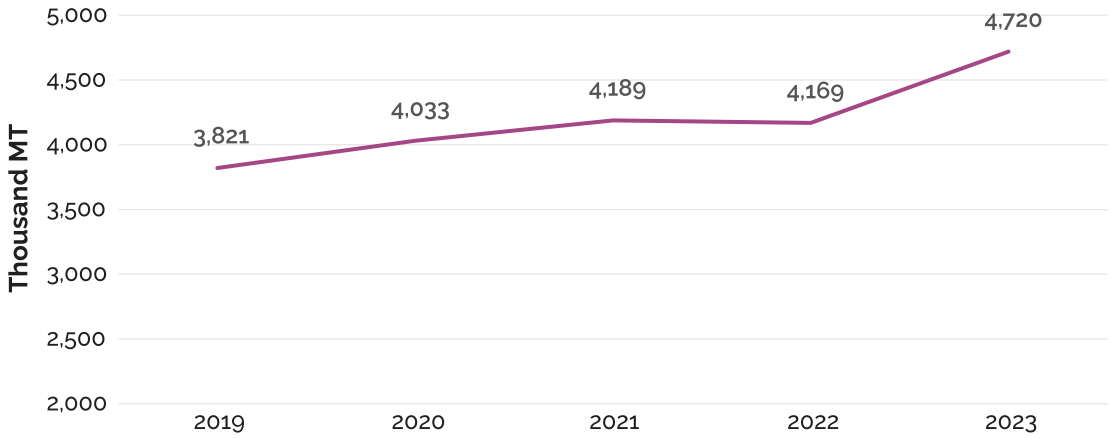


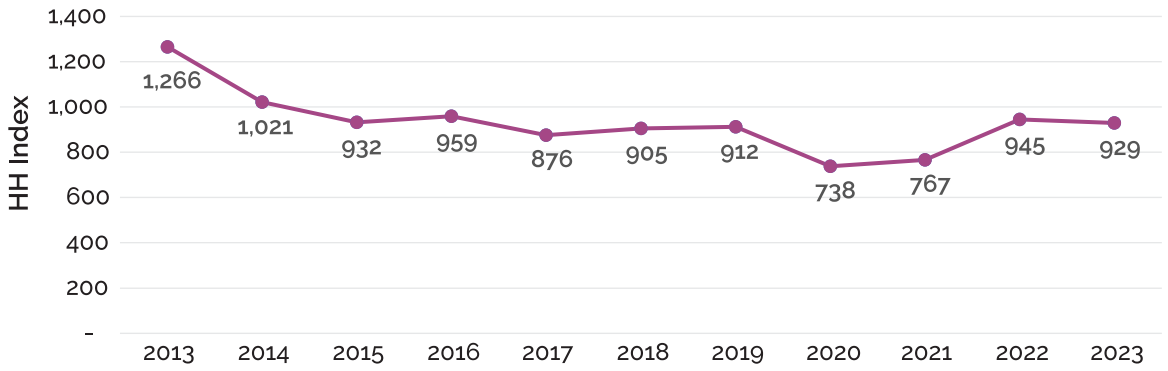

**Figure 14:** Trend of Import by BIDECs (2019-2023)




Analysis of BIDECs sales volume performance for 2023 revealed that the top ten (10) BIDECs supplied 77% of petroleum production unto the market while the remaining thirty (36) supplied 23%. The BIDEC market has witnessed a reduction in concentration levels since 2013. The Herfindahl-Hirschman Index (HHI)[165] showed a declining trend between 2013 and 2023 suggesting that the market is less concentrated even though not highly competitive (See figure 15). While the HHI index declined from 932 in 2015 to 767 in 2022, it increased in 2023 recording an index of 929. This represents an increase of 23% from 2022. Even though the number of BIDECs was relatively the same in 2023, this had no significant impact on the market concentration and potentially market competition.

[165] If HHI is below 100 it indicates highly competitive industry. If it is below 1500 it means the industry is not concentrated. If it is between 1500 and 2500, it means that the industry is moderately concentrated. If it is above 2500 it means the industry is highly concentrated.

Figure 15: Trend of BIDECs Competition (2013 to 2023)




### *4.6.2 Oil Marketing Companies (OMCs)*

The number of OMCs[166] decreased from 235 in 2022 to 201 in 2023, representing a decrease of 14% (see Figure 16). The decrease in the number of OMCs did not significantly impact the market dynamics of the industry as the market share controlled by the top 10 OMCs decreased from 65% in 2022 to 61% in 2023. This could be attributed to a decline in concentration levels in the market, which is explained by the decrease in the HHI index from 718 in 2022 to 568 in 2023 (See figure 17). This may imply that the OMC market is gradually becoming more competitive.

Figure 16: Number of OMCs (2011-2023)

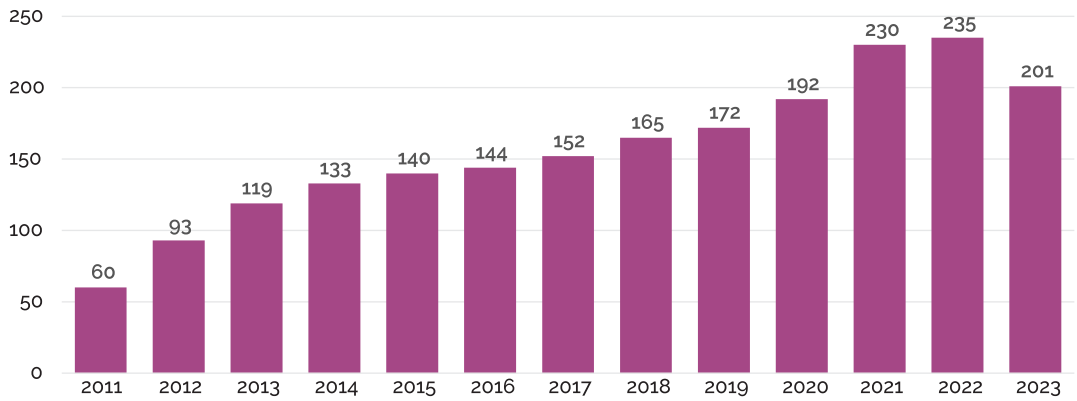
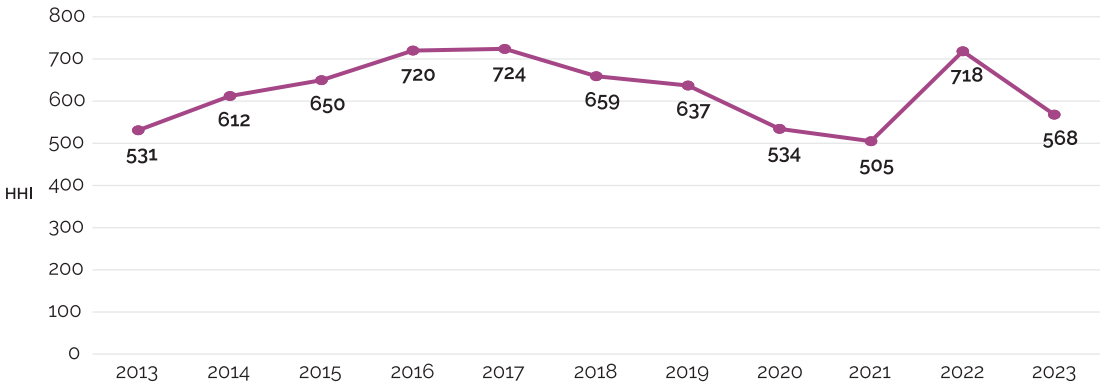
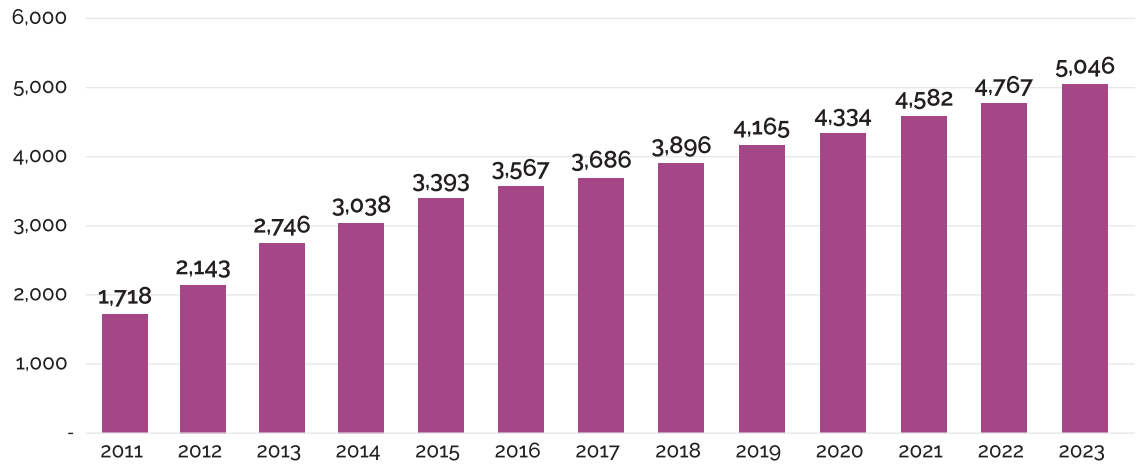



Figure 17: Trend of OMCs Competition



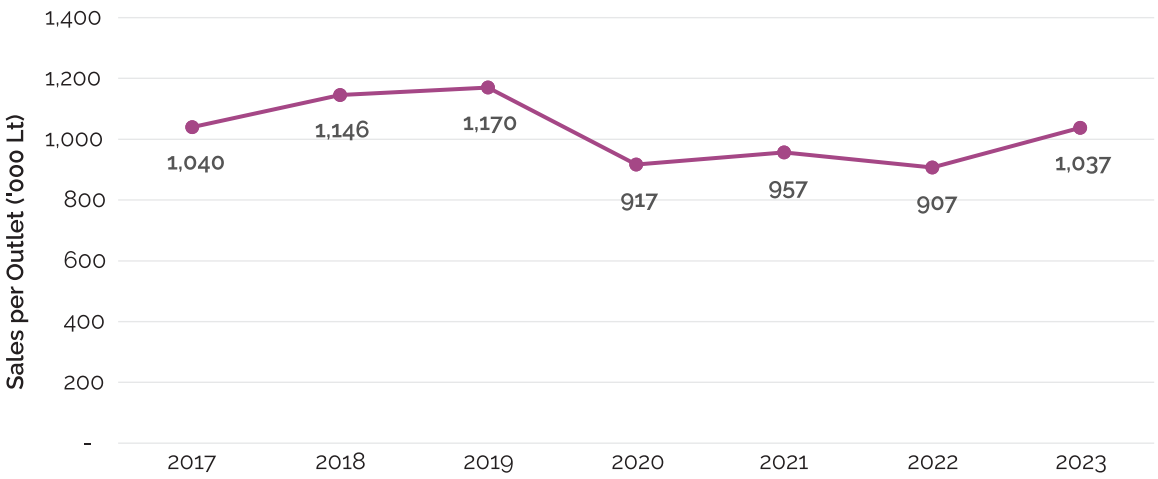

[166] Including LPG Marketing companies

Figure 18: Number of retail outlets (2011-2023)




The number of retail outlets has grown considerably since 2015 with the number increasing from 3,038 in 2014 to 5,046 in 2023, representing an increase of 66%. Given the number of retail outlets and the total national consumption of petrol and diesel, the productivity of retail outlets could be affected. Further, the number of retail outlets has grown considerably since 2015, increasing from 3,038 in 2014 to 5,046 in 2023, representing an increase of 66%. Given the increasing number of retail outlets and the relatively stable total national consumption of petrol and diesel, the productivity of retail outlets continue to decline (Figure 19.) For instance, retail outlet productivity increased by 2% from 2018 to 2019. However, there was a significant drop in retail outlet productivity by 22% in 2020 before increasing marginally by 4% in 2021. In 2022, the retail outlet productivity declined by 5% but picked up in 2023 increasing by 14% in 2023. The rise in productivity of retail outlets could be attributed to the rise in sales volumes of OMCs in 2023.

Figure 19: Retail Outlet Productivity



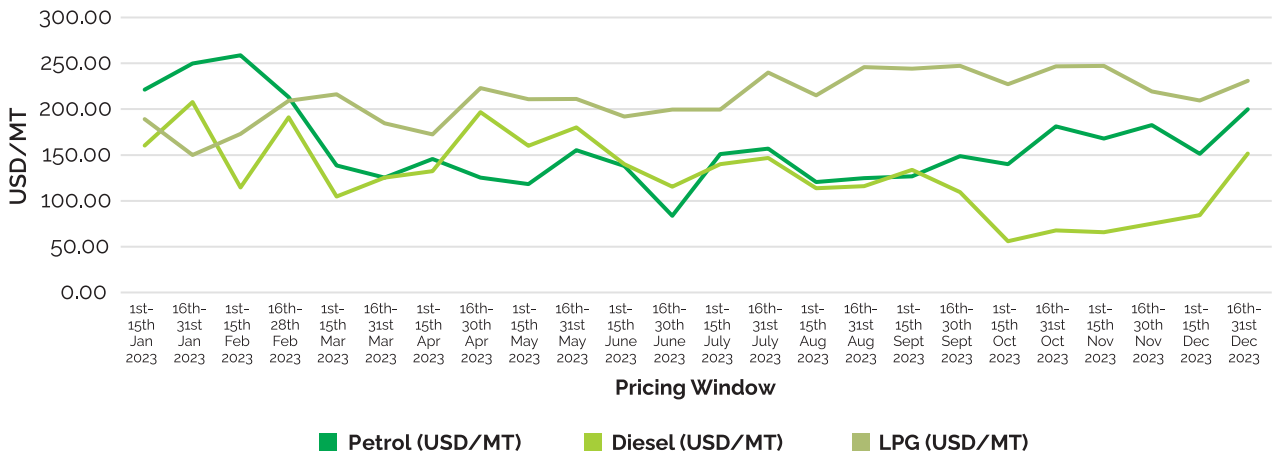
# 5 FINANCIAL REVIEW

## 5.1 Suppliers' Premiums

The Suppliers' Premium in the petroleum products Price Build-Up (BPU) is provided for the full cost recovery of investment of the BIDECS in the importation of petroleum products. This ensures the viability of petroleum product importers to guarantee the sustainability of supply. The Suppliers' Premium in this report is computed by NPA, using the ex-refinery prices of BIDECs and extrapolated through backward calculation from the average ex-refinery prices adopting the estimated exchange rate for each pricing window in the year.

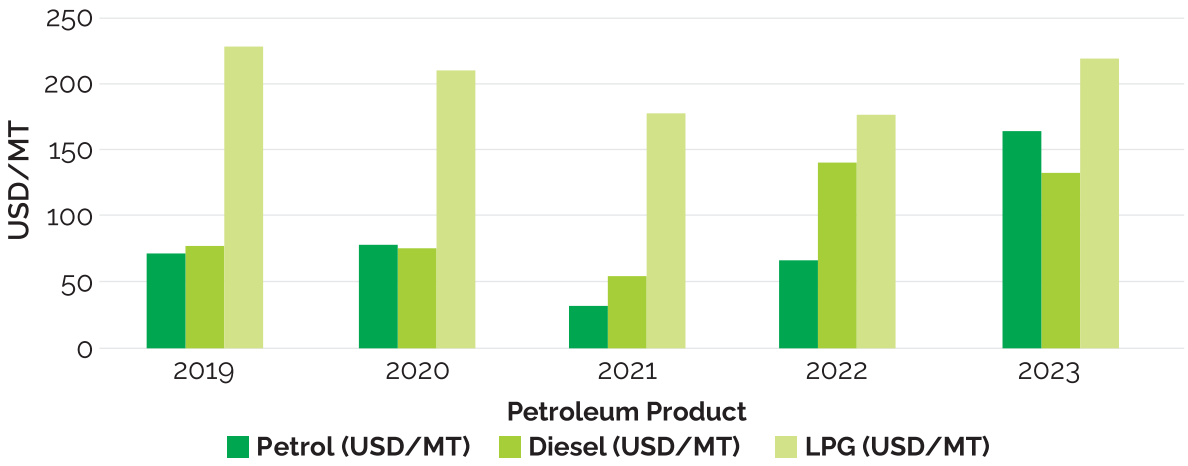
The estimated Suppliers' Premium of petrol increased significantly by about 146.80% in 2023, from an annual average of US$64.57/mt in 2022 to US$159.35/mt. Unlike in 2022, the Supplier's Premiums of petrol per pricing window were largely higher than diesel in 2023, ranging from US$83/mt to US$258.75/mt. It is observed that average premium of petrol was higher in Q1 than in Q4 by about 18.00%. This trend could be attributed to the downgrade in the credit rating of the Country in the third quarter of 2022 and the Debt Exchange program that commenced in 2023. Standard and Poor's ("S&P") Global Ratings on 5th August 2022 downgraded Ghana's foreign and local currency credit ratings from 'B-/B' To 'CCC+/C' with a negative outlook. Ghana's credit rating was also downgraded by Fitch Ratings due to missed bond payments in April 2022. On 4th February 2022, Moody's Ratings downgraded Ghana's Long-Term Issuer and Senior unsecured bond Ratings to Caa1 from B3. These impacted the confidence of IOTCs on the credit worthiness of the country, thereby increasing premiums. Premiums on LPG also surged by about 23.89% from US$171.61/mt in 2022 to US$212.60/mt in 2023. However, suppliers' premiums for diesel declined by about 5.49% to an average of US$128.69/mt in 2023. It was also observed that due to the Credit downgrade in 2022, suppliers' premiums on diesel were about two times higher in Q1 2023 than in Q4 2023. Figure 20 below shows the trend of Suppliers' premiums in 2023. The trend reveals a stable pattern of suppliers' premiums in the period.

**Figure 20:** Trend of Suppliers ' Premiums for the year 2023




Observing the trend of Suppliers' Premiums reveal an increase of about 125% and 71% in the Suppliers' Premiums of petrol and diesel respectively from 2019 to 2023. This surge could be attributed to the Covid-19 pandemic in 2020 and 2021, the Russia-Ukraine War in 2022, the Israel–Hamas war in 2023, the country's credit downgrade in 2022, and the Debt Exchange Program. Figure 21 shows a five-year comparison of Suppliers' Premiums of petrol, diesel and LPG.

Figure 21: Average Suppliers' Premiums




These, notwithstanding, BIDECs are currently being confronted with stiff competition leading to price undercutting in the industry. Widely complained about by industry players, this phenomenon of underpricing and undercutting continues to threaten the survival of BIDECs. If not comprehensively addressed will risk the sustainable supply of petroleum products and the sector's indebtedness to the banking sector. Table 3 below shows the estimated average Suppliers' premiums by NPA for each pricing window.

Table 3: Suppliers' Premiums for 2023

| Pricing Window | Petrol (USD/MT) | Diesel (USD/MT) | LPG (USD/MT) |
|---|---|---|---|
| 1st - 15th Jan | 221.43 | 160.24 | 188.98 |
| 16th - 31st Jan | 249.84 | 207.73 | 149.99 |
| 1st - 15th Feb | 258.75 | 114.48 | 172.90 |
| 16th - 28th Feb | 212.98 | 191.11 | 209.23 |
| 1st - 15th Mar | 138.43 | 104.74 | 216.26 |
| 16th - 31st Mar | 125.28 | 125.28 | 184.45 |
| 1st - 15th Apr | 145.53 | 132.35 | 172.46 |
| 16th - 30th Apr | 125.27 | 196.74 | 222.96 |
| 1st - 15th May | 118.30 | 160.12 | 210.72 |
| 16th - 31st May | 155.25 | 179.99 | 210.99 |
| 1st - 15th Jun | 138.12 | 139.90 | 191.79 |
| 16th - 30th Jun | 83.66 | 115.37 | 199.42 |
| 1st - 15th Jul | 150.97 | 140.10 | 199.42 |
| 16th - 31st Jul | 156.83 | 146.89 | 240.03 |
| 1st - 15th Aug | 120.49 | 113.83 | 215.07 |
| 16th - 31st Aug | 124.78 | 115.87 | 245.95 |
| 1st - 15th Sept | 126.76 | 133.69 | 244.29 |
| 16th - 30th Sept | 148.85 | 109.63 | 247.12 |
| 1st - 15th Oct | 140.04 | 55.93 | 227.12 |
| 16th - 31st Oct | 181.20 | 67.80 | 246.64 |
| 1st - 15th Nov | 167.91 | 65.70 | 247.17 |
| 16th - 30th Nov | 182.69 | 75.14 | 219.43 |
| 1st - 15th Dec | 151.15 | 84.33 | 209.31 |
| 16th - 31st Dec | 199.96 | 151.54 | 230.78 |
| **Average** | **159.35** | **128.69** | **212.60** |

## 5.2 Marketers and Dealers Margins

The estimated "Marketers and Dealers Margins" used by OMCs for petrol ranged between GHp50.0/Lt and GHp127.0/Lt, and averaged GHp75.53/Lt, up 32% from 2022. The lowest margin was recorded in the first window of July while the highest margin was recorded in the second window of April. The "Marketers and Dealers Margin" of petrol recorded a net increase of 180% in 2023.

The estimated "Marketers and Dealers Margins" used by OMCs for diesel ranged between GHp18.0/Lt and GHp121.0/Lt, and averaged GHp54.94/Lt, down 2% from 2022. The lowest margin was recorded in the second window of March while the highest margin was recorded in the second window of June. The "Marketers and Dealers Margin" of diesel recorded a net increase of 989% in 2023.

The estimated "Marketers and Dealers Margins" used by OMCs for LPG ranged between GHp44.22/Kg and GHp220.22/Kg, and averaged GHp95.8580/Kg, down 3% from 2022. The lowest margin was recorded in the second window of November while the highest margin was recorded in the first window of June (See Table 4). The "Marketers and Dealers Margin" of LPG recorded a net increase of 338% in 2023.

Figure 22: Trend of Marketers and Dealers Margins for the year 2023 (GHP/LT;KG)

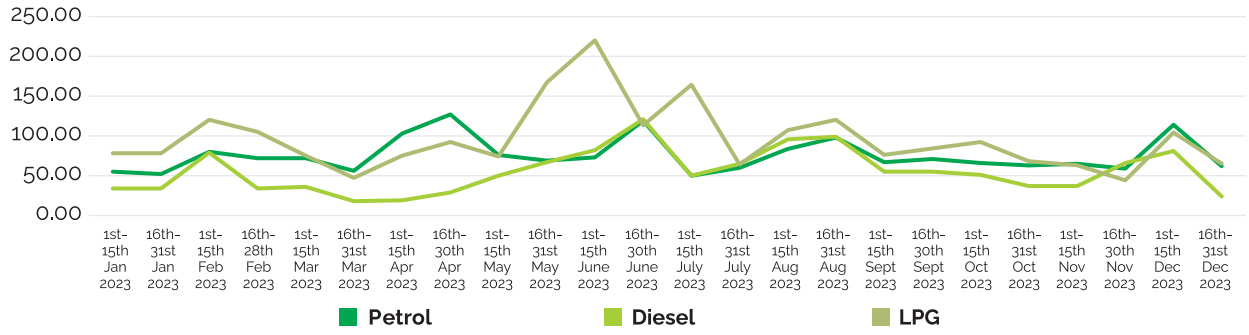



Table 4: Marketers' and Dealers' Margins

| Pricing Window | Petrol | %age Change | Diesel | %age Change | LPG | %age Change |
|---|---|---|---|---|---|---|
| 1st - 15th Jan, 2023 | 55.0 | 14.6% | 34.0 | 750.0% | 78.2 | 110.1% |
| 16th - 31st Jan, 2023 | 52.0 | -5.5% | 34.0 | 0.0% | 78.2 | 0.0% |
| 1st - 15th Feb, 2023 | 80.0 | 53.8% | 79.0 | 132.4% | 120.2 | 53.7% |
| 16th - 28th Feb, 2023 | 72.0 | -10.0% | 34.0 | -57.0% | 105.2 | -12.5% |
| 1st - 15th Mar, 2023 | 72.0 | 0.0% | 36.0 | 5.9% | 75.2 | -28.5% |
| 16th - 31st Mar, 2023 | 56.0 | -22.2% | 18.0 | -50.0% | 47.2 | -37.2% |
| 1st - 15th Apr, 2023 | 103.0 | 83.9% | 19.0 | 5.6% | 75.2 | 59.3% |
| 16th - 30th Apr, 2023 | 127.0 | 23.3% | 29.0 | 52.6% | 92.2 | 22.6% |
| 1st - 15th May, 2023 | 76.0 | -40.2% | 50.0 | 72.4% | 74.2 | -19.5% |
| 16th - 31st May, 2023 | 69.0 | -9.2% | 67.0 | 34.0% | 167.2 | 125.3% |
| 1st - 15th June, 2023 | 73.0 | 5.8% | 82.0 | 22.4% | 220.2 | 31.7% |
| 16th - 30th June, 2023 | 119.0 | 63.0% | 121.0 | 47.6% | 113.2 | -48.6% |
| 1st - 15th July, 2023 | 50.0 | -58.0% | 50.0 | -58.7% | 164.4 | 45.2% |
| 16th - 31st July, 2023 | 60.0 | 20.0% | 65.0 | 30.0% | 64.2 | -60.9% |
| 1st - 15th Aug, 2023 | 83.7 | 39.4% | 95.7 | 47.2% | 107.2 | 67.0% |
| 16th - 31st Aug, 2023 | 98.0 | 17.1% | 99.0 | 3.5% | 120.2 | 12.1% |

Table 4: Marketers' and Dealers' Margins (Cont.)

| Pricing Window | Petrol | %age Change | Diesel | %age Change | LPG | %age Change |
|---|---|---|---|---|---|---|
| 1st - 15th Sept, 2023 | 67.0 | -31.6% | 55.0 | -44.4% | 76.2 | -36.6% |
| 16th - 30th Sept, 2023 | 71.0 | 6.0% | 55.0 | 0.0% | 84.2 | 10.5% |
| 1st - 15th Oct, 2023 | 66.0 | -7.0% | 51.0 | -7.3% | 92.2 | 9.5% |
| 16th - 31st Oct, 2023 | 63.0 | -4.5% | 37.0 | -27.5% | 68.2 | -26.0% |
| 1st - 15th Nov, 2023 | 65.0 | 3.2% | 37.0 | 0.0% | 63.2 | -7.3% |
| 16th - 30th Nov, 2023 | 59.0 | -9.2% | 66.0 | 78.4% | 44.2 | -30.1% |
| 1st - 15th Dec, 2023 | 114.0 | 93.2% | 81.0 | 22.7% | 104.2 | 135.7% |
| 16th - 31st Dec, 2023 | 62.0 | -0.45614 | 24.0 | -70.4% | 65.2 | -37.4% |
| Min | 50.0 | | 18.0 | | 44.2 | |
| Max | 127.0 | | 121.0 | | 220.2 | |
| Average | 75.5 | | 54.9 | | 95.9 | |
| Total Decreses | | -243.1% | | -315.2% | | -344.7% |
| Total Increases | | 423.4% | | 1304.6% | | 682.7% |
| Net Change | | 180.3% | | 989.4% | | 338.0% |

## 5.3 BOG Auction

The government engaged the Bank of Ghana (BOG) to provide FX for petroleum product importation through the BOG special FX auction to BIDECs. This special FX auction to BIDECS commenced in April 2022 and is conducted at least three (3) days before the start of a pricing window. The aim of this initiative was to provide FX to BIDECS at a favourable rates for the importation of petroleum products into the country. It was also intended to aggregate BIDECs' FX demand and to reduce the impact of the individual demand on the commercial market.

The BOG reviewed the volume of FX they auction to BIDECs to US$40mn monthly from an average of about US$97mn monthly in 2022. This was an attempt by the BOG to increase its foreign exchange reserves which had declined in 2022 to 2.7 months of import cover. According to an African Developments Bank's report on Ghana's economic outlook, Ghana's gross international reserves shrank from $6.3 billion at the end of 2022 (2.7 months of import cover) to $5.0 billion (2.3 months) in November 2023.[167] Due to this, BOG's allocation to BIDECs declined by about 50% from about US$1,166mn in 2022 to US$578mn in 2023. Plagued by rising inflation and the volatile deprecation of the cedi, the BOG auction rate depreciated by about 23% in 2023, from an average of GHS9.3450/USD to GHS11.4729/USD. Notwithstanding the decline in petroleum products prices in the year under review, average pump prices rose by 10.57%, 15.65%, and 0.60% for LPG, Petrol, and Diesel respectively, largely due to the depreciation of the Cedi and the reduction in the volume of FX auctioned to BIDECs for petroleum product importation. In 2023, BOG auction was only about 27% of BIDECs total bits compared to 43% in 2022.

Due to the hikes in pump prices largely as a result of the depreciation of the cedi, the government announced in 2022 to introduce the Gold for Oil (G4O) in 2023 to reduce the impact of BIDECS FX demand on the cedi. The policy sought to allow government through BOST to import petroleum products in exchange for gold. Although stakeholders advised government to onboard the BIDECs into the G4O program, government was hesitant to do so. A summary of the BOG bi-weekly auction to BIDECs is shown in table 5. A comparison of the FX rates from the

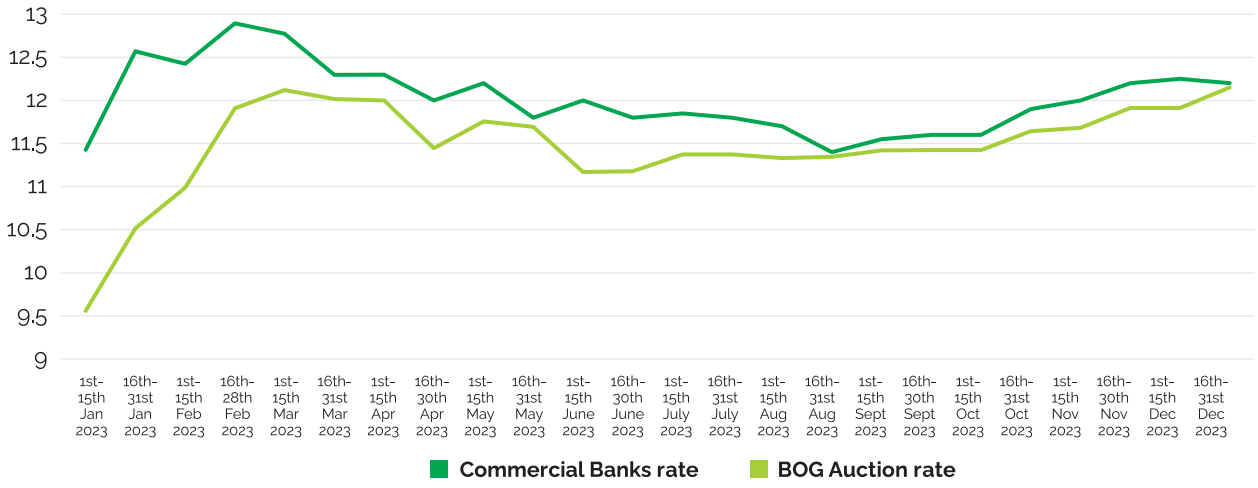
[167] https://www.afdb.org/en/countries/west-africa/ghana/ghana-economic-outlook#:~:text=Gross%20international%20reserves%20shrank%20from,to%2013.96%25%20in%202023).

BOG auction and commercial banks as shown in figure 23 emphasis the importance of increasing the volumes of FX auction to BIDECs as this will largely reduce pump prices.

Table 5: Summary Report of BoG FX Auction for BIDECs in 2023

| Window | Total Bid (USD) | Amount Offered (USD) | Percentage Offered | Auction FX Rate (GHS/USD) |
|---|---|---|---|---|
| 1 - 15 Jan 2023 | 99,732,633 | 60,000,000 | 60% | 9.5579 |
| 16 - 31 Jan 2023 | 83,435,977 | 40,000,000 | 48% | 10.5151 |
| 1 - 15 Feb 2023 | 139,190,727 | 40,000,000 | 29% | 10.9875 |
| 16 - 28 Feb 2023 | 112,589,195 | 27,989,862 | 25% | 11.9095 |
| 1 -15 March 2023 | 101,739,692 | 30,000,000 | 29% | 12.1203 |
| 16 -31 March 2023 | 97,127,404 | 20,000,000 | 21% | 12.0158 |
| 1 - 15 April 2023 | 96,164,518 | 20,000,000 | 21% | 12.0000 |
| 16- 30 April 2023 | 100,000,000 | 20,000,000 | 20% | 11.4467 |
| 1 - 15 May 2023 | 100,000,000 | 20,000,000 | 20% | 11.7575 |
| 16 - 31 May 2023 | 76,095,251 | 20,000,000 | 26% | 11.6943 |
| 1 - 15 June 2023 | 51,533,156 | 20,000,000 | 39% | 11.16943 |
| 16 - 30 June 2023 | 60,840,385 | 20,000,000 | 33% | 11.1781 |
| 1 - 15 July 2023 | 80,022,607 | 20,000,000 | 25% | 11.3737 |
| 16 - 31 July 2023 | 65,779,572 | 20,000,000 | 30% | 11.3737 |
| 1 - 15 August 2023 | 74,530,674 | 20,000,000 | 27% | 11.3312 |
| 16 - 31 August 2023 | 66,748,615 | 20,000,000 | 30% | 11.346 |
| 1 - 15 Sept 2023 | 100,000,000 | 20,000,000 | 20% | 11.421 |
| 16 - 30 Sept 2023 | 89,746,101 | 20,000,000 | 22% | 11.4232 |
| 1 - 15 Oct 2023 | 100,000,000 | 20,000,000 | 20% | 11.4244 |
| 16- 31 Oct 2023 | 100,786,470 | 20,000,000 | 20% | 11.6435 |
| 1 - 15 Nov 2023 | 96,096,715 | 20,000,000 | 21% | 11.6824 |
| 16 - 30 Nov 2023 | 104,593,956 | 20,000,000 | 19% | 11.9131 |
| 1 - 15 Dec 2023 | 96,395,486 | 20,000,000 | 21% | 11.9131 |
| 16 -31 Dec 2023 | 68,730,361 | 20,000,000 | 29% | 12.1512 |
| **Total** | **2,161,879,495** | **577,989,862** | | |
| **Average** | | | **27%** | **11.47286** |

Figure 23: BoG Auction Rates vs Commercial FX Rates




## 5.4 Stock Accounting in the Sector

### *5.4.1 National Stock Reconciliation*

Ghana consumes several refined petroleum products including Gasoline, Gasoil, Fuel oil, Unified, Kerosene, LPG, Premium, Premix and ATK. Gasoline and Gasoil are the most consumed petroleum products in Ghana. Large quantities of these products are imported while a small quantity is produced by the local refineries. Petroleum products consumed in Ghana are subject to various taxes, levies and regulatory margins. Taxes and levies on the sale of these products accounted for about 12% of total domestic tax revenue in 2023 emphasising the importance of petroleum tax revenue to the Government's fiscal policy. This also underscores the need to monitor stock movement and accounting to ensure the optimization of this revenue by the State.

In accounting for stock movements, this report considers the following elements as depicted in the formula below: Opening Stock positions, Stock Inflows (Imports and Production), Closing Stock, Domestic Reported sales and Exports and provisions for operational losses.

**Official unaccounted stocks** = **Expected Sales (ES)** - **Reported Sales (RS)**

Where
Expected Sales
=Opening Stock+ Purchases (Imports)for the year
+ Production- Less Allowable Losses within the year
- Less Closing Stock

And
Reported Sales
=Domestic Reported Sale
+Export Reported Sales

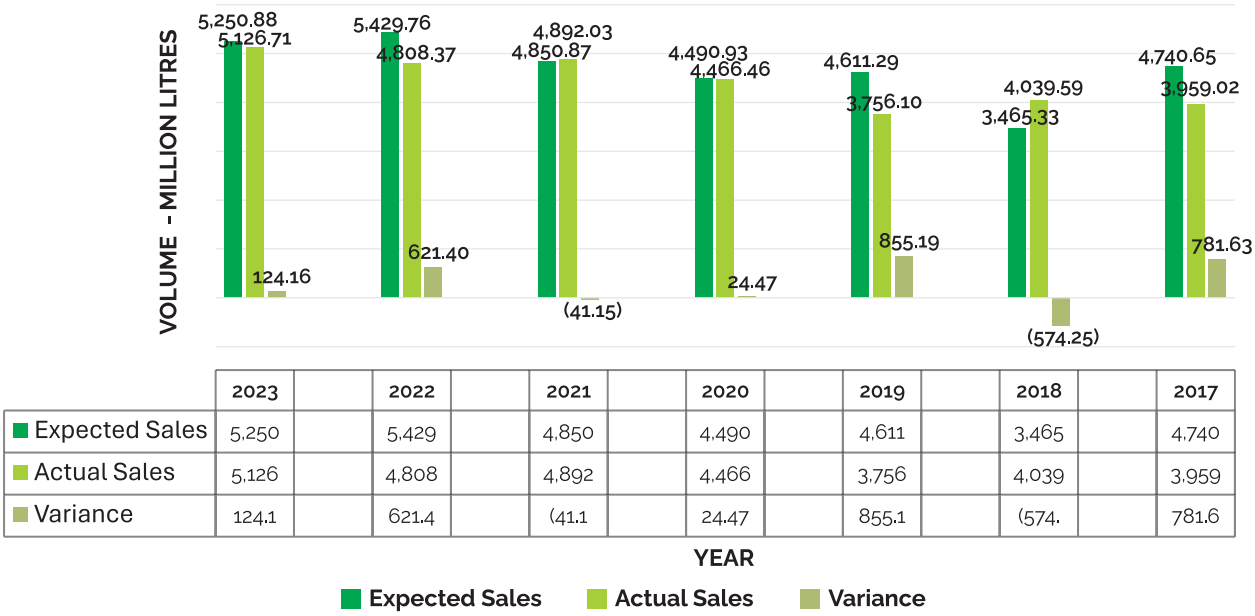
The analysis develops an expectation of sales in line with stock accounting principles after adjusting for operating losses, where applicable, and compares it with officially reported sales (domestic and exports).

An analysis of the position using official records of the NPA revealed that in 2023, about 284.14mn litres of stocks of gasoline delivered into the country were not accounted for and may have evaded Ghana's tax regime by about GHS551.23mn. However, the reported sales of diesel

exceeded the expected sales by about 159.99mn litres. The total estimated tax revenue associated with these excess reported sales saved government revenue by about GHS307.16mn. Total accounted stock from petrol and diesel led to an estimated revenue loss of about GHS244.07mn in 2023.

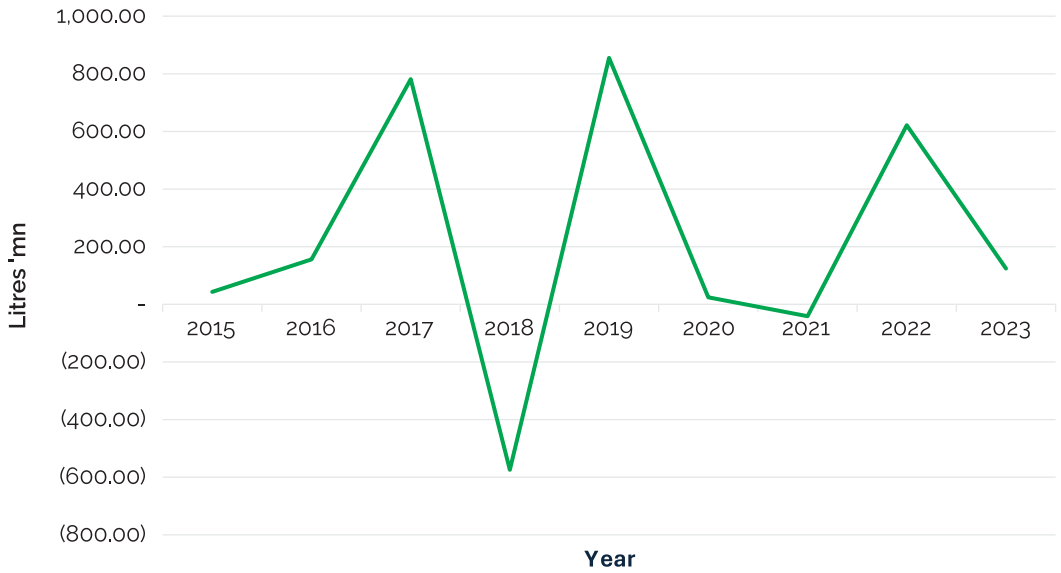
The unaccounted stock is largely attributed to illegal activities in the sector despite the automations and other initiatives by the Regulator. This calls for stricter monitoring of petroleum product stocks along the entire value chain.

Figure 24: Expected vs Actual sales and Variances (2017 – 2023)




| | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|---|---|
| Expected Sales | 5,250 | 5,429 | 4,850 | 4,490 | 4,611 | 3,465 | 4,740 |
| Actual Sales | 5,126 | 4,808 | 4,892 | 4,466 | 3,756 | 4,039 | 3,959 |
| Variance | 124.1 | 621.4 | (41.1 | 24.47 | 855.1 | (574. | 781.6 |

Figure 25: Growth in Official Unaccounted Stocks (2015-2023)



## 5.5 Taxes and Levies on Petroleum Products

Several taxes and levies have been imposed on the consumption of some petroleum products to raise revenue for government. These taxes and levies are charged on the sale of specified petroleum products such as petrol, kerosene, diesel, liquefied petroleum gas and fuel oil. Prior to the Energy Sector Levies Act (ESLA), Act 899 in 2015, petroleum taxes in Ghana were referred to as 'petroleum taxes and related levies[168] which comprised of six levies (namely cross-subsidy levy, energy Levy, hydrocarbon exploration levy, road levy, specific levy, and the Tema oil refinery debt recovery levy) in addition to petroleum excise, which was abolished in 2017. However, the ESLA Act 899[169] consolidated these levies into four levies. This was part of the government's efforts to reduce the tax burden on consumers of petroleum products, manage the liabilities of the Energy Sector State-Owned Enterprises, promote investments in the sector and support road maintenance activities.

Currently, the following taxes and levies are imposed on petroleum products in Ghana

1. Energy Debt Recovery Levy (EDRL),
2. Price Stabilisation and Recovery Levy (PSRL),
3. Road Fund Levy (RFL),
4. Energy Fund Levy (EFL),
5. Energy Sector Recovery Levy (ESRL),
6. Sanitation and Pollution Levy (SPL) and
7. Special Petroleum Tax (SPT).

The levies are chargd on the sale of petrol, diesel, Marine Gas Oil (MGO), Residual Fuel Oil (RFO), Liquefied Petroleum Gas (LPG), Unified, and Kerosene.

The SPT was introduced by the government in 2014 (Special Petroleum Tax Act, 2014, Act 879), at an ad valorem rate of 17 percent on the ex-depot price of petroleum products but currently a specific rate per litre or kilogram on petrol, diesel, LPG, natural gas, and kerosene.

The SPL was introduced to address the rising sanitation issues in the country as well as improve the quality of air in the urban areas, provide dedicated support for maintenance and management of major landfill sites and other waste treatment plants and facilities, eliminate open defecation, and serve as a buffer for the fumigation of public spaces.

In terms of Government revenue classification, the Energy Fund Levy, Road Fund Levy, and SPT are classified as tax revenue, and this is because the levies are deposited into the 'Ghana Consolidated Fund'. Revenue collections from the Energy Debt Recovery Levy, Price Stabilization and Recovery Levy, Energy Sector Recovery Levy and the Sanitation and Pollution Levy are classified as 'other revenue' and this is because they are earmarked into specific accounts other than the Consolidated Fund.

[168] (Customs and Excise (Petroleum Taxes and Petroleum Related Levies) Act 2005, Act 685)

[169] The imposition of the levies resulted in the amendment and repeal of the Customs Excise (Petroleum Taxes and Petroleum Related Levies) Act, 2005 (Act 685), as amended Act 867, Debt Recovery (Tema Oil Refinery Company) Fund Act, 2003 (Act 642), Electricity (Special Levies) Act 1995, and the National Petroleum Authority (Prescribed Petroleum Pricing) Regulations, 2012 (L.I 2186).

Table 6: Taxes and Levies on Petroleum Products 2023

| 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 | 13 | 13 | - |
| BOST MARGIN | 9 | 9 | - |
| FUEL MARKING MARGIN | 5 | 5 | - |
| SPECIAL PETROLEUM TAX | 46 | 46 | 48 |
| UPPF | 75 | 75 | 75 |
| DISTRIBUTION/PROMOTION MARGIN | - | - | 5 |
| TOTAL | **250** | **248** | **162** |

Table 7: Petroleum taxes and levies rate, 2023

| Levy | Item | Rate | Purpose |
|---|---|---|---|
| **Energy Debt Recovery Levy** | Petrol, Diesel<br>Marine gas Oil<br>Fuel Oil<br>Liquefied Petroleum gas<br>Unified/naphtha | GH¢ 0.49 per litre<br>GH¢ 0.03 per litre<br>GH¢ 0.04 per litre<br>GH¢ 0.41 per kg<br><br>GH¢ 0.49 per litre | Debt recovery of Tema Oil Refinery; downstream petroleum sector foreign exchange under-recoveries; boost investments in power infrastructure |
| **Energy Sector Recovery Levy (Delta Fund)** | Petrol, diesel<br>Liquefied Petroleum gas | GH¢ 0.20 per litre<br>GH¢ 0.18 per litre | Support the payment of capacity charges and gas supply bills in the energy sector |
| **Sanitation and Pollution Levy** | Petrol, diesel, unified | GH¢ 0.10 per litre | Support the re-engineering and maintenance of landfill sites; support fumigation of public spaces, schools, health centres and markets; construct waste disposal and treatment plants; and improve urban air quality and combat pollution |
| **Energy Fund Levy** | Petrol, kerosene, diesel, fuel oil, Unified/Naphtha | GH¢ 0.01 per litre | Support activities of the Energy Commission |
| **Price Stabilisation and Recovery Levy** | Petrol<br>Diesel<br>Liquefied petroleum gas | GH¢ 0.16 per litre<br>GH¢ 0.14 per litre<br>GH¢ 0.14 per kg | Used as a buffer for under-recoveries, or subsidies to stabilise petroleum prices for the consumer |
| **Road Fund Levy** | Petrol, diesel | GH¢ 0.48 per litre | Support road maintenance |
| **Special Petroleum Tax** | Petrol<br>Diesel<br>Kerosene<br>Liquefied petroleum gas<br>Natural gas | GH¢ 0.46<br>GH¢ 0.46<br>GH¢ 0.39<br>GH¢ 0.48 per kg<br><br>GH¢ 0.35 per kg | |

Source: **ESLA Act (2015) Act 899 as amended 2017 (Act 946), 2019 (Act 997), 2021 (Act 1064) and Special Petroleum Tax (Amendment) Act, 2018 (Act 965)**

According to the ESLA Report for 2023 presented to Parliament by the Ministry of Finance, actual Energy sector levies amounted to GHS7,356.67mn in 2023 against a revised target of GHS8,235.61mn due to lower than anticipated petroleum product consumption and unpaid invoices by OMCs and LPGMCs. This is a 9.8% increase over 2022 collections of GHS6,703.30. About GHS6,815.85 out of the total ESLA collections was collected from Petroleum product levies, representing 93% of ESLA's contribution.

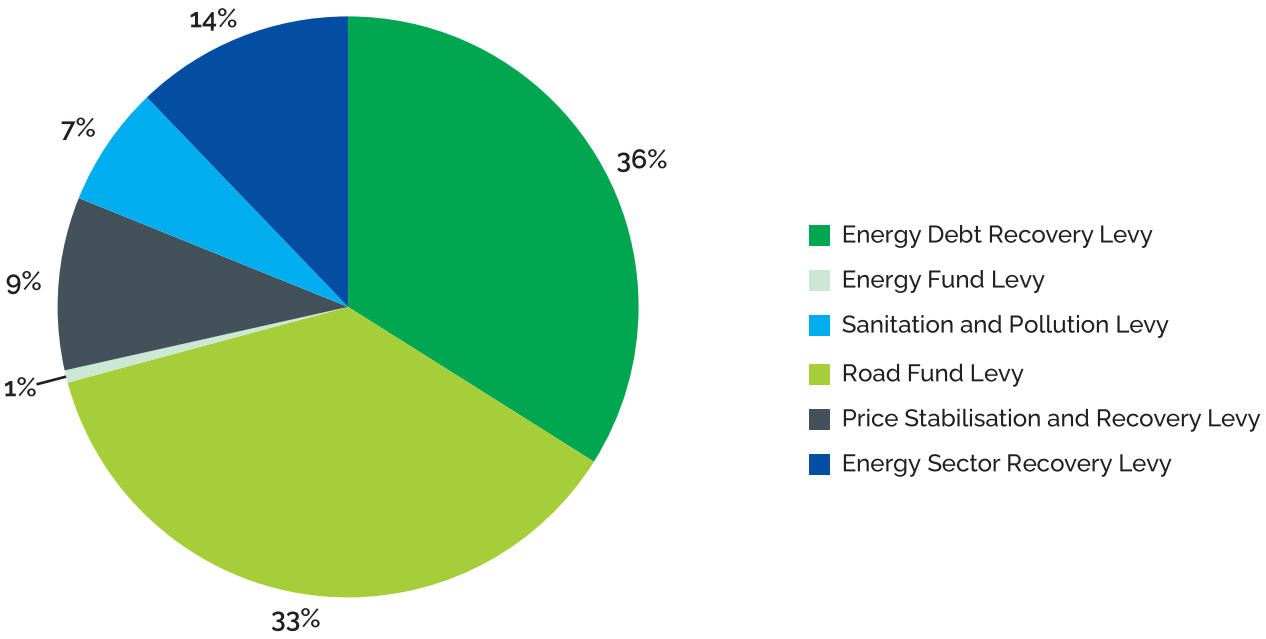
Collections from the EDRL increased by 7.3% in 2023 from GHS2,269.64mn in 2022 to GHS2,435.24mn in 2023. However, this was about 8.4% lower than targeted amount. Collections from the ESRL increased by 4.0% in 2023 to GHS1,108.71mn. Total collection from the SPL amounted to GHS470.88mn representing a 4.2% increase over collections in 2022. Collections from the RFL and EFL increased by 7.6% and 7.9% respectively. The increase in collections is attributed to the increase in petroleum products consumption in 2023 particularly petrol, diesel, and LPG.

The PSRL which is collected by NPA amounted to GHS743.83mn in 2023. An outstanding of GHS133.40mn owed by 31 OMCs/LPGMCs was yet to be paid as of the end of the year. Goil owed about 96.5% of the outstanding amount. The Ministry of Finance released GHS302.92mn for the payment of outstanding subsidy on premix fuel and RFO owed to BIDECs that supplied products to the local market.

**Table 8:** Total ESLA Contribution 2023

| | Tax component | 2023 GHS | 2022 GHS | 2021 GHS |
|---|---|---|---|---|
| 1 | Energy Debt Recovery Levy | 2,435,242,091.79 | 2,269,637,618.08 | 2,373,888,412.07 |
| 2 | Road Fund Levy | 2,253,246,713.75 | 2,095,002,024.55 | 2,177,454,632.41 |
| 3 | Energy Fund Levy | 47,817,339.03 | 44,322,331.15 | 47,374,170.81 |
| 4 | Price Stabilisation and Recovery Levy | 610,435,579.14 | 504,246,122.96 | 629,351,271.80 |
| 5 | Sanitation and Pollution Levy | 470,877,332.27 | 452,008,576.24 | 264,818,176.23 |
| 6 | Energy Sector Recovery Levy | 998,227,903.80 | 959,857,946.77 | 566,085,627.84 |
| | **ESLA Contribution** | **6,815,846,959.78** | **6,325,074,619.75** | **6,058,972,291.16** |

Figure 26: 2023 ESLA Contributions



# 6

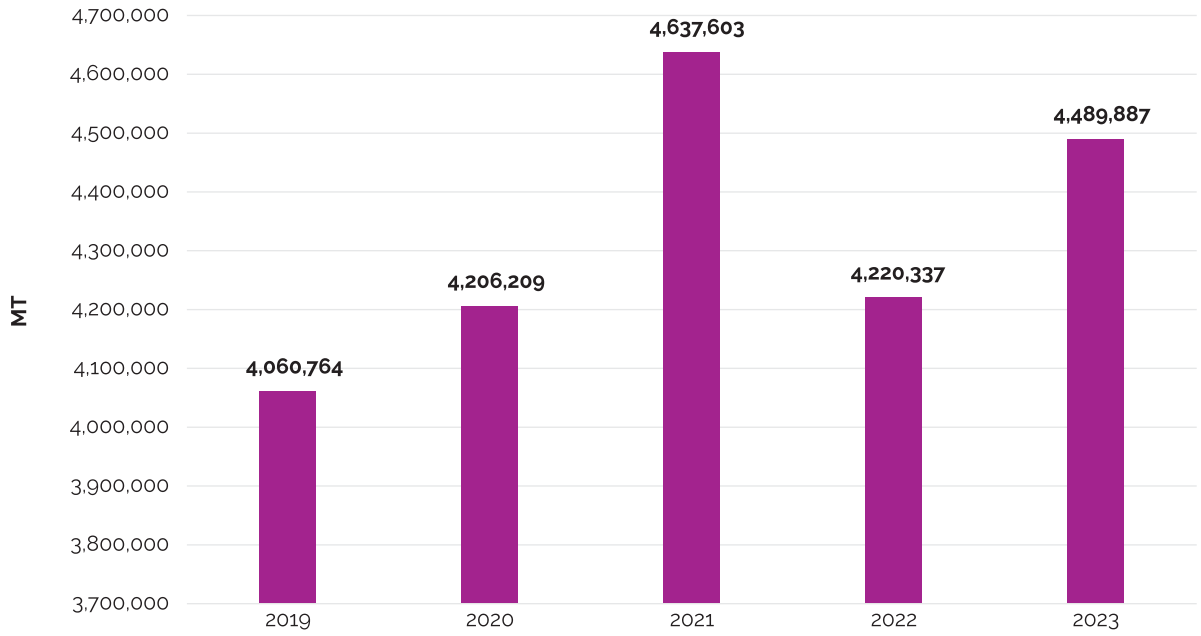
# MARKET REVIEW

## 6.1 National Consumption

Ghana's gross national consumption[170] was 4.49 mn mt in 2023. This is 6% increase from the 4.22 mn mt consumed in 2022. A total of 4.48 mn mt was consumed by the non-power sector representing 99.8% of the gross consumption while 0.2% was consumed by the power sector (fuel oil and gasoil for power). The 4.48 mn mt consumed by the non-power sector was a 6% increase from the 4.21 mn mt consumed in 2022. AKSA Power Plant consumed HFO and gasoil, while CenPower consumed gasoil in 2023.

The growth in consumption by the non-power sector was mainly due to the increase in consumption for all petroleum products except Naphtha, Kerosene, Premix, ATK, Gasoil Rig, and Gasoil mines. The main petroleum products (Gasoil and Gasoline) recorded increases of 4% and 7% respectively from 2022 to 2023. There was a significant increase in the volume of MGO Local and Gasoil (Cell Site) by 263% and 335% respectively from 2022 to 2023. ATK consumption witnessed a decrease of 4% following three consecutive years of increase (see Figure 27).

Figure 27: Petroleum product consumption (2023)




### 6.1.1 *Gasoil*

Gasoil remained the largest product consumed in the country in 2023, accounting for 48% of total petroleum product consumption. Its consumption increased to 2.16mn mt in 2023 from the 2.02mn mt recorded in 2022. This represents a 7% increase in the 2023 volume consumed. The increase was driven by the rise in the consumption of gasoil regular, marine gasoil local, marine gasoil foreign and gasoil (cell site) by 4%, 263%, 52% and 335% respectively. Consumption of gasoil mines, gasoil rig, and gasoil power plants in 2023 however decreased by 8%, 4%, and 46% respectively (see Figure 28). Of the total gasoil consumption in 2023, 30% was additivated, compared to 35% in 2022. The trend of gasoil consumption from 2019 to 2023 is presented in Figure 29.

[170] Gross national consumption is the sum of petroleum products (including the fuel by the power generation companies consumed in 2023.

Figure 28: Gasoil Consumption (2022-2023)

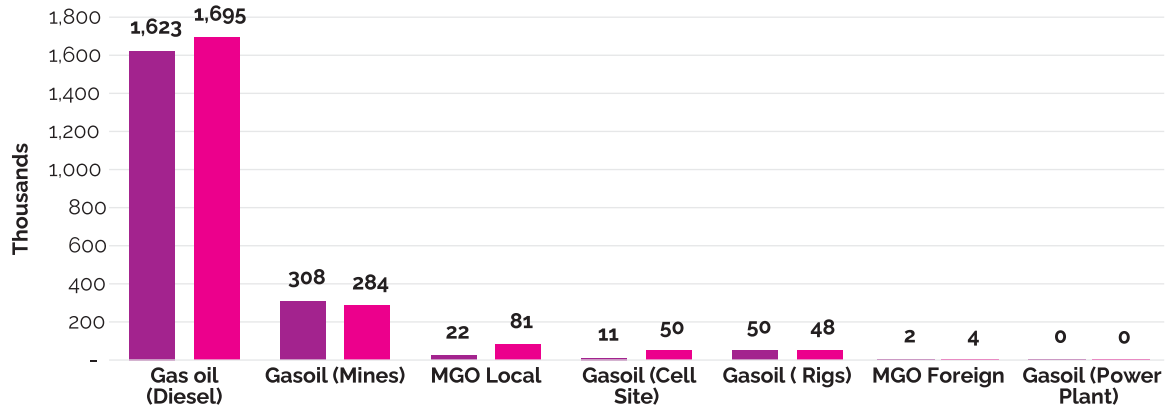
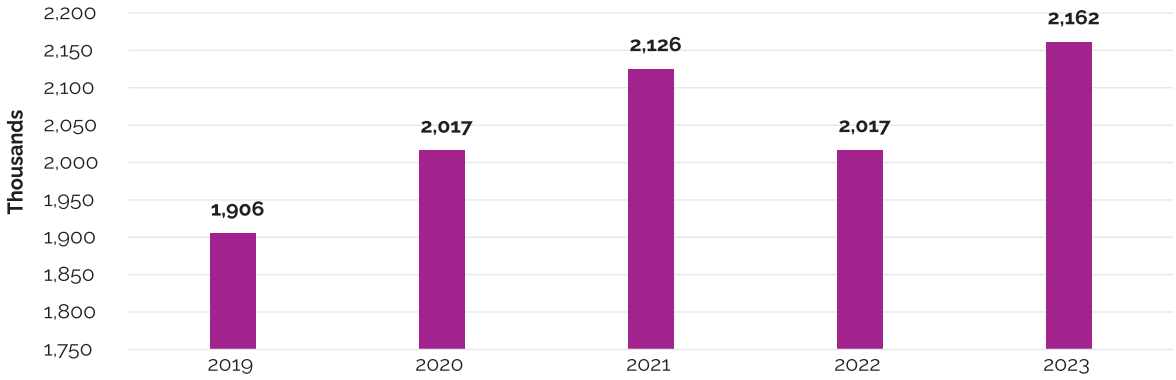


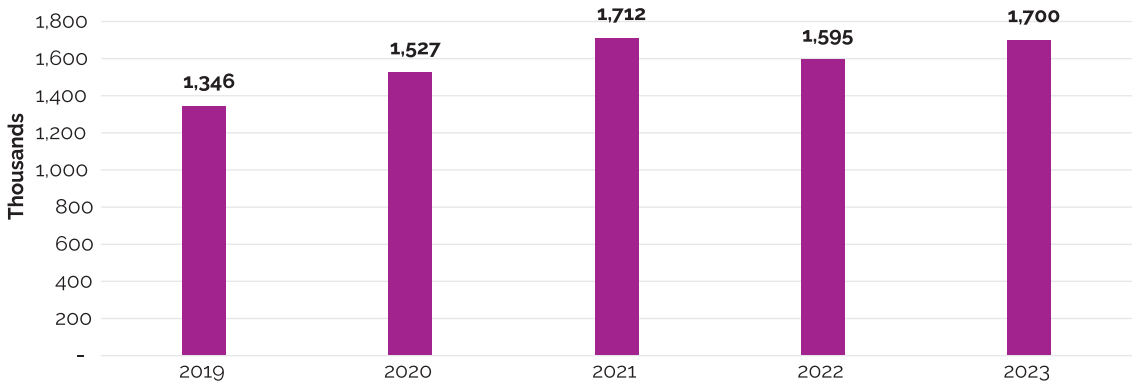

Figure 29: Trend of Gasoil Consumption (2019-2023)




### *6.1.2 Gasoline*

Gasoline was the second highest consumed product in Ghana, accounting for 38% of total refined products consumption in 2023 (See figure 30). Consumption of the product increased to 1.70 mn mt in 2023 from 1.60 mn mt in 2022. This represents a 7% increase, as compared to the 7% decline recorded in 2022 when consumption declined to 1.60 mn mt from 1.71 mn mt in 2021. Regular gasoline (RON 91) accounted for 81% of total gasoline consumption, compared to 76% recorded in 2022. Premium gasoline (RON95) accounted for 19% of total gasoline consumption, compared to 24% recorded in 2022. Of the regular gasoline consumption, 23% was additivated in 2023, compared to 30% recorded in 2022.

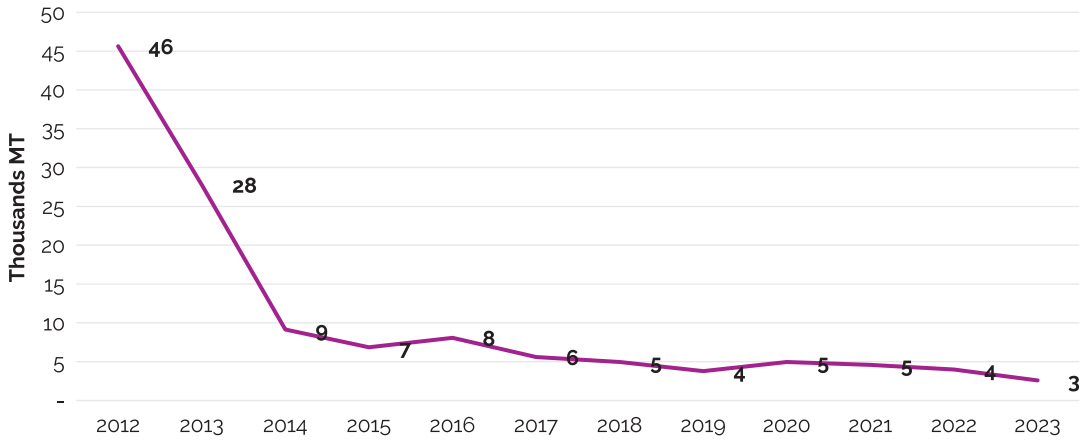
Figure 30: Gasoline Consumption, 2019 to 2023 (mt)



### 6.1.3 *Kerosene*

The consumption of kerosene declined by 35% to 2,582mt in 2023 from 2022, reflecting the downward trend witnessed over the years. The trend of the consumption of kerosene over the last 10 years (2012-2023) shows a peak in demand in 2012 at 45,632 mt, followed by a consistent fall in demand to 2,582 mt in 2023 even though there were some years where consumption witnessed an upward movement (Figure 31). The significant drop in the consumption of kerosene is largely attributable to the reduction in the use of the product as an adulterant for gasoil after the NPA introduced the Fuel Marking Programme in 2013 and the removal of the kerosene subsidy in 2013. The government's LPG Promotion policy which seeks to replace the consumption of wood fuels with LPG also contributed to the significant fall in the consumption of kerosene over the years. The increasing urbanisation of the Ghanaian population also contributed to driving the switch from the use of kerosene to cleaner sources such as LPG.

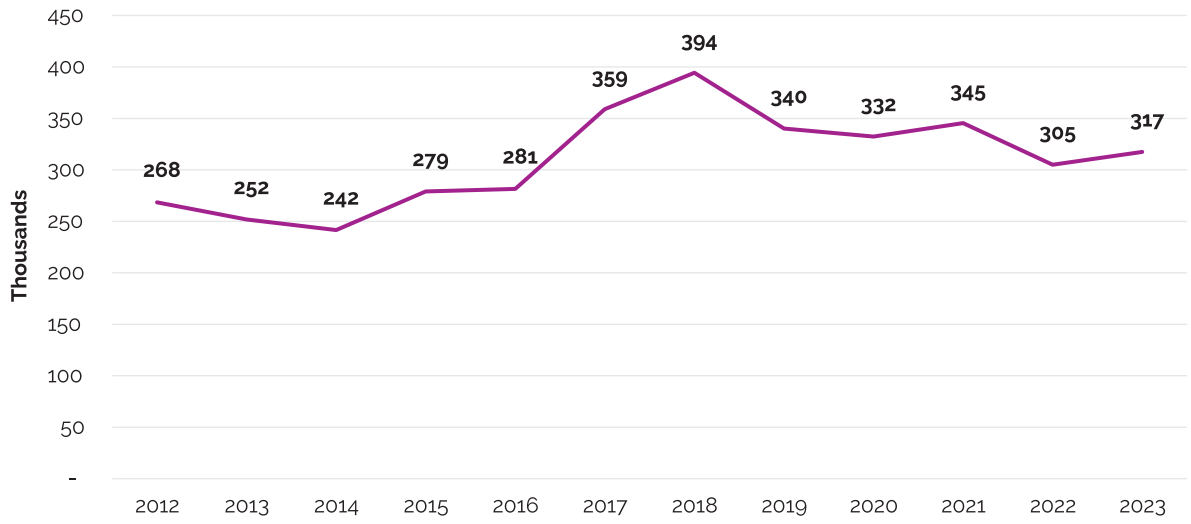
**Figure 31:** Kerosene Consumption (2012 -2023)




### 6.1.4 *LPG*

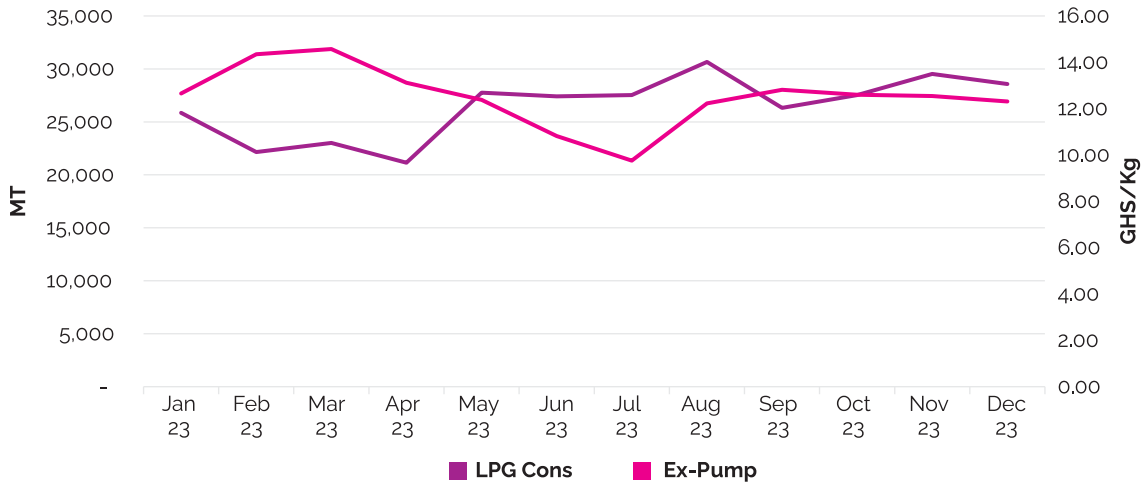
The consumption of LPG increased from 305,076 mt in 2022 to 317,465 mt in 2023 representing an increase of 4%. The increase in consumption witnessed in 2023 is largely attributed to the general recovery in economic activities in 2023 compared to 2022 (See figure 32).

**Figure 32:** Domestic LPG Consumption 2012-2023



Analysis of LPG monthly consumption vis-à-vis average monthly prices indicates that generally LPG consumption and prices are inversely related. However, there were some months where price increases did not result in a decline in LPG consumption, eg August and December. These suggest that though price may be one of the key determinants of LPG consumption, there are other behavioural factors that need to be considered to increase uptake of LPG (See figure 33).

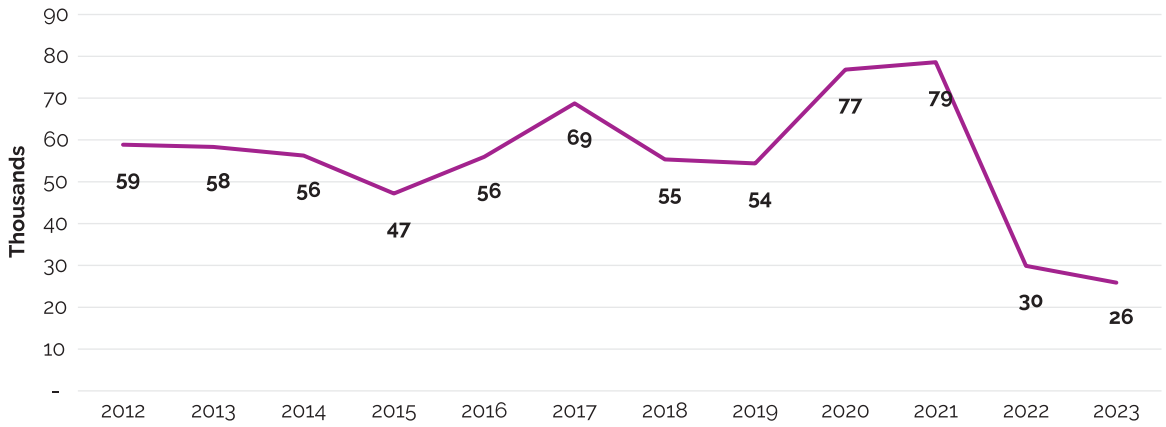
Figure 33: Relationship between LPG Consumption and Average Monthly Price of LPG




### 6.1.5 *Premix Fuel*

The government's indebtedness to Premix Fuel suppliers had a significant toll on Premix Fuel supply in 2023, resulting in low consumption of the product. For instance, Premix Fuel consumption further declined in 2023 following the sharp decline in 2022. Consumption in 2023 declined by 13% from 2022 (See figure 34). To reduce the subsidy payment and improve the Premix Fuel supply situation, government has capped the subsidy at 50% of the quarterly reviewed price of Premix Fuel. Prior to 16th January 2023, prices were reviewed bi-weekly, and the subsidy amount could go as high as over 70%.

Figure 34: Premix Consumption chart (2012-2023)



### *6.1.6 Fuel Oil*

Consumption of fuel oil rose significantly from 58,438 mt in 2022 to 79,723 mt in 2023, representing an increase of 36%. The increase was due to the significant increase in the consumption of fuel oil by both power plants and industries, which witnessed a rise of 73% and 32% respectively in 2023. Fuel oil consumption in 2023 comprised 9,927 mt (12%) of heavy fuel oil for power generation and 69,796 mt (88%) of residual fuel oil for industries (See figure 35). The rise in consumption of residual fuel oil was largely due to the increase in demand by industries due to the recovery in economic activities in 2023 (See figure 36).

Figure 35: Fuel Oil Consumption, 2023

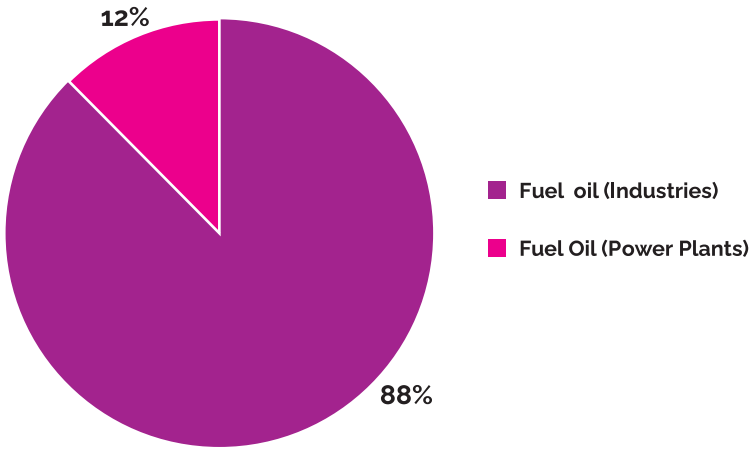
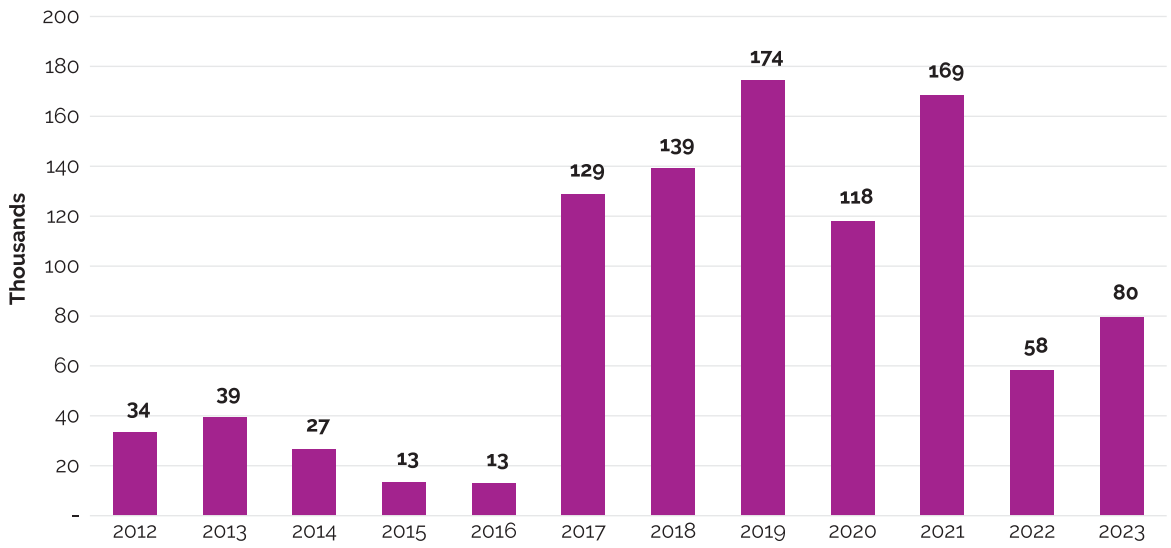



Figure 36: Fuel Oil Consumption (2012-2023)

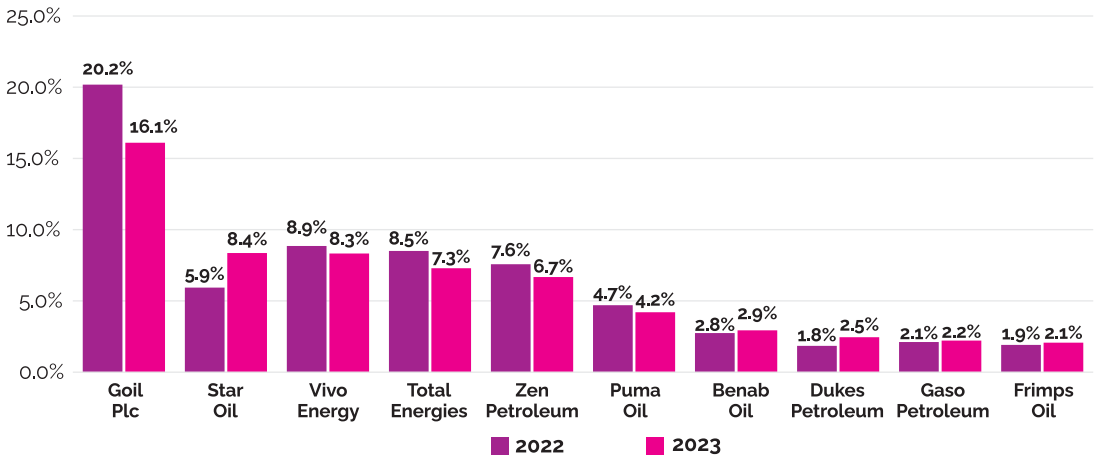


## 6.2 OMC/LPGMCs Performance

A total of about 4.49 mn mt of petroleum products were marketed on the local market in 2023. This was 6% higher than the 4.22mn mt sold in 2022. Amongst the products marketed were gasoline (petrol), gasoil (diesel), LPG, Premix Fuel, RFO, ATK, marine gasoil, kerosene, and naphtha. Of the 174 OMCs/LPGMCs that operated in 2023, 58 sold products above 10,000mt, while 116 sold products below 10,000mt, with about 27 companies being inactive as compared to 47 companies in 2022.

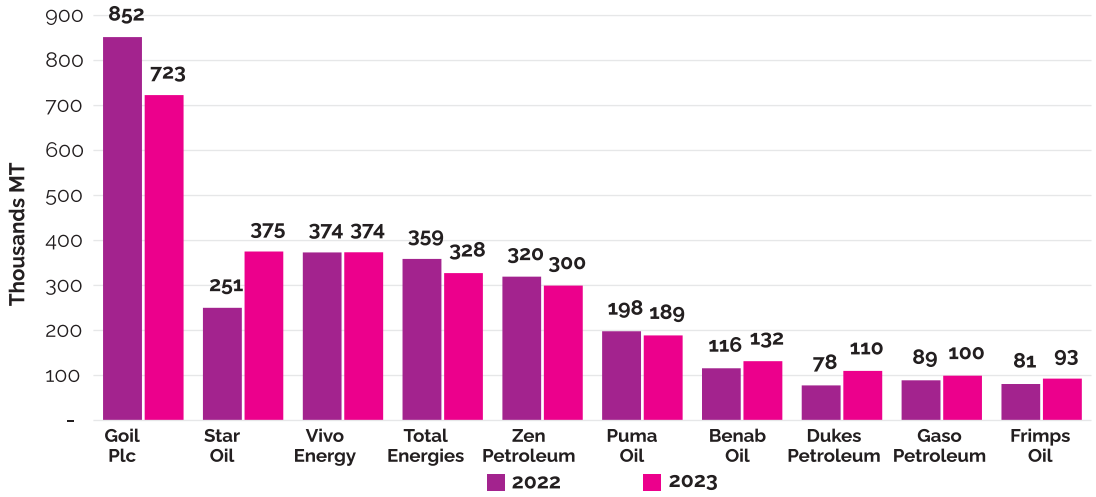
Goil continued its dominance of the market, running into the 9th year. Goil commanded 16% of the total market in 2023 compared to 20% in 2022. The reduction in market share was largely driven by decreases in gasoil and gasoline sales by 3.5% and 6.5% respectively. Star Oil moved to second from fifth in 2022, gaining 2.5% share in 2022 to 8.4%. Vivo Energy, TotalEnergies, Zen Petroleum, and Puma Energy lost market shares in 2023, while Benab, Dukes, Gaso, and Frimps recorded gains in market share. Dukes Petroleum displaced Petrosol from the top 10 marketers in 2023 (see figure 37).

Figure 37: Market shares of Top 10 OMCs




Goil Plc marketed and retailed over 700,000 mt of refined products in 2023. Star Oil, Vivo Energy, TotalEnergies, and Zen Petroleum marketed over 300,000mt each. Four other companies marketed 100,000mt – 200,000mt, while Frimps Oil sold below 100,000mt (see figure 38).

Figure 38: Top 10 OMCs by Volumes Sold (MT)

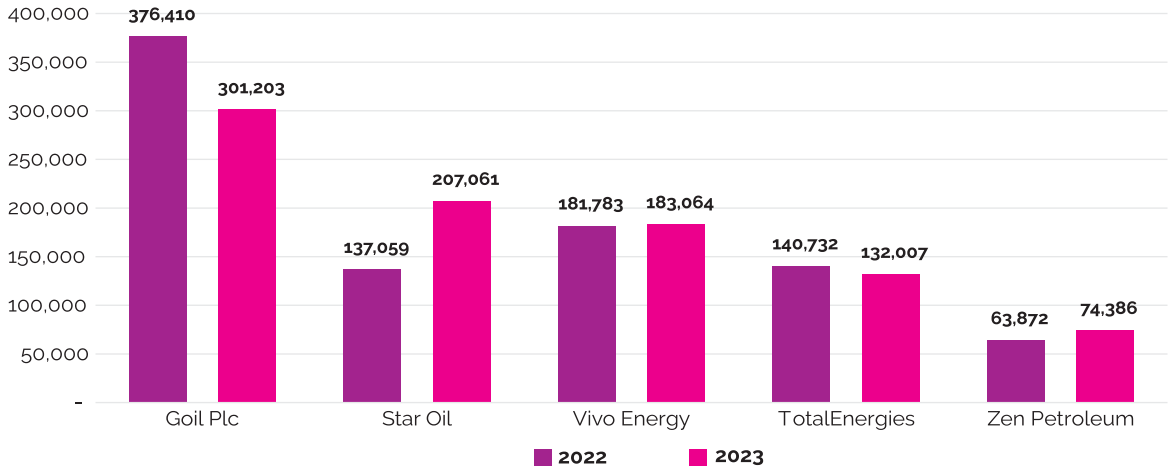


### *6.2.1 Market Trends*

While a majority of the top 10 OMCs marketed gasoline and regular gasoil as their main products, Zen Petroleum and Gaso Petroleum had gasoil (mines) as their lead products. Puma Energy sold ATK as its main product.

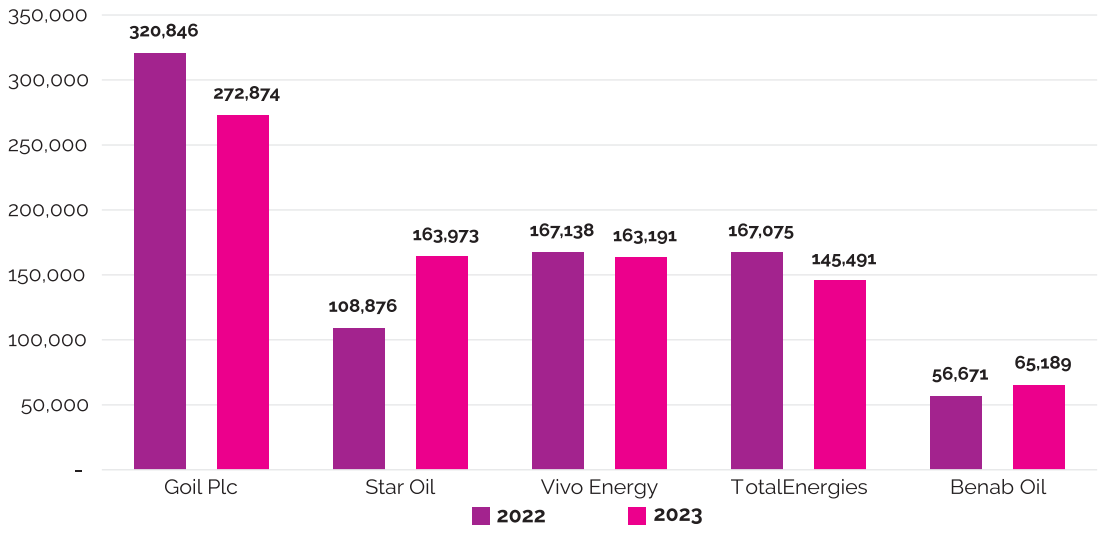
The sale of gasoline in 2023 stood at 1.70mn mt, representing a 7% increase over the 1.59mn mt sold in 2022. The top 5 marketers of gasoline for 2022 were the same for 2023. Goil Plc, even with a lost share, maintained its leadership of the gasoline market in 2023 (see figure 39). Star Oil, however, gained the most volumes of any marketer, enabling it to move to 2nd position from 4th in 2022. Vivo Energy and Zen Petroleum increased their sales while TotalEnergies recorded a reduction in volumes for the period. Overall, the top 5 OMCs commanded 53% compared to 56% of the gasoline market share in 2022.

Figure 39: 2023 Top 5 Marketers of Gasoline (MT)



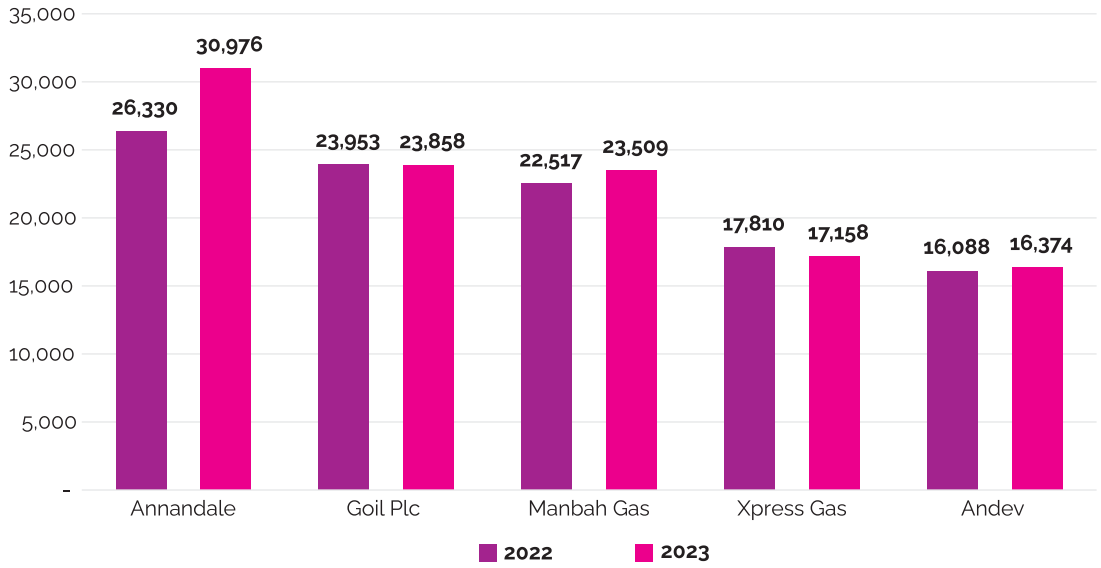

The sale of regular gasoil recorded an increase of 4% in 2023, with volumes increasing from 1.62mn mt in 2022 to 1.69mn mt in 2023. The top 5 OMCs commanded 48% of the market share, compared to 51% in 2022. Except for Star Oil and Benab Oil, the other three OMCs recorded reductions in their volumes for 2023. Star oil increased its 2023 gasoil volumes by 51%, bringing it to 2nd position from 4th in 2022 (see figure 40).

Figure 40: 2023 Top 5 Marketers of Regular Gasoil (MT)



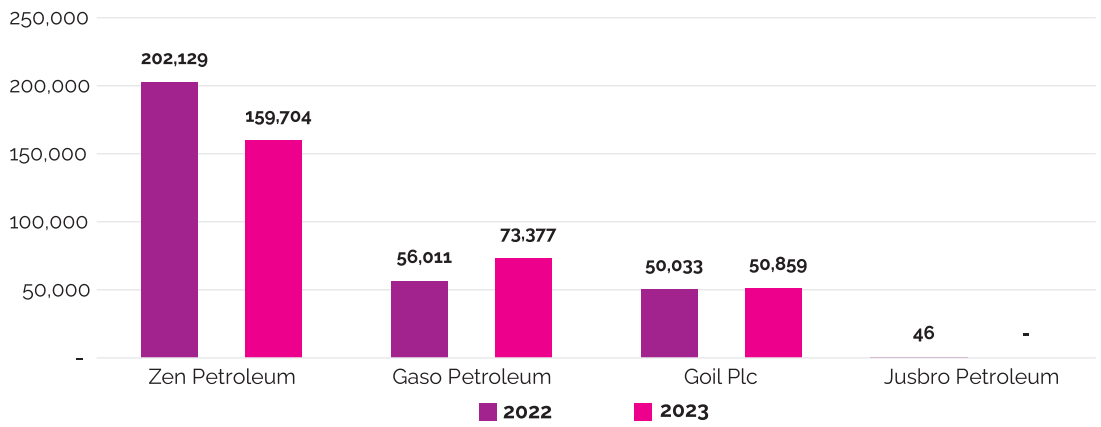
The sale of LPG recorded an increase of 4% in 2023, with volumes increasing from 305,076 mt in 2022 to 317,465 mt in 2023. The top 5 OMCs in the market commanded 48% of the market share, compared to 51% in 2022. Except for Goil Plc and Xpress Gas, the other three OMCs recorded increases in volumes for 2023. Annandale recorded an 18% increase while Xpress sold 4% less volumes in 2023 compared to 2022 (see figure 41).

**Figure 41:** 2023 Top 5 Marketers of LPG (MT)



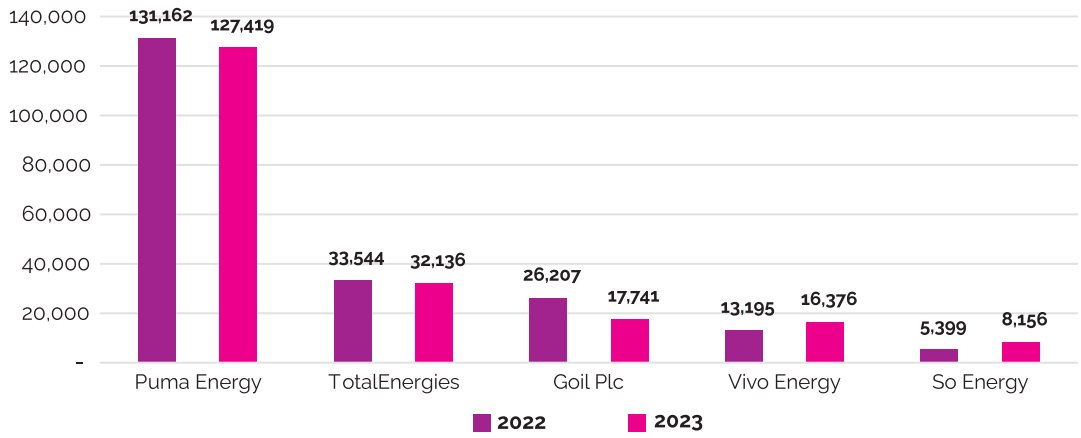

Gasoil mines sale recorded a decrease of 8% to 283,940mt in 2023. Only three marketers sold gasoil mines in 2023, compared to 4 in 2022. Zen Petroleum, Gaso Petroleum and Goil Plc continued as the main players in the gasoil mines market, recording 56%, 26%, and 18% market shares respectively (see figure 42). Jusbro Petroleum, which entered the gasoil mine market in 2022, lost out in 2023 recording no volumes for the period. Zen Petroleum recorded 21% reduction in sales in 2023, while Gaso Petroleum and Goil Plc recorded increases of 31% and 2% respectively. Zen Petroleum has consistently dominated the market for the sale of gasoil to the mines since 2014, when it replaced Total Petroleum as the largest marketer of gasoil to the mines.

**Figure 42:** 2023 Marketers of Gasoil Mines (MT)



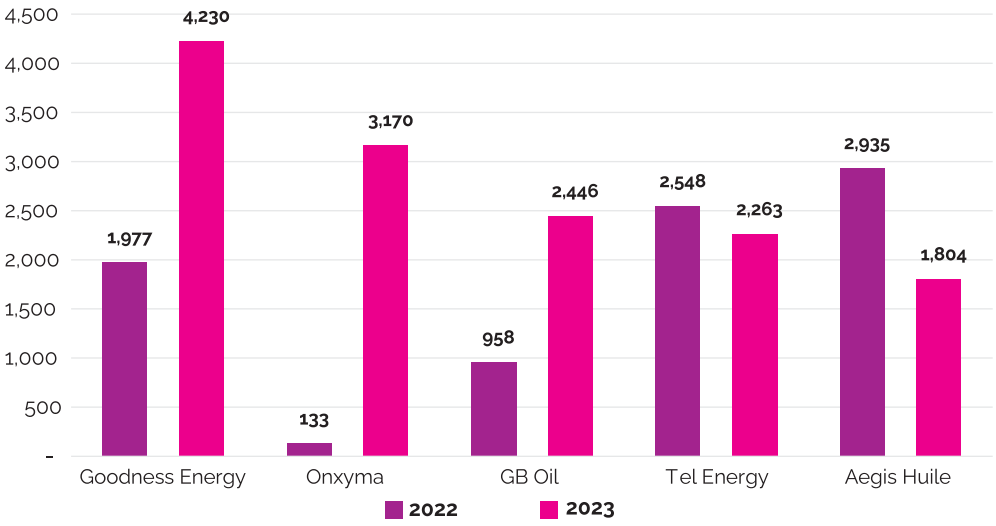
The ATK market continues to be controlled by five marketers, with total volumes decreasing by 4% to 201,828mt in 2023. Puma Energy continues to lead the market with a share of 63%, while So Energy recorded a market share of 4% in 2023. Vivo and So Energy recorded increases in sales volumes of 24% and 51% respectively while Puma Energy, TotalEnergies, and Goil Plc recorded reductions in sale of 3%, 4%, and 32% respectively (see figure 43).

**Figure 43:** 2023 Top 5 Marketers of ATK (MT)




Premix Fuel marketed in 2023 decreased by 13% to 25,879mt, following the 62% reduction observed in 2022. Goodness Energy, previously the 4th ranked marketer by volumes, made significant inroads to occupy the 1st position with 16% market share. Onxyma was the major gainer, increasing its sales by 2,292% and moving from 28th position to 2nd in 2023. Frimps, the highest marketer of Premix Fuel in 2022, placed 15th in 2023. Except for Tel Energy and Aegis Huile, the other three marketers recorded significant increases in sales volume for the period under review (see figure 44).

**Figure 44:** 2023 Top 5 Marketers of Premix (MT)



## 6.3 BIDECs Market

The BIDECs/Refinery market saw the cumulative market shares of the top 5 increasing from 54% in 2022 to 56% in 2023 (See figure 45). Go Energy, Juwel Energy, Maranatha, Fueltrade, and Blue Ocean were the top 5 distributors in 2023. Dominion and Astra were displaced from the top 5 list by Fueltrade and Blue Ocean. Except for Go Energy, the other 4 distributors recorded increases in their 2023 volumes (see figure 35). Go Energy's share of the market reduced from 20% in 2022 to 16% in 2023, Juwel distributed over 650,000mt (15%), while Blue Ocean distributed over 250,000mt (6%) for the period under review (See figure 46).

Figure 45: 2023 BIDEC Market Share – Top 5 vs Others

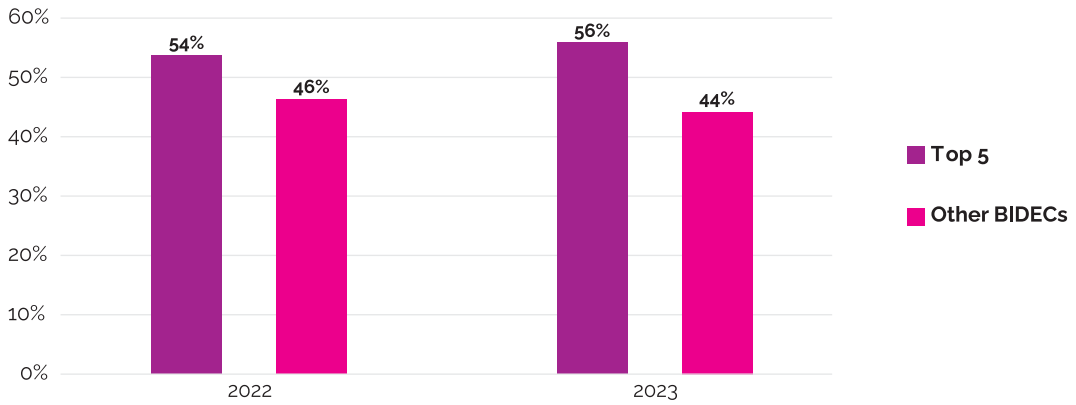



Figure 46: Top 5 BIDECs (MT)

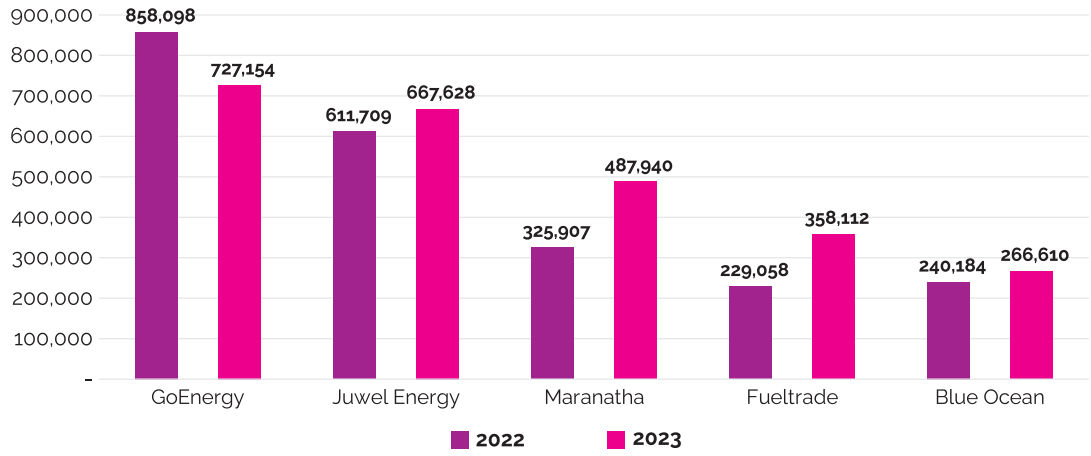
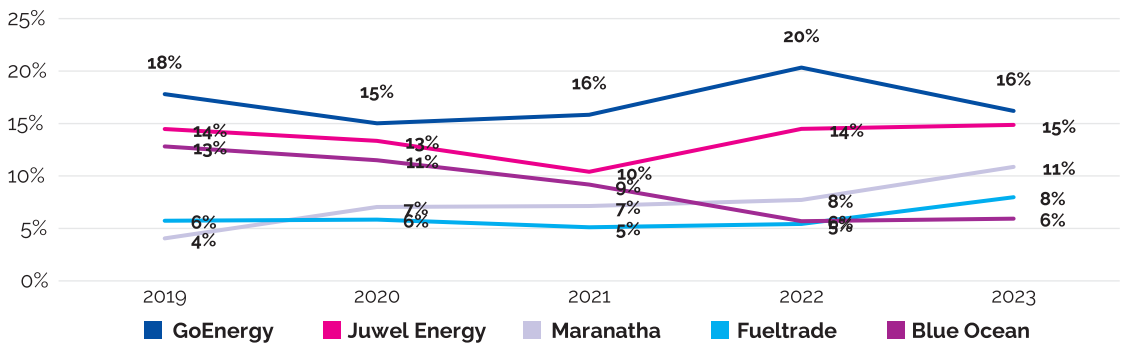



Figure 47: Top 5 BIDECs Evolution



### *6.3.1 Gasoil*

A total of 2.16mn mt of gasoil was distributed in 2023. This was 7% higher than the volumes distributed in 2022. This included regular gasoil (1.70mn mt), gasoil rig (47,756mt), gasoil mines (283,940mt), gasoil power plant (222mt), gasoil cell site (49,860mt), MGO foreign (3,548mt) and MGO local (80,988mt).

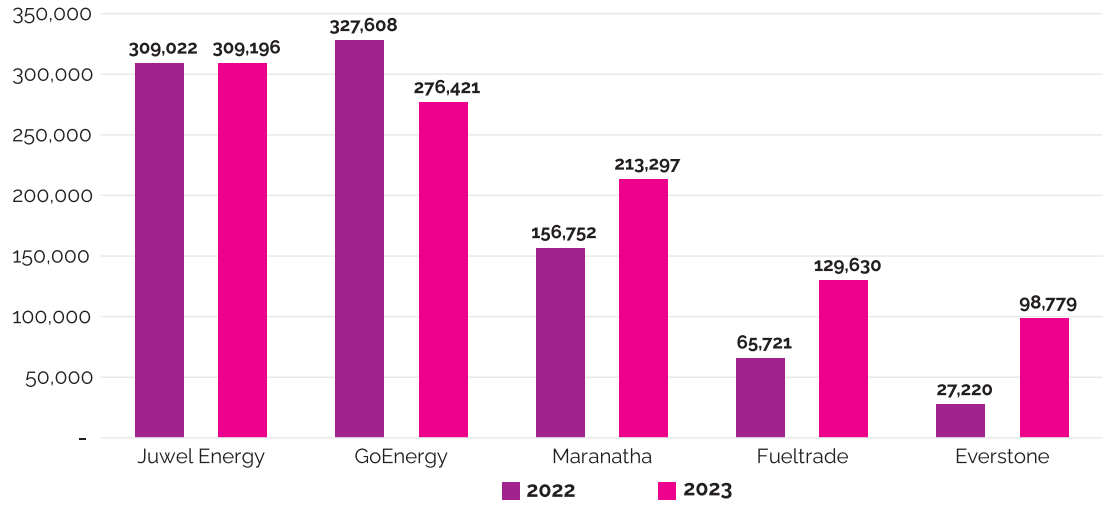
The top five distributors of regular gasoil in 2023 (Juwel, Go Energy, Maranatha, Fueltrade, and Everstone) distributed a total of 1,027,323mt, representing 61% of the total market share (See figure 48).

Three (3) players participated in the sale of gasoil to the mines in 2023 as compared to the 7 in 2022. Astra Oil Services maintained its lead distributorship role of gasoil (mines) in 2023. Astra Oil distributed 159,704mt, representing 56% of the total gasoil mines distribution, as compared to the second ranked distributor, Fueltrade, who distributed 73,377mt (26%) of total gasoil mines in 2023).

Go Energy and Astra Energy were the only companies to sell gasoil rig in both 2023 and 2022. Go Energy remained the largest distributor of gasoil rig in 2022, with sales increasing from 45,961mt in 2022 to 47,739mt in 2023.

A total of 26 companies distributed MGO local in 2023, compared to 20 companies in 2022. For the MGO local space, Maranatha displaced Go Energy to become the largest distributor with total volumes of 14,510mt, representing 18% of the total MGO local market share. Surprisingly, GoEnergy lost ground and is currently the 6th largest distributor of MGO Local in 2023. Blue Ocean maintained its position as the largest distributor of MGO foreign in 2023 with market a share 70%.

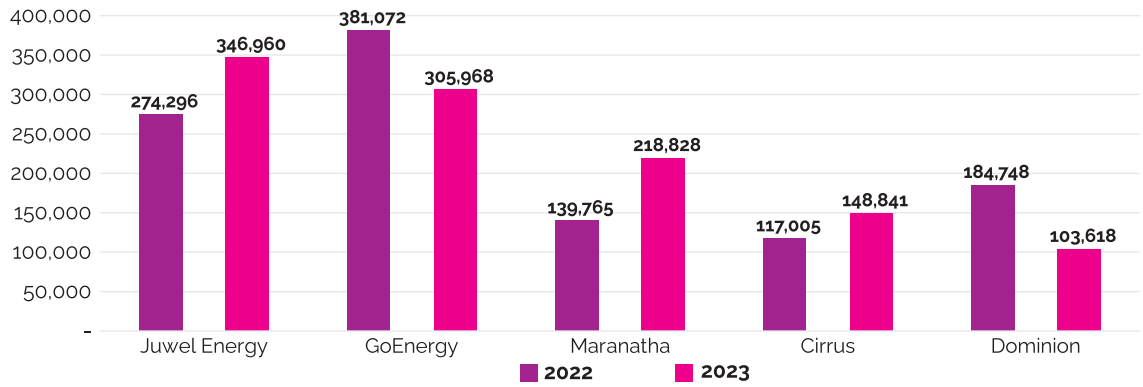
Figure 48: Top 5 Gasoil Regular Distributors (MT)




### *6.3.2 Gasoline*

A total of 1.70mn mt of gasoline was distributed in 2023, 7% higher than in 2022 (1.59mn mt). The top five distributors of gasoline were Juwel Energy (20%), GoEnergy (18%), Maranatha (13%), Cirrus (9%), and Dominion (6%). They accounted for a total of 1,124,214mt, representing 66% of the total market share. Maranatha moved up to become the 3rd largest gasoline distributor in 2023, increasing its distribution to 218,828mt in 2023, representing a 57% growth. GoEnergy and Dominion recorded decreases in distribution of gasoline by 20% and 44% respectively in 2023 from 2022. Cirrus moved up to 4th position from its 5th spot in 2022.

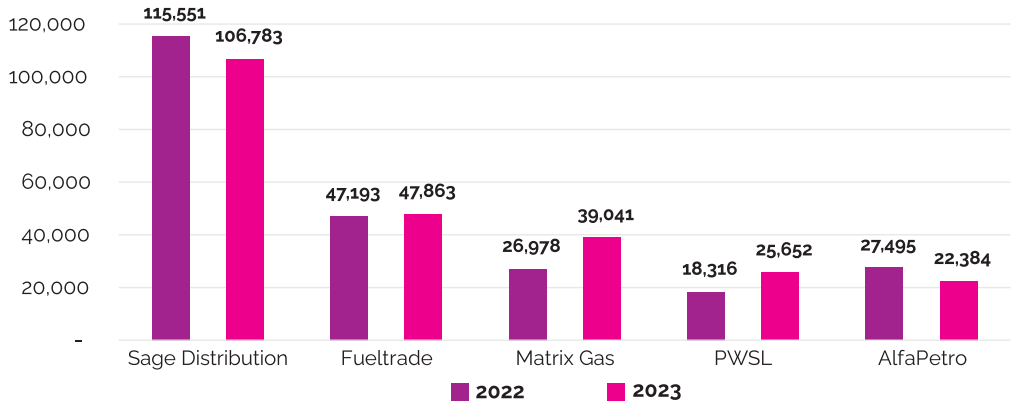
Figure 49: Top 5 Gasoline Distributors (MT)




### 6.3.3 LPG

A total of sixteen (16) BIDECs distributed LPG in 2023 – same as in 2022. The 317,465mt of LPG (butane) distributed was mainly for domestic, vehicular, and industrial consumption, with no LPG (Propane) consumed by the power sector. This was a 4% rise in the distribution of LPG from 305,076mt in 2022.The largest top 5 distributors of LPG in 2023, distributed 76% of total LPG distributed, with Sage distributing 34%, Fueltrade 15%, and Matrix Gas 12% in 2023.

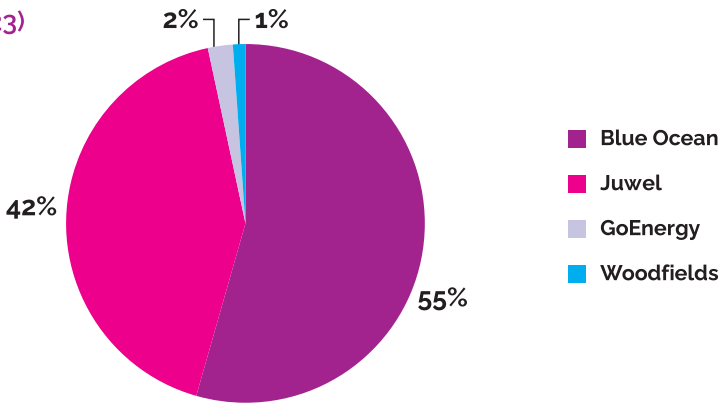
Figure 50: Top 5 LPG Distributors (MT)




### 6.3.4 Kerosene

Only four companies (Blue Ocean, Juwel, Go Energy, and Woodfields) distributed kerosene in 2023 totalling 2,582mt. This was a 35% decline in the distribution of kerosene from 3,988mt in 2022. However, over the past decade, there has been a significant decline in kerosene distribution by 94% due to the liberalization of kerosene prices, which has deterred the use of kerosene to adulterate diesel.

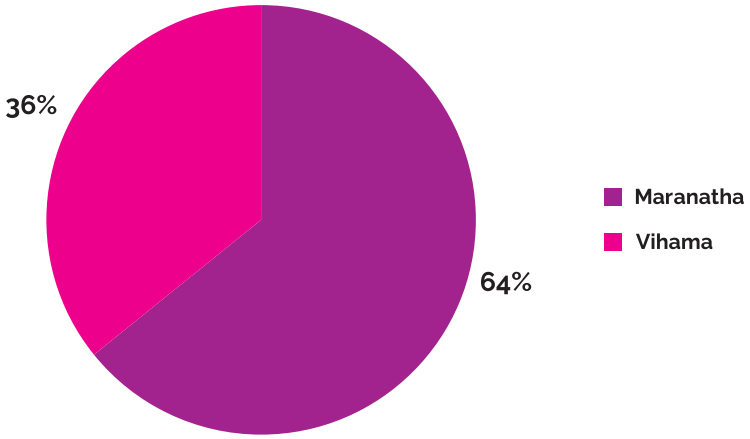
Figure 51: Kerosene Distributors (2023)



### *6.3.5 Premix Fuel*

A total of 25,879mt of Premix Fuel was distributed in 2023, 13% lower than in 2022 (29,884mt). This was mainly due to the government's inability to pay subsidies promptly which resulted in the reduction in supply. Two companies distributed Premix Fuel in 2023, with Vihama maintaining its position as the leader supplying over 64% (equivalent to 16,614mt) of the total premix consumed in the country, while Maranatha supplied about 36% (equivalent to 9,265mt) in 2023.

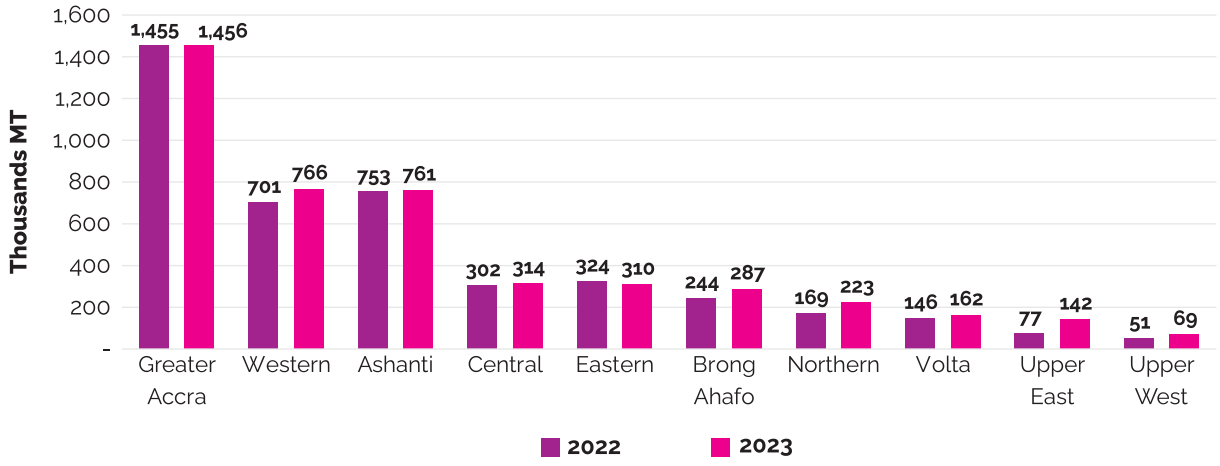
Figure 52: Premix Fuel Distributors (2023)




## 6.4 Regional Consumption

As expected, the Greater Accra Region maintained its place as the largest consuming region with 1.456mn mt, representing 32.4% of national consumption. The region lost 2% share of consumption from 2022 share of 34.5%. The Ashanti and Western Regions followed with consumption of 766,118mt and 760,530mt respectively. Except for Eastern region, all other regions recorded increases in consumption volumes in 2023. The Upper East, Upper West, and Northern regions recorded consumption increases of 86%, 35%, and 32% respectively. The Eastern region recorded a decrease of 5% in 2023 from 2022 (See figure 53).

Figure 53: Regional Consumption (2023 vs 2022)



Over the past five (5) years, the Greater Accra Region has consistently consumed volumes above 1.3 mn mt. The Ashanti and Western regions have mostly consumed between 600,000mt – 800,000mt, while the Eastern and Central regions consumed between 200,000mt – 400,000mt over the five-year period (see figure 54).

Figure 54: Top 5 Regional Consumers of Petroleum Products (2019-2023)

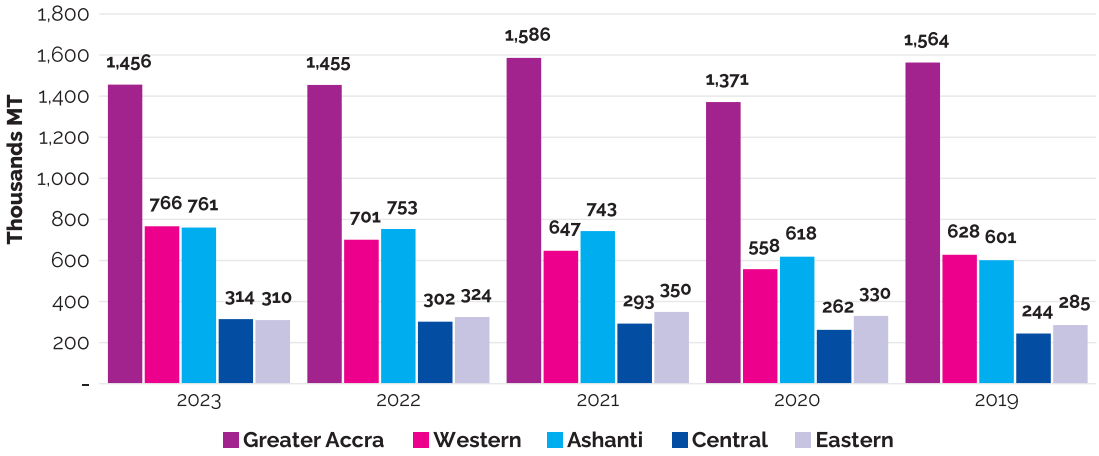
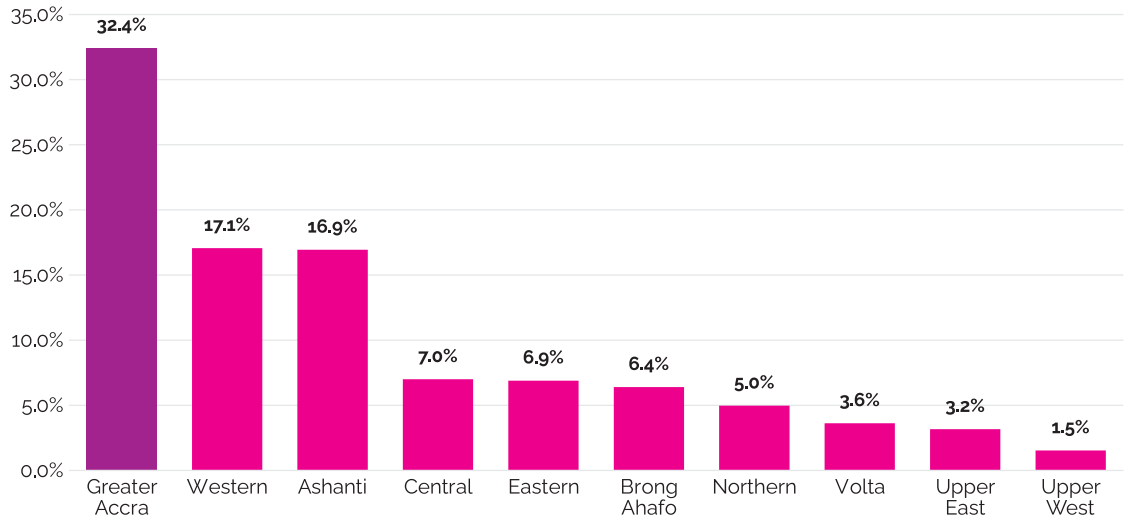



Figure 55: Regional Consumption Shares: Greater Accra vrs Others (2023)




## 6.5 Production

Ghana witnessed a 59% increase in total refinery output in 2023, having recorded a 54% fall in 2022. Total output increased to 301,405mt from 189,593mt in 2022. The rise in local refinery output was mainly driven by the coming onstream in November 2023 of the new 40,000bps Sentuo Oil Refinery. Sentuo's output accounted for 29% of total output in 2023. Platon recorded an increase in output of 585% from its 2022 production, while Akwaaba and GNGC recorded decreases of 59% and 9% respectively. LPG was the largest product obtained from refinery/gas processing operations in 2023, with its share of refinery output accounting for 34% compared to 61% in 2022 (See figure 56).

Figure 56: Output of Local refineries

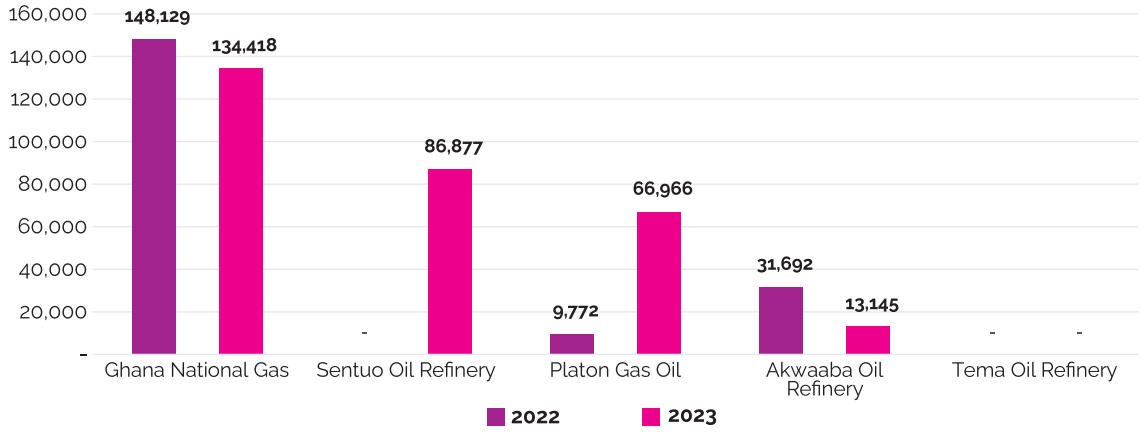



Figure 57: Total Refinery Output (2019-2023)

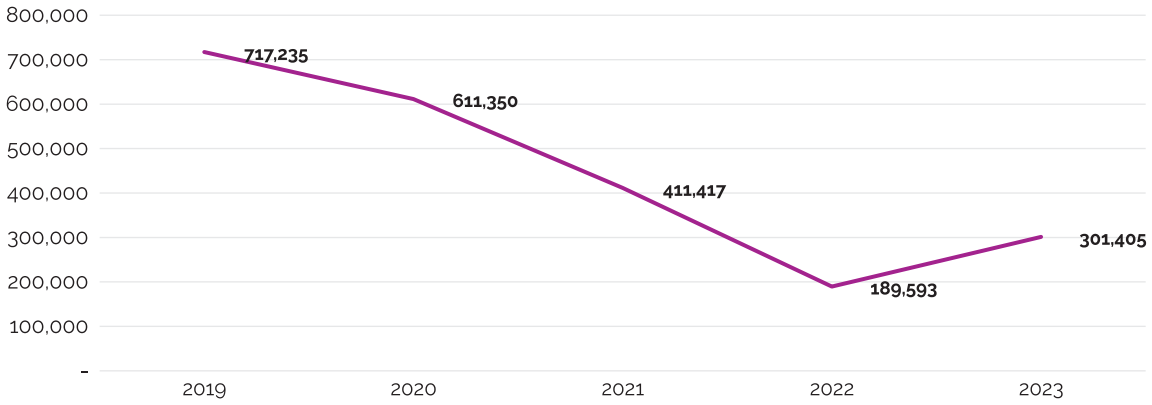



Figure 58: Refinery Output (MT)

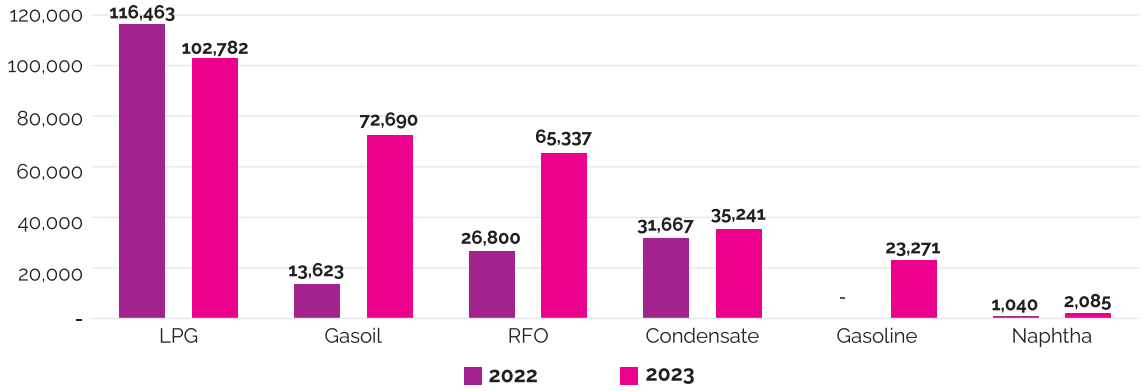
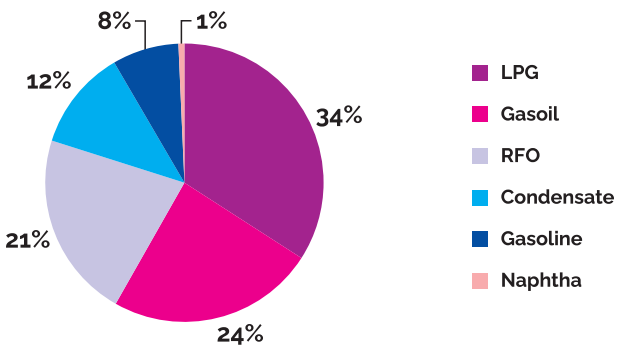


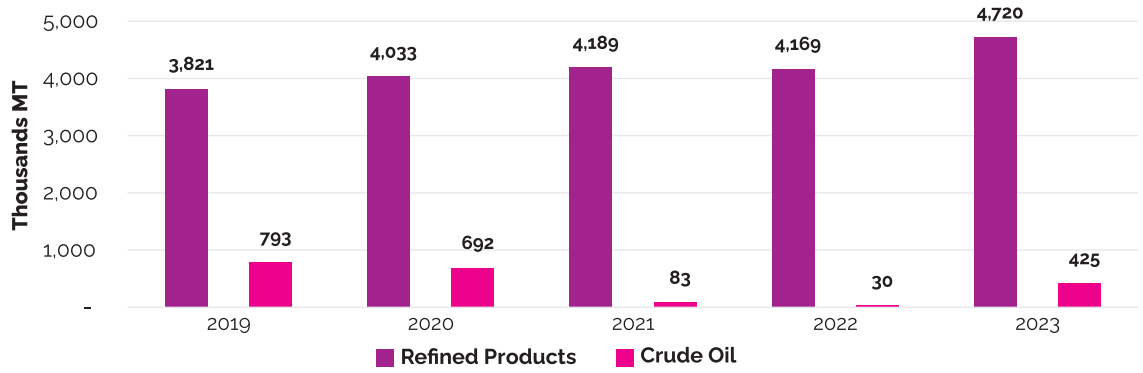

Figure 59: 2023 Refinery Output share



## 6.6 Imports

Imports of crude oil and refined products increased significantly by 23% in 2023 from 2022. Total imports of crude oil and refined products reached 5.145mn mt in 2023 from 4.199mn mt in 2022. Crude oil imports accounted for 8% (424,773mt) while petroleum products accounted for 92% of total imports. All the crude oil volume imported into the country was refined into petroleum products with none for power generation. Moreover, the year under review also witnessed a 13% increase in the importation of refined products with the importation of crude oil increasing significantly by 1,298%, which was a result of Sentuo Oil Refinery coming onstream as well as ramp up in Platon Oil's crude import in 2023 (See figure 60).

Figure 60: Petroleum product import (2019-2023)

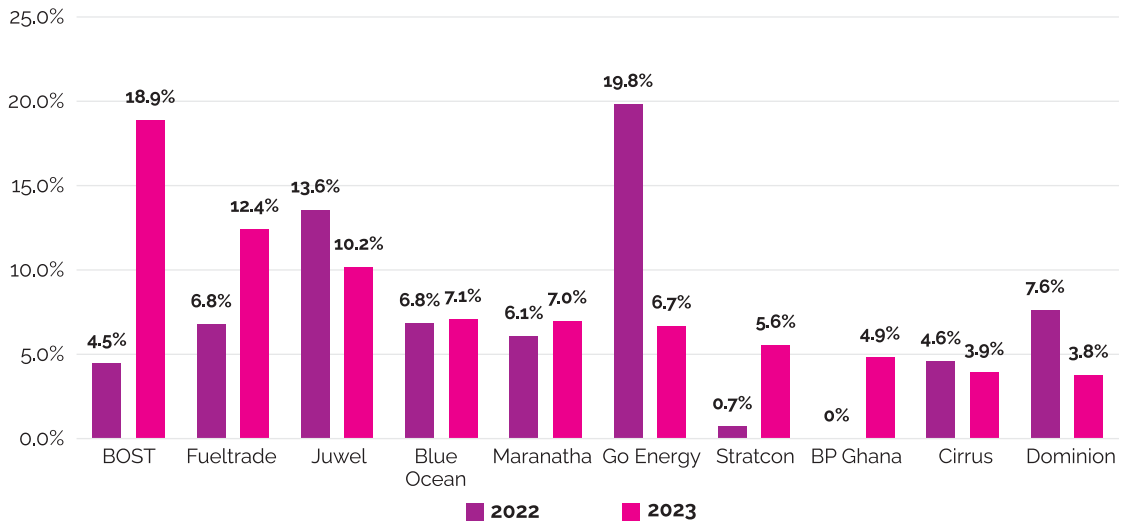



During the period under review, gasoil, gasoline, and LPG recorded an increase of 10%, 18%, and 31% respectively. Products such as fuel oil and ATK recorded decreases of 16% and 6% respectively.

A total of 27 BIDECs compared to 33 in 2022 (in addition to Sonabhy which transits through Ghana to Burkina Faso) imported products in 2023. GoEnergy lost its position as the highest importer of refined products to sixth position in 2023. GoEnergy lost 13.1% market share to 6.7% in 2023. This was due to Government's roll out of the G4O program mandating BOST to be the exclusive importer under the program. BOST assumed number one position with a market share of 18.9%, an increment in market share of 14.4% from 2022. Juwel Energy lost 3.4% market share to 10.2% and its second position to Fueltrade. Fueltrade gained 5.7% market share to 12.4% in 2023. Astra and Sage dropped out of the top 10 in 2023 to Stratcon and BP Ghana.

For the crude oil space, Sentuo Oil Refinery, Platon Gas oil, Chase, Everstone, and Akwaaba Oil Refinery imported 55%, 19%, 14%, 8%, and 3% respectively for the period under review.

Figure 61: Top 10 Importers (2023 vrs 2022)




## 6.7 Exports

A total of 314,234mt of refined products was exported in 2023, representing a rise of 8% from 2022. This was made up of 180,674mt of gasoline, 67,186mt of LPG, 65,112mt of gasoil and 1,262mt of ATK. By destination, Burkina Faso accounted for 97.7% of total exports while Mali, Niger, and Togo accounted for 2.3% for the period under review. By exporter, Sonabhy transited 97% of total exports through Ghana, while the BDCs exported 3% of total exports in 2023.

Figure 62: Share of Exports by Product

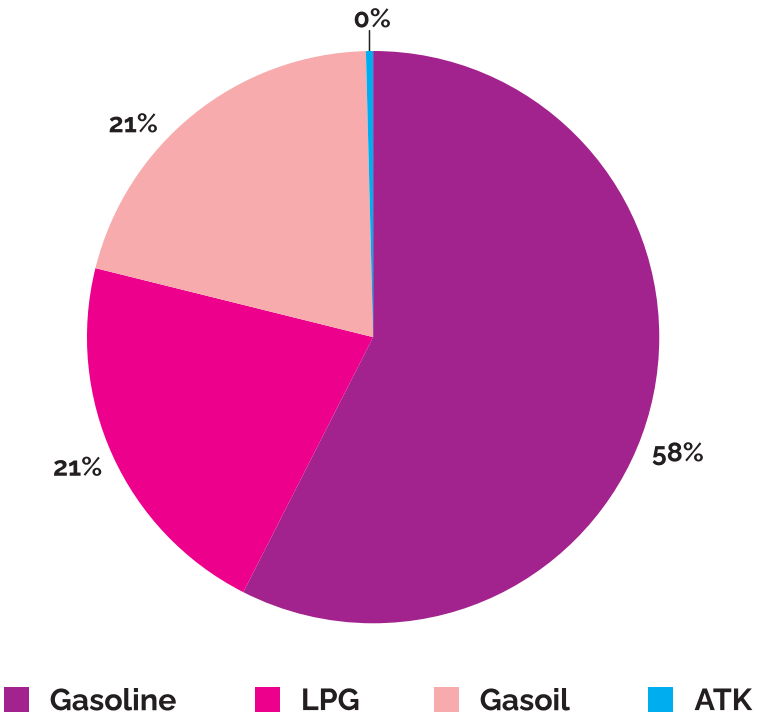


Figure 63: Volumes of Exports by Product

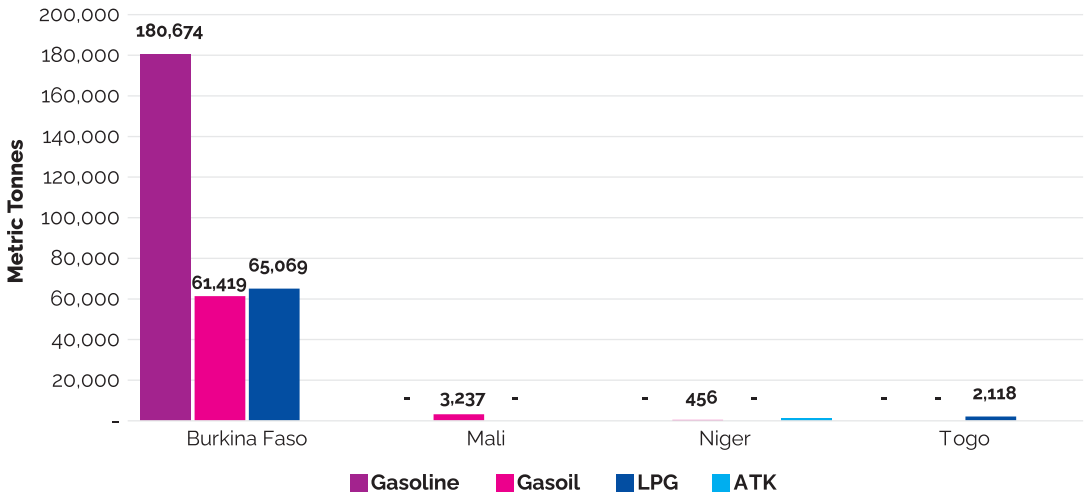
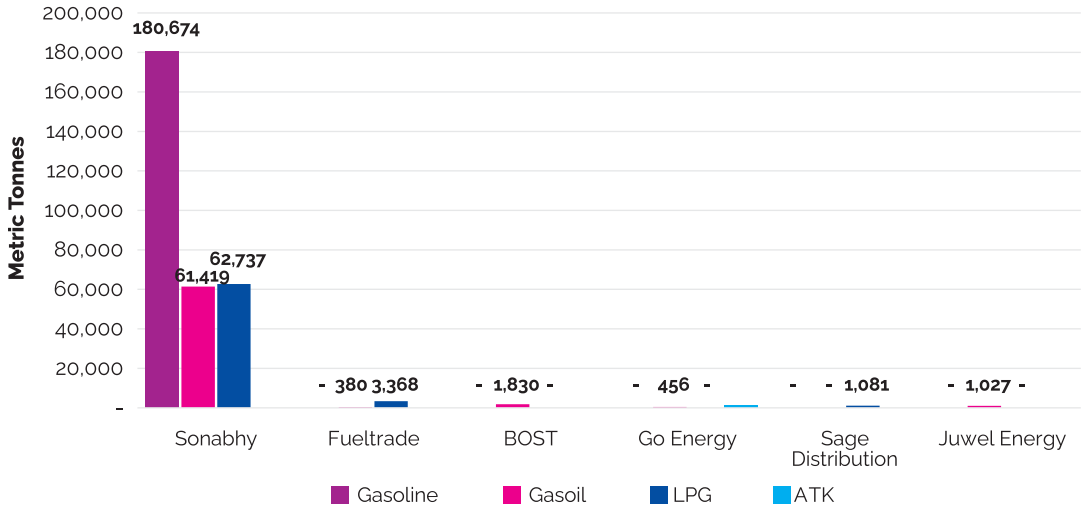



Figure 64: Volumes of Exports by BIDEC




## 6.8 Pricing Review

Dated Brent crude prices averaged USD82.60/bbl in 2023, down 18% from the previous year. The bi-weekly FOB prices of Dated Brent for the year 2023 ranged between USD74.27/bbl and USD94.76/bbl (see table 9). The lowest price was recorded in the first window of July while the highest price was recorded in the first window of October. The FOB price of Dated Brent in 2023 recorded cumulative decrease of 2%.

The decline in prices were mainly due to lower-than-expected demand growth and continued rise in output by key producers to defend their market share.

The bi-weekly FOB prices of **gasoline (petrol)** for the year 2023 ranged between USD717.95/MT and USD989.48/MT, and averaged USD853.07/MT, representing a decrease of 15% from 2022. The lowest price was recorded in the first window of January while the highest price was recorded in the first window of September. The FOB price of petrol in 2023 recorded a cumulative decrease of 6%.

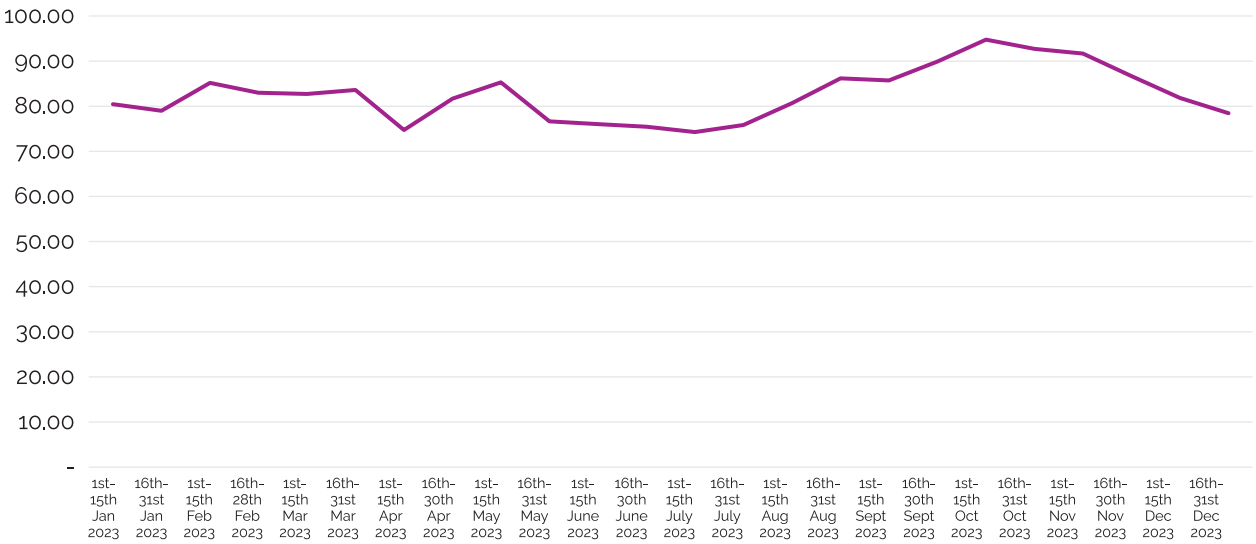
The bi-weekly FOB prices of **gasoil (diesel)** for the year 2023 ranged between USD673.25/MT and USD992.95/MT, and averaged USD833.25/MT, representing a decrease of 20% from 2022. The lowest price was recorded in the second window of May while the highest price was recorded in the first window of October. The FOB price of diesel in 2023 recorded a cumulative decrease of 6%.

The bi-weekly FOB prices of **LPG** for the year 2023 ranged between USD316.02/MT and USD702.73/MT, and averaged USD524.68/MT, representing a decrease of 28% from 2022. The lowest price was recorded in the first window of July while the highest price was recorded in the first window of March. The FOB price of LPG in 2023 recorded a cumulative increase of 16%.

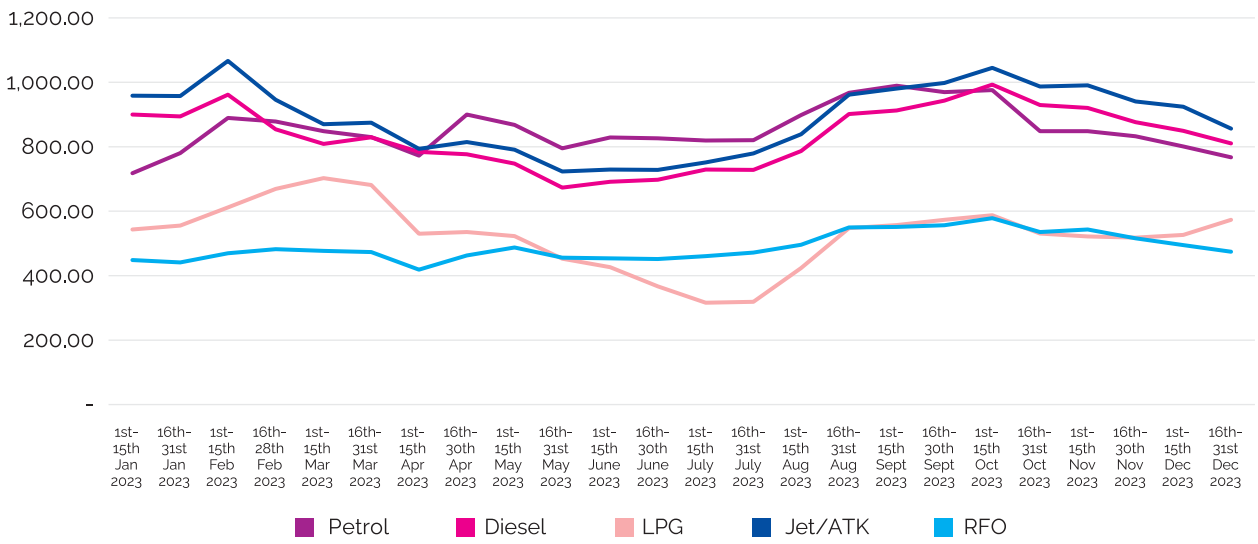
The bi-weekly FOB prices of **Aviation Turbine Kerosene (ATK/Jet)** for the year 2023 ranged between USD723.31/MT and USD1,066.50/MT, and averaged USD887.74/MT, representing a decrease of 18% from 2022. The lowest price was recorded in the second window of May while the highest price was recorded in the first window of February. The FOB price of ATK in 2023 recorded a cumulative decrease of 6%.

The bi-weekly FOB prices of **Residual Fuel Oil (RFO)** for the year 2023 ranged between USD418.63/MT and USD578.39/MT, and averaged USD489.56/MT, representing a decrease of 18% from 2022. The lowest price was recorded in the first window of April while the highest price was recorded in the first window of October. The FOB price of RFO in 2023 recorded a cumulative increase of 7%.

Figure 65: Trend of Dated Brent Crude Oil FOB Prices (USD/BBL)



## Figure 66: Trend of Finished Products FOB Prices (USD/MT)




## Table 9: 2023 Pricing window FOB Prices (USD/MT except Brent Dated in USD/BBL)

| Pricing Window | Petrol | % age Change | Diesel | % age Change | LPG | % age Change | Jet/ATK | % age Change | RFO | % age Change | Brent Dated | % age Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1st - 15th Jan, 2023 | 717.95 | -6.0% | 900.30 | 0.9% | 543.33 | -5.2% | 958.68 | 0.6% | 448.58 | -1.3% | 80.45 | -2.8% |
| 16th - 31st Jan, 2023 | 780.33 | 8.7% | 894.18 | -0.7% | 555.20 | 2.2% | 957.28 | -0.1% | 441.35 | -1.6% | 78.99 | -1.8% |
| 1st - 15th Feb, 2023 | 889.59 | 14.0% | 961.91 | 7.6% | 611.95 | 10.2% | 1,066.50 | 11.4% | 469.52 | 6.4% | 85.16 | 7.8% |
| 16th - 28th Feb, 2023 | 878.41 | -1.3% | 854.00 | -11.2% | 669.45 | 9.4% | 945.84 | -11.3% | 482.25 | 2.7% | 82.99 | -2.5% |
| 1st - 15th Mar, 2023 | 848.35 | -3.4% | 809.00 | -5.3% | 702.73 | 5.0% | 869.90 | -8.0% | 476.83 | -1.1% | 82.71 | -0.3% |
| 16th - 31st Mar, 2023 | 829.73 | -2.2% | 829.48 | 2.5% | 681.38 | -3.0% | 874.50 | 0.5% | 473.15 | -0.8% | 83.61 | 1.1% |
| 1st - 15th Apr, 2023 | 772.75 | -6.9% | 783.95 | -5.5% | 530.10 | -22.2% | 793.43 | -9.3% | 418.63 | -11.5% | 74.73 | -10.6% |
| 16th - 30th Apr, 2023 | 900.20 | 16.5% | 776.65 | -0.9% | 535.45 | 1.0% | 814.68 | 2.7% | 462.45 | 10.5% | 81.69 | 9.3% |
| 1st - 15th May, 2023 | 868.14 | -3.6% | 747.93 | -3.7% | 522.77 | -2.4% | 790.95 | -2.9% | 487.45 | 5.4% | 85.29 | 4.4% |
| 16th - 31st May, 2023 | 795.31 | -8.4% | 673.25 | -10.0% | 452.75 | -13.4% | 723.31 | -8.6% | 456.06 | -6.4% | 76.64 | -10.1% |
| 1st - 15th June, 2023 | 828.70 | 4.2% | 691.41 | 2.7% | 426.50 | -5.8% | 729.23 | 0.8% | 453.64 | -0.5% | 76.04 | -0.8% |
| 16th - 30th June, 2023 | 826.08 | -0.3% | 697.47 | 0.9% | 366.61 | -14.0% | 728.39 | -0.1% | 451.42 | -0.5% | 75.46 | -0.8% |
| 1st - 15th July, 2023 | 819.61 | -0.8% | 729.07 | 4.5% | 316.02 | -13.8% | 751.25 | 3.1% | 460.68 | 2.1% | 74.27 | -1.6% |
| 16th - 31st July, 2023 | 820.27 | 0.1% | 728.11 | -0.1% | 319.09 | 1.0% | 779.25 | 3.7% | 471.80 | 2.4% | 75.85 | 2.1% |
| 1st - 15th Aug, 2023 | 898.55 | 9.5% | 786.73 | 8.1% | 423.75 | 32.8% | 838.89 | 7.7% | 495.91 | 5.1% | 80.67 | 6.4% |
| 16th - 31st Aug, 2023 | 967.29 | 7.7% | 901.73 | 14.6% | 547.52 | 29.2% | 961.46 | 14.6% | 549.54 | 10.8% | 86.17 | 6.8% |
| 1st - 15th Sept, 2023 | 989.48 | 2.3% | 912.68 | 1.2% | 557.05 | 1.7% | 980.70 | 2.0% | 551.48 | 0.4% | 85.70 | -0.5% |
| 16th - 30th Sept, 2023 | 969.60 | -2.0% | 943.03 | 3.3% | 573.50 | 3.0% | 997.85 | 1.7% | 556.38 | 0.9% | 89.90 | 4.9% |
| 1st - 15th Oct, 2023 | 975.73 | 0.6% | 992.95 | 5.3% | 587.43 | 2.4% | 1,044.91 | 4.7% | 578.39 | 4.0% | 94.76 | 5.4% |
| 16th - 31st Oct, 2023 | 848.30 | -13.1% | 929.36 | -6.4% | 530.64 | -9.7% | 986.77 | -5.6% | 535.36 | -7.4% | 92.70 | -2.2% |
| 1st - 15th Nov, 2023 | 848.18 | 0.0% | 920.57 | -0.9% | 521.61 | -1.7% | 990.55 | 0.4% | 543.41 | 1.5% | 91.68 | -1.1% |
| 16th - 30th Nov, 2023 | 832.64 | -1.8% | 876.18 | -4.8% | 518.14 | -0.7% | 940.64 | -5.0% | 516.05 | -5.0% | 86.68 | -5.5% |
| 1st - 15th Dec, 2023 | 801.18 | -3.8% | 849.70 | -3.0% | 526.23 | 1.6% | 924.33 | -1.7% | 495.05 | -4.1% | 81.84 | -5.6% |
| 16th - 31st Dec, 2023 | 767.20 | -4.2% | 810.70 | -4.6% | 573.20 | 8.9% | 856.41 | -7.3% | 474.09 | -4.2% | 78.47 | -4.1% |
| Min | 717.95 | | 673.25 | | 316.02 | | 723.31 | | 418.63 | | 74.27 | |
| Max | 989.48 | | 992.95 | | 702.73 | | 1,066.50 | | 578.39 | | 94.76 | |
| Average | 853.07 | | 833.35 | | 524.68 | | 887.74 | | 489.56 | | 82.60 | |
| Total Decreses | | -57.7% | | -57.2% | | -91.9% | | -60.0% | | -44.6% | | -50.4% |
| Total Increases | | 63.6% | | 51.6% | | 108.4% | | 54.0% | | 52.1% | | 48.2% |
| Net Change | | 5.9% | | -5.6% | | 16.4% | | -6.0% | | 7.5% | | -2.2% |

## 6.9 Exchange Rate

The BoG Interbank exchange rate of the Ghana Cedi against the USD generally traded high throughout 2023. The average USD/GHS exchange rate monitored from the Bank of Ghana for the period ranged between USD/GHS8.6698 and USD/GHS11.6251, averaging USD/GHS10.8593. The average USDGHS for 2023 depreciated significantly by 25% from the USD/GHS8.1425 recorded in 2022. The lowest exchange rate was recorded in the second window of January while the highest exchange rate was recorded in the second of December.

The average USD/GHS exchange rate monitored from the **Commercial Banks (Absa, Stanbic and Standard Chartered)** for the period ranged between USD/GHS10.2950 and USD/GHS12.8833, and averaged USD/GHS11.8547. The lowest exchange rate was recorded in the first window of January while the highest exchange rate was recorded in the first window of March. The average commercial banks' exchange rate monitored throughout the year depreciated by 24% from 2022. The spread between the BOG Interbank rate and the Market rate averaged GHp99 in 2023, up from the GHp90 recorded in 2022.

Figure 67: Trend of US$/GHS Exchange Rate in 2023

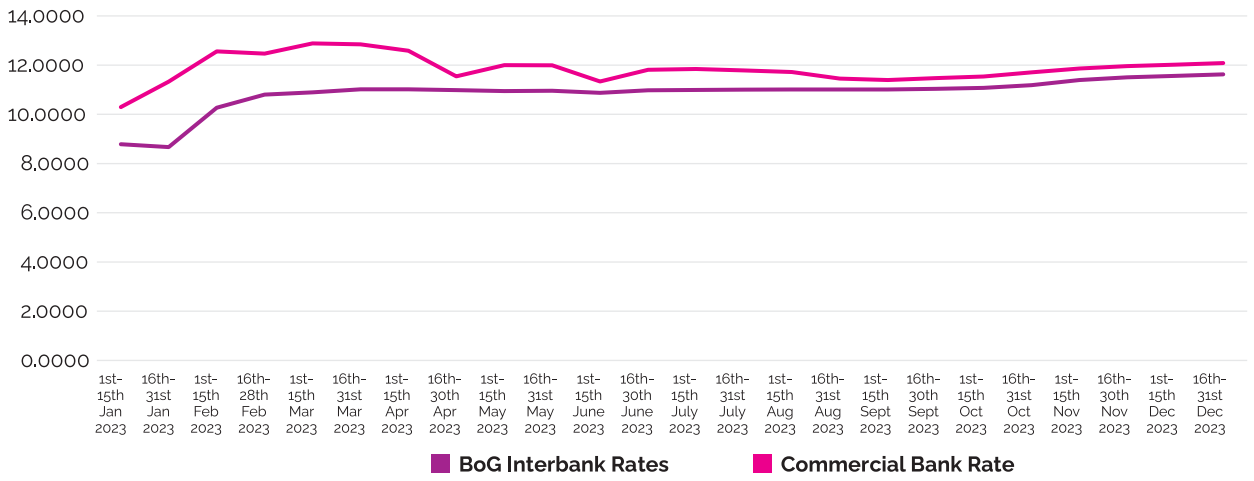



Table 10: US$/GHS exchange rates for the period 2023

| Pricing Window | BoG Interbank Rates | %age Change | Commercial Bank Rate | %age Change |
|---|---|---|---|---|
| 1st - 15th Jan, 2023 | 8.7854 | 48.1% | 10.2950 | 36.1% |
| 16th - 31st Jan, 2023 | 8.6698 | 1.3% | 11.3283 | -9.1% |
| 1st - 15th Feb, 2023 | 10.2725 | -15.6% | 12.5606 | -9.8% |
| 16th - 28th Feb, 2023 | 10.8045 | -4.9% | 12.4697 | 0.7% |
| 1st - 15th Mar, 2023 | 10.8909 | -0.8% | 12.8833 | -3.2% |
| 16th - 31st Mar, 2023 | 11.0193 | -1.2% | 12.8483 | 0.3% |
| 1st - 15th Apr, 2023 | 11.0195 | 0.0% | 12.5867 | 2.1% |
| 16th - 30th Apr, 2023 | 10.9871 | 0.3% | 11.5450 | 9.0% |
| 1st - 15th May, 2023 | 10.9482 | 0.4% | 12.0006 | -3.8% |
| 16th - 31st May, 2023 | 10.9587 | -0.1% | 11.9963 | 0.0% |
| 1st - 15th June, 2023 | 10.8759 | 0.8% | 11.3394 | 5.8% |
| 16th - 30th June, 2023 | 10.9794 | -0.9% | 11.8111 | -4.0% |
| 1st - 15th July, 2023 | 10.9911 | -0.1% | 11.8455 | -0.3% |
| 16th - 31st July, 2023 | 11.0044 | -0.1% | 11.7848 | 0.5% |

Table 10: US$/GHS exchange rates for the period 2023 (Cont.)

| Pricing Window | BoG Interbank Rates | %age Change | Commercial Bank Rate | %age Change |
|---|---|---|---|---|
| 1st - 15th Aug, 2023 | 11.0085 | 0.0% | 11.7185 | 0.6% |
| 16th - 31st Aug, 2023 | 11.0083 | 0.0% | 11.4538 | 2.3% |
| 1st - 15th Sept, 2023 | 11.0115 | 0.0% | 11.3950 | 0.5% |
| 16th - 30th Sept, 2023 | 11.0343 | -0.2% | 11.4730 | -0.7% |
| 1st - 15th Oct, 2023 | 11.0758 | -0.4% | 11.5409 | -0.6% |
| 16th - 31st Oct, 2023 | 11.1881 | -1.0% | 11.7070 | -1.4% |
| 1st - 15th Nov, 2023 | 11.3928 | -1.8% | 11.8638 | -1.3% |
| 16th - 30th Nov, 2023 | 11.5069 | -1.0% | 11.9639 | -0.8% |
| 1st - 15th Dec, 2023 | 11.5642 | -0.5% | 12.0207 | -0.5% |
| 16th - 31st Dec, 2023 | 11.6251 | -0.5% | 12.0821 | -0.5% |
| Min | 8.6698 | | 10.2950 | |
| Max | 11.6251 | | 12.8833 | |
| Average | 10.8593 | | 11.8547 | |
| Total Depreciation | | -29.2% | | -36.0% |
| Total Appreciation | | 50.9% | | 58.0% |
| Net Depr.(-)/Appr.(+) | | 21.7% | | 21.9% |

## 6.10 Ex-Refinery Prices

The year under review saw the average ex-refinery price for petrol range between GHS8.30/Lt and GHS11.82/Lt, and averaged GHS9.4826/Lt. The average ex-refinery price in 2023 increased by 19% from 2022. The lowest ex-refinery price was recorded in the first window of June while the highest was recorded in the second window of January. The ex-refinery price of petrol saw a net decrease of 0.75% in 2023. The ex-refinery price of petrol constituted 75% of the average ex-pump price for 2023.

The average ex-refinery price for diesel ranged between GHS8.30/Lt and GHS12.57/Lt, and averaged GHS10.00/Lt. The average ex-refinery price in 2023 decreased by 0.11% from 2022. The lowest ex-refinery price was recorded in the first window of June while the highest was recorded in the first window of January. The ex-refinery price of diesel saw a net decrease of 15% in 2023. The ex-refinery price of diesel constituted 76% of the average ex-pump price for 2023.

The average ex-refinery price for LPG ranged between GHS6.218/Lt and GHS12.89/Lt, and averaged GHS9.0553/Lt. The average ex-refinery price in 2023 increased by 5% from 2022. The lowest ex-refinery price was recorded in the second window of June and the first window of July, while the highest was recorded in the second window of February. The ex-refinery price of LPG recorded a net increase of 12% in 2023. The ex-refinery price of LPG constituted 72% of the average ex-pump price for 2023.

Figure 68: Trend of Ex-Refinery Prices for 2023 (GHS/Lt;Kg)

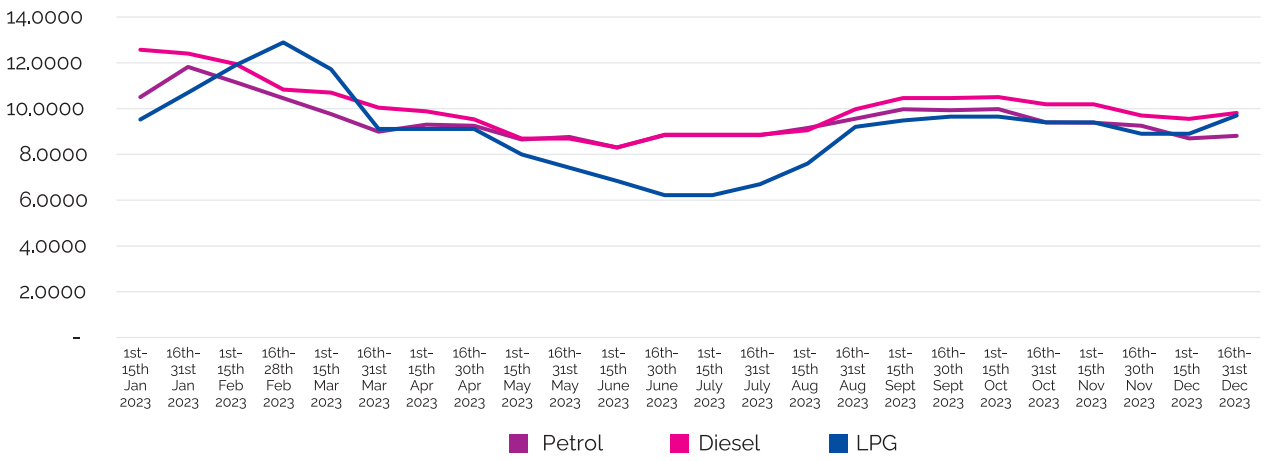



Table 11: Average Ex-Refinery Prices for the period 2023 (GHS/Lt;Kg)

| Pricing Window | Petrol | %age Change | Diesel | %age Change | LPG | %age Change |
|---|---|---|---|---|---|---|
| 1st - 15th Jan, 2023 | 10.50 | 13.9% | 12.57 | 7.9% | 9.52 | 0.0% |
| 16th - 31st Jan, 2023 | 11.82 | 12.6% | 12.40 | -1.4% | 10.70 | 12.4% |
| 1st - 15th Feb, 2023 | 11.15 | -5.7% | 11.95 | -3.6% | 11.89 | 11.1% |
| 16th - 28th Feb, 2023 | 10.45 | -6.3% | 10.83 | -9.4% | 12.89 | 8.4% |
| 1st - 15th Mar, 2023 | 9.76 | -6.6% | 10.70 | -1.2% | 11.72 | -9.1% |
| 16th - 31st Mar, 2023 | 8.99 | -7.9% | 10.04 | -6.2% | 9.11 | -22.3% |
| 1st - 15th Apr, 2023 | 9.30 | 3.4% | 9.88 | -1.6% | 9.11 | 0.0% |
| 16th - 30th Apr, 2023 | 9.25 | -0.5% | 9.53 | -3.5% | 9.11 | 0.0% |
| 1st - 15th May, 2023 | 8.65 | -6.5% | 8.69 | -8.8% | 8.00 | -12.2% |
| 16th - 31st May, 2023 | 8.76 | 1.3% | 8.69 | 0.0% | 7.42 | -7.2% |
| 1st - 15th June, 2023 | 8.30 | -5.3% | 8.30 | -4.5% | 6.84 | -7.8% |
| 16th - 30th June, 2023 | 8.84 | 6.5% | 8.86 | 6.7% | 6.22 | -9.1% |
| 1st - 15th July, 2023 | 8.84 | 0.0% | 8.86 | 0.0% | 6.22 | 0.0% |
| 16th - 31st July, 2023 | 8.84 | 0.0% | 8.86 | 0.0% | 6.70 | 7.8% |
| 1st - 15th Aug, 2023 | 9.15 | 3.5% | 9.05 | 2.2% | 7.60 | 13.4% |
| 16th - 31st Aug, 2023 | 9.56 | 4.4% | 9.97 | 10.1% | 9.20 | 21.1% |
| 1st - 15th Sept, 2023 | 9.97 | 4.3% | 10.46 | 4.9% | 9.48 | 3.0% |
| 16th - 30th Sept, 2023 | 9.93 | -0.4% | 10.46 | 0.0% | 9.65 | 1.8% |
| 1st - 15th Oct, 2023 | 9.98 | 0.5% | 10.50 | 0.4% | 9.65 | 0.0% |
| 16th - 31st Oct, 2023 | 9.40 | -5.8% | 10.19 | -3.0% | 9.40 | -2.6% |
| 1st - 15th Nov, 2023 | 9.38 | -0.2% | 10.19 | 0.0% | 9.40 | 0.0% |
| 16th - 30th Nov, 2023 | 9.25 | -1.4% | 9.70 | -4.8% | 8.90 | -5.3% |
| 1st - 15th Dec, 2023 | 8.70 | -5.9% | 9.55 | -1.5% | 8.90 | 0.0% |
| 16th - 31st Dec, 2023 | 8.81 | 1.3% | 9.81 | 2.7% | 9.70 | 9.0% |
| Min | 8.30 | | 8.30 | | 6.22 | |
| Max | 11.82 | | 12.57 | | 12.89 | |
| Average | 9.4826 | | 10.0018 | | 9.0553 | |
| Total Decreses | | -52.5% | | -49.5% | | -75.6% |
| Total Increases | | 51.7% | | 35.0% | | 88.0% |
| Net Change | | -0.7% | | -14.5% | | 12.4% |

## 6.11 Ex-Pump Prices

The average ex-pump price of petrol in the year 2023 ranged between GHS11.7829/Lt and GHS15.2697/Lt, and averaged GHS12.7140/Lt, up 17% from 2022. The lowest price was recorded in the first window of July while the highest price was recorded in the first window of February. The ex-pump price of petrol in 2023 recorded a net decrease of 4%.

The average ex-pump price of diesel for the period ranged between GHS11.7814/Lt and GHS15.5519/Lt and averaged GHS13.1728/Lt, up 3% from 2022. The lowest price was recorded in the first window of July while the highest price was recorded in the second window of January. The ex-pump price of diesel in 2023 recorded a net decrease of 18%.

The average ex-pump price of LPG for the period ranged between GHS9.7446/Kg and GHS15.36/Kg, and averaged GHS12.5117/Kg, 19% higher than 2022. The lowest price was recorded in the second window of July while the highest price was recorded in the second window of February. The ex-pump price of LPG in 2023 recorded a net decrease of 13%. In spite of the robust increase in LPG prices, demand for LPG increased by 4% mainly due to the recovery in the economy in 2023.

Figure 69 present a graphical representation of the trend of the ex-pump prices of gasoline, gasoil, and LPG in the year 2023.

**Figure 69:** Trend of Ex-Pump Prices for the year 2023 (GHS/Lt;Kg)

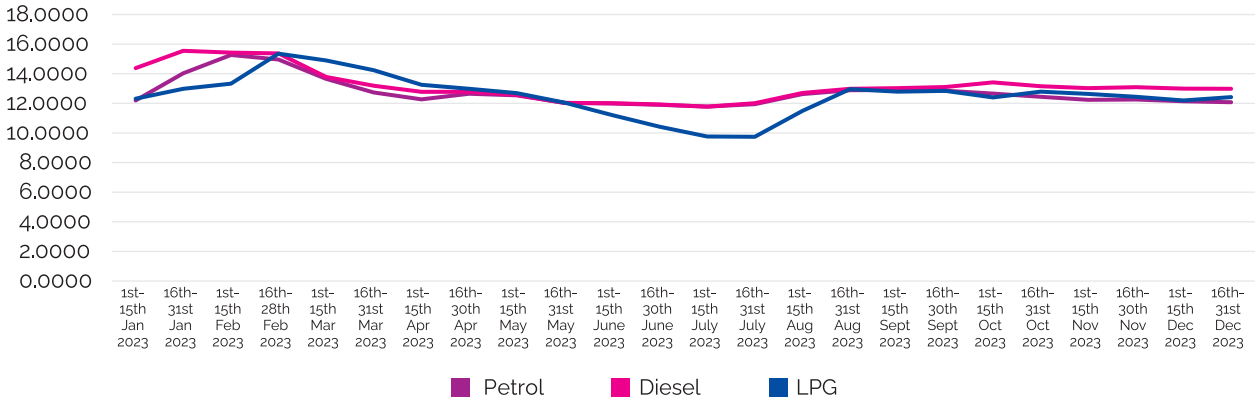



**Table 12:** Average Ex-Pump Prices, 2023

| Pricing Window | Petrol | %age Change | Diesel | %age Change | LPG | %age Change |
|---|---|---|---|---|---|---|
| 1st - 15th Jan, 2023 | 12.1988 | - 5.8% | 14.3781 | -9.3% | 12.3165 | -18.2% |
| 16th - 31st Jan, 2023 | 14.0390 | 15.1% | 15.5519 | 8.2% | 12.9877 | 5.4% |
| 1st - 15th Feb, 2023 | 15.2697 | 8.8% | 15.4322 | -0.8% | 13.3300 | 2.6% |
| 16th - 28th Feb, 2023 | 14.9633 | -2.0% | 15.3732 | -0.4% | 15.3600 | 15.2% |
| 1st - 15th Mar, 2023 | 13.6541 | -8.7% | 13.7886 | -10.3% | 14.8996 | -3.0% |
| 16th - 31st Mar, 2023 | 12.7418 | -6.7% | 13.1937 | -4.3% | 14.2441 | -4.4% |
| 1st - 15th Apr, 2023 | 12.2777 | -3.6% | 12.7805 | -3.1% | 13.2532 | -7.0% |
| 16th - 30th Apr, 2023 | 12.6556 | 3.1% | 12.7796 | 0.0% | 12.9864 | -2.0% |
| 1st - 15th May, 2023 | 12.5469 | -0.9% | 12.5773 | -1.6% | 12.6970 | -2.2% |
| 16th - 31st May, 2023 | 12.0333 | -4.1% | 12.0311 | -4.3% | 12.0604 | -5.0% |
| 1st - 15th June, 2023 | 11.9914 | -0.3% | 12.0114 | -0.2% | 11.2138 | -7.0% |
| 16th - 30th June, 2023 | 11.9092 | -0.7% | 11.9295 | -0.7% | 10.4228 | -7.1% |
| 1st - 15th July, 2023 | 11.7829 | -1.1% | 11.7814 | -1.2% | 9.7681 | -6.3% |
| 16th - 31st July, 2023 | 11.9496 | 1.4% | 12.0168 | 2.0% | 9.7446 | -0.2% |
| 1st - 15th Aug, 2023 | 12.6286 | 5.7% | 12.7060 | 5.7% | 11.4907 | 17.9% |
| 16th - 31st Aug, 2023 | 12.8890 | 2.1% | 12.9863 | 2.2% | 12.9670 | 12.8% |
| 1st - 15th Sept, 2023 | 12.9083 | 0.2% | 13.0350 | 0.4% | 12.7917 | -1.4% |
| 16th - 30th Sept, 2023 | 12.8579 | -0.4% | 13.1067 | 0.5% | 12.8412 | 0.4% |

Table 12: Average Ex-Pump Prices, 2023 (Cont.)

| Pricing Window | Petrol | %age Change | Diesel | %age Change | LPG | %age Change |
|---|---|---|---|---|---|---|
| 1st - 15th Oct, 2023 | 12.6643 | -1.5% | 13.4232 | 2.4% | 12.4000 | -3.4% |
| 16th - 31st Oct, 2023 | 12.4462 | -1.7% | 13.1587 | -2.0% | 12.7938 | 3.2% |
| 1st - 15th Nov, 2023 | 12.2426 | -1.6% | 13.0307 | -1.0% | 12.6441 | -1.2% |
| 16th - 30th Nov, 2023 | 12.2645 | 0.2% | 13.0914 | 0.5% | 12.4486 | -1.5% |
| 1st - 15th Dec, 2023 | 12.1478 | -1.0% | 13.0014 | -0.7% | 12.1979 | -2.0% |
| 16th - 31st Dec, 2023 | 12.0738 | -0.6% | 12.9820 | -0.1% | 12.4222 | 1.8% |
| Min | 11.7829 | | 11.7814 | | 9.7446 | |
| Max | 15.2697 | | 15.5519 | | 15.3600 | |
| Average | 12.7140 | | 13.1728 | | 12.5117 | |
| Total Decreses | | -40.8% | | -40.0% | | -72.0% |
| Total Increases | | 36.4% | | 21.9% | | 59.5% |
| Net Change | | -4.3% | | -18.1% | | -12.5% |

# 7

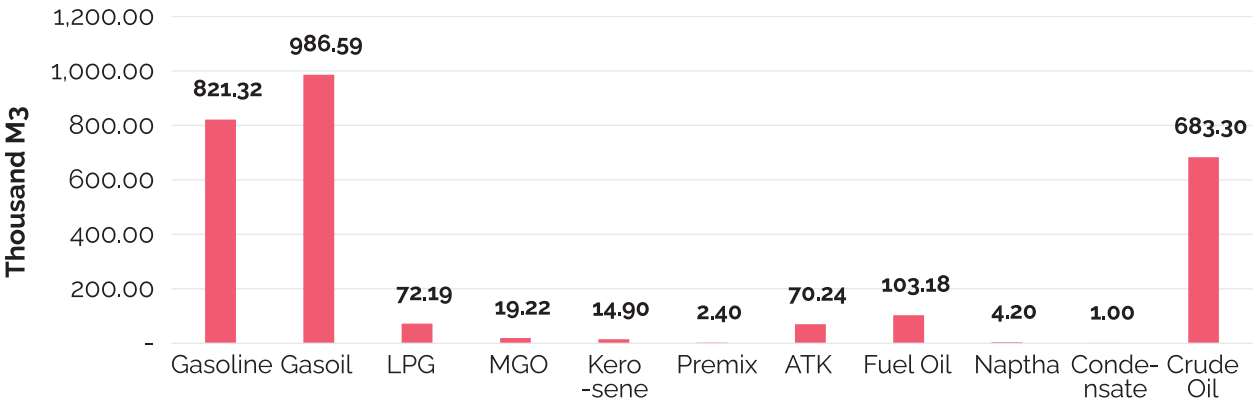
# INFRASTRUCTURAL REVIEW

## 7.1 Bulk Oil Storage Depot

The country's total petroleum product and crude storage capacity in 2023 stood at about 2,778,529 $m^3$. This represented an increase of 19.04% from the 2022 storage capacity of 2,334,114 $m^3$. This comprised 2,095,233 $m^3$ of refined petroleum products accounting for 75.41% of total capacity and 683,296 $m^3$ crude oil accounting for 24.59% of total storage capacity in 2023.

The country's gasoil storage capacity is about 821,317 $m^3$ (29.56%) with gasoline storage capacity at about 986,586 $m^3$ (35.51%) and LGP storage at 72,187 $m^3$ (2.60%). LPG storage tank capacity increased by 23.85% to 62,315 $m^3$ in 2022 due to the completion of the greenfield depot (12,000 $m^3$) constructed by Matrix Gas (Ghana) and further increased by 15.84% in 2023 due to the additional capacity by the Sentuo Oil refinery.

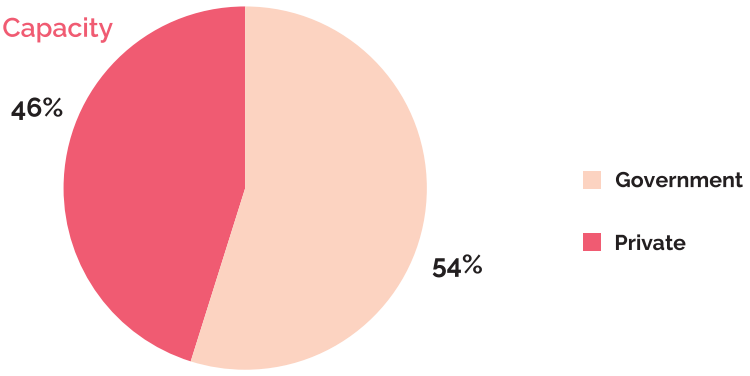
Figure 70: Product Distribution of Bulk Oil Storage Capacity in 2022




Government continues to dominate the bulk oil storage capacity of the country, controlling 54.18% of storage capacity in 2023, while private sector players control about 45.92%. Governments continuous dominance is driven by the crude capacity held by the Tema Oil Refinery, which accounts for 1,040,537 $m^3$ of total storage capacity and 66.59% of crude oil storage capacity. However, private sector share of total storage capacity increased from about 37% in 2022 to about 45.92% in 2023 largely due to the commissioning of the Sentuo Oil Refinery which had an installed capacity 305,436 $m^3$.

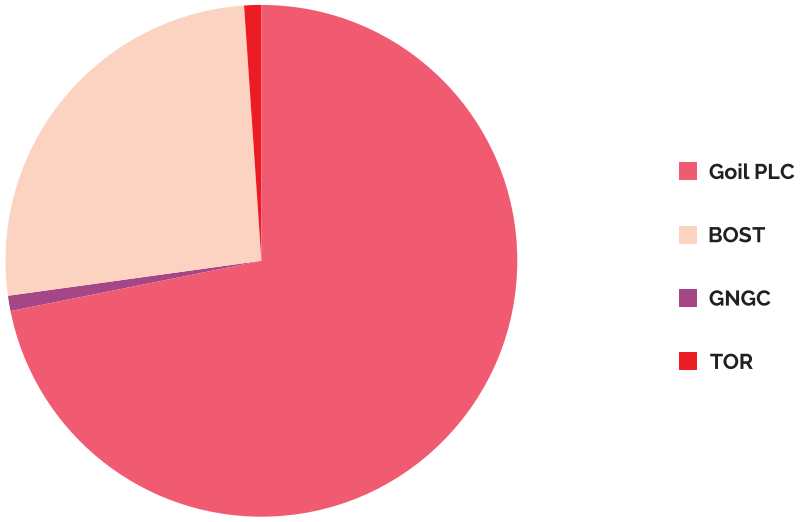
In the refined product storage capacity space, the private sector controls about 49.87% whiles government entities, comprising of TOR and BOST, control about 50.13%.

Figure 71: 2023 Share of Storage Capacity



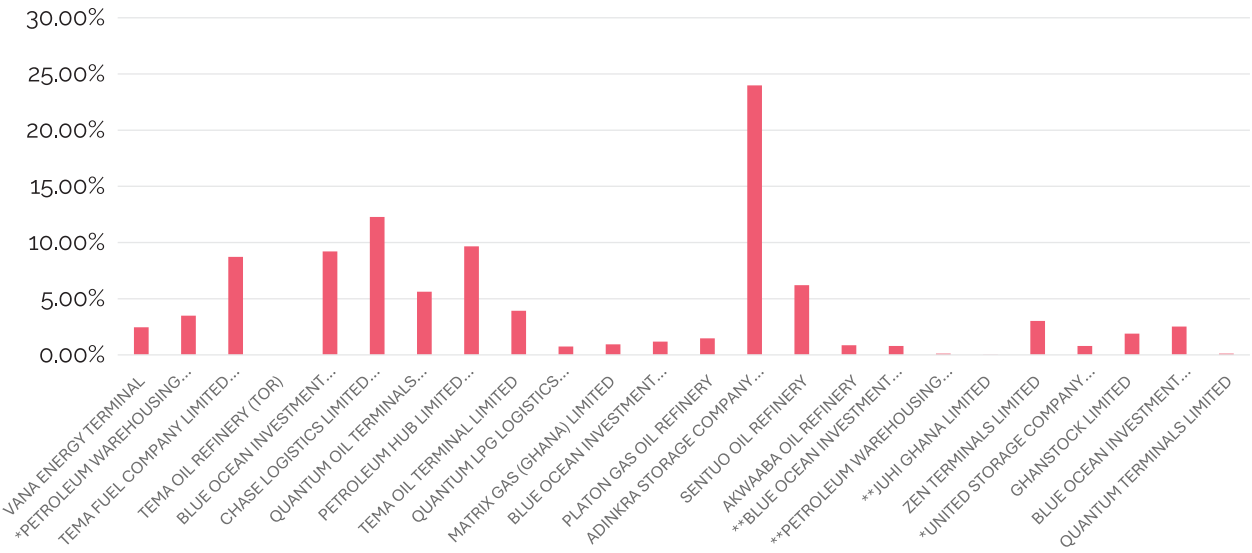
The Tema Oil Refinery has storage capacity for all refined petroleum products, and currently accounts for 69.12% of government-held depots across the country. BOST, the most decentralized depot operator in the country, owns 29.01% of government-held storage depots, while Ghana Gas accounted for the least share (0.6%) for the period (see figure 72).

**Figure 72:** Government Entities




The private sector controlled about 33.41% of the crude oil storage capacity and 49.87% of refined product storage capacity in 2023. Sentuo Oil Refinery which came on stream in 2023 accounts for 23.99% of privately held capacity, while the Chase Depot - Tema Tank Farm (TTF), Tema Fuel Company (TFC), Petroleum Hub, and Blue Ocean's Tema Multi-product Terminal accounted for 12.27%, 8.72%, 9.66% and 9.21% of privately held capacity in the bulk oil storage depot category.

**Figure 73:** Privately Held Stake of Bulk Oil Storage Capacity in 2023



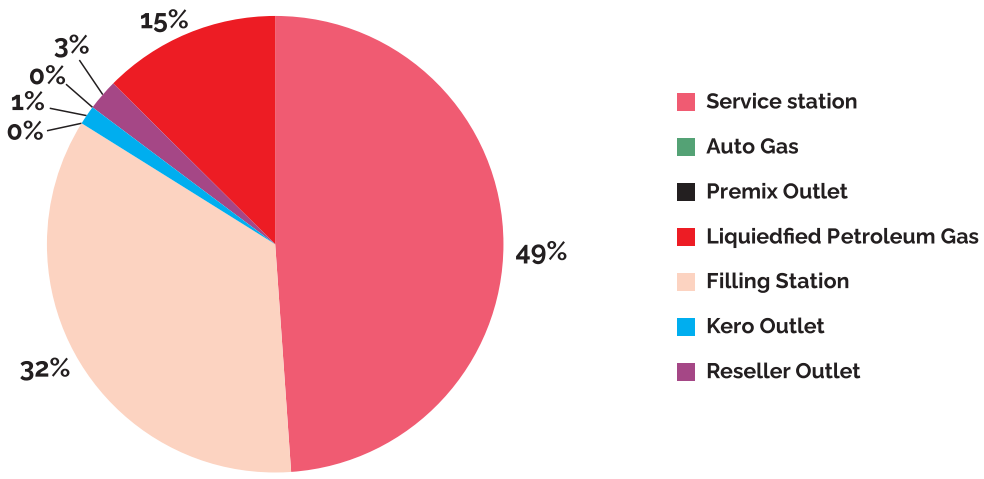
The geographical distribution of Ghana's storage infrastructure has been skewed towards the Greater Accra region, which is a host to about 87.053% of national bulk oil storage for both crude oil and refined products. The Tema enclave alone hosts about 99.06% of Greater Accra's storage capacity while the remaining 0.4% is located at the Kotoka International Airport, which hosts ATK storage tanks. The Western and Ashanti regions accounted for 4.834% and 3.31% respectively, while the Eastern region had the least (1.02%) storage capacity. The concentration of the storage facilities in the Greater Accra region continues to impact the Unified Petroleum Pricing Fund (UPPF) and the Zonalization policy. Moreover the rising concerns of security threats in the sub-region call for increased security surveillance within the Tema enclave to avert any form of attacks.

Bulk oil storage depot deliveries tank turns[171] for refined petroleum products was estimated at 26.1% of total design capacity per month in 2022. This low figure underscores the fact that Ghana has over capacity of bulk oil storage depots. Tank utilizations are expected to decline in the coming year due to the commsioning of the first phase of the Sentuo Oil Refinery. Gasoline and gasoil tank turns were 27.34% and 21.67% respectively, highlighting the need for a moratorium on the construction of new terminals, especially in the Tema enclave. Bulk oil storage depot tank turns are expected to reduce further in 2024 mainly due to the commissioning of the greenfield 40,000bpsd Sentuo Oil Refinery. The operations of the Sentuo oil Refinery will greatly impact the tank turn of the existing depots due to the lack of pipeline interconnection with the other private depots. This implies that refined products from Sentuo will only be lifted through Sentuo's gantries. Hence, the absence of pipeline interconnectivity with Sentuo implies the private depots will close to 30% of their market share due to the about 30% share of Sentuo's production of national consumption.

## 7.2 Petroleum Products Retail Outlets

The number of petroleum product retail outlets increased by about 5.87% from 4,767 in 2022 to 5,045 in 2023. Service stations account for the highest share (49.14%) of retail network across the country. (See figure 74)

Figure 74: Distribution of Petroleum Products Retail Outlets in Ghana



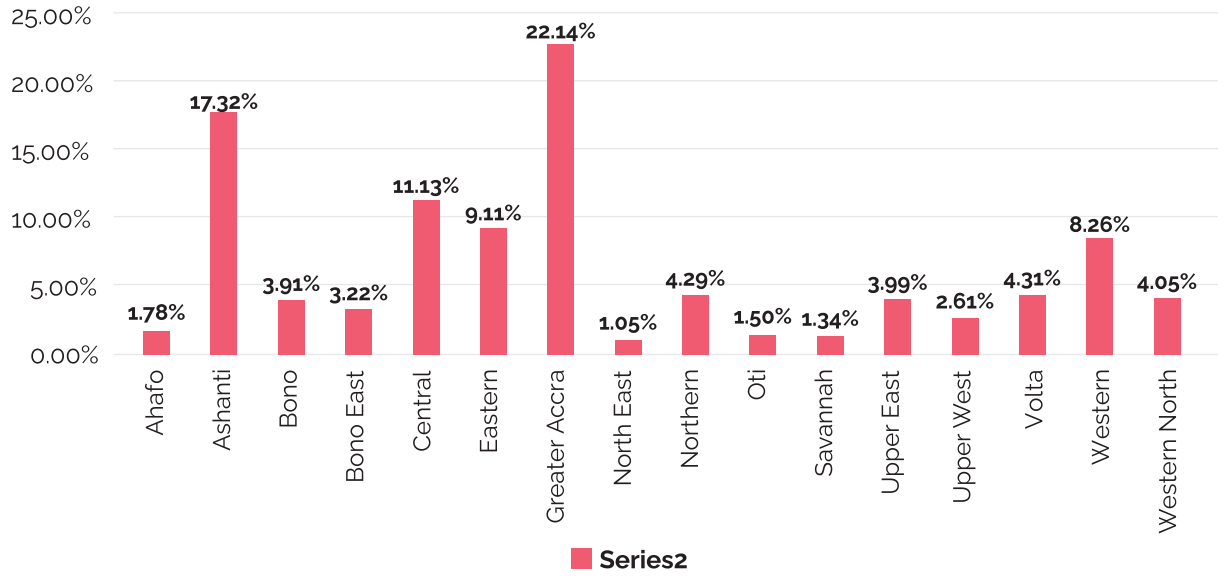

[171] Tank turn refers to deliveries from the depot divided by capacity of the depot.

Following the policy initiative of the NPA to decommission all reseller outlets in metropolitan and municipal areas, the number of reseller outlets decreased by 16% to 119 in 2022 and 1.68% to 117 in 2023. Reseller outlets are outlets with hand-pump dispensing units.

The number of LPG outlets increased by 4.95% in 2023 despite the NPA and Ministry of Energy's efforts to implement the Cylinder Recirculation Model to promote the use of bottling plants to fill and circulate LPG in safe conditions for domestic and industrial usage.

About 22.14% of all petroleum retail outlets were located in the Greater Accra region followed by the Ashanti region with 17.32%, Central region with 11.13%, Eastern region with 9.11%, and the Western region 8.26%) (see figure 75). These five regions consumed the highest volumes of refined products. North East, Savannah, Oti, and Ahafo regions account for less than 6% of retail outlets across the country for the period under review.

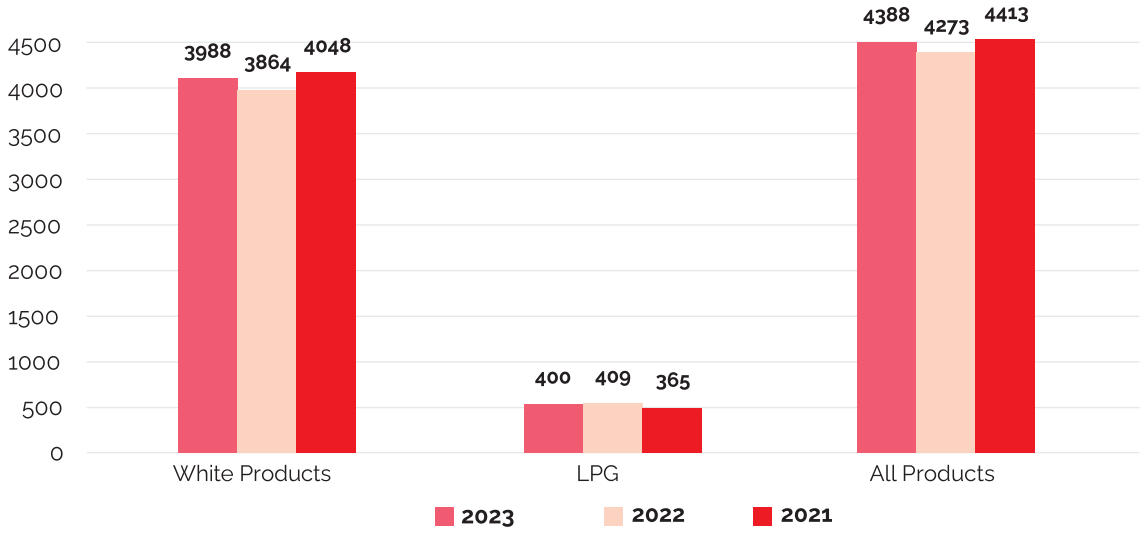
Figure 75: Regional Distribution of Petroleum Retail Outlet in Ghana in 2023




## 7.3 Bulk Road Vehicle

A total of 4,388 bulk road vehicles (BRVs) were licensed in 2023 to transport petroleum products by road. This represented an increase of 2.69% from the year 2022 compared to a decline of 3.17% from 2021 to 2022. White product BRVs accounted for 90.88% of licensed BRVs in 2022, while LPG BRVs accounted for 10%. White product BRVs increased by 3.21% from 2022 to 2023, following a decrease by 4.5% from 2021 to 2022. LPG BRVs decreased by 2.20% in 2023, after increasing by 12.05% in 2022 (see figure 76).

Figure 76: Number of Licensed BRVs in Ghana




## 7.4 Projects

The downstream petroleum industry undertook some infrastructural projects in the business of retail/service stations, bulk oil storage depots, refineries, cylinder bottling plants, amongst others as provided below.

## 7.5 Bottling Plants Projects

### *7.5.1 Goil Bottling Plant – Tema*

The LPG Bottling Plant is constructed for the provision of filling and distribution of domestic and industrial LPG cylinders on a large scale with a production capacity of 800 cylinders an hour. The site has a total product storage capacity of 1680m$^3$. The facility receives LPG from the Tema Oil Jetty through both the 6-inch and 12-inch harbour pipelines and connected to the 14-inch header with 8-inch tie-in pipeline via the Tema Oil Refinery to the facility. Additionally, the facility has the capability of receiving LPG through a 4-inch direct supply from TOR and Bulk Road Vehicles (BRVs).

The Bottling Plant has a 24-cylinder capacity filling carousel with a minimum filling capacity of 6,400 cylinders per day for an 8-hour shift system.

1. A 24-point cylinder filling carousel has been installed at the facility. 18 out of the 24 points had been mounted for use for the filing operations. Additionally, 4 stand-alone filling points have been provided.
2. The 18-point filling carousel will be used for filling 6kg, 12kg and 14kg cylinders whilst the standalone filling points will be used for filling 45kg and 50kg cylinders;
3. The filling time is estimated to be 30 seconds;

Figure 77: Goil Bottling Plant – Tema

### *7.5.2 Goil Bottling Plant – Kumasi*

This LPG Bottling Plant is constructed for the filling and distribution of domestic and industrial LPG cylinders on a large scale with a production capacity of 600 cylinders an hour. The site has a total product storage capacity of 840m$^3$. The plant has a discharging facility to enable receipt of LPG by Bulk Road Vehicles (BRVs).

The Bottling Plant has a 24-cylinder carousel with a minimum filling rate of 4,800 cylinders per day for an 8-hour shift system

1. A 24-point cylinder filling carousel has been installed at the facility. 12 out of the 24 points have been mounted for use for filing operations. Additionally, 4 stand-alone filling points have been provided.
2. The 12-point filling carousel will be used for filling 6kg, 12kg and 14kg cylinders whilst the standalone filling points will be used for filling 45kg and 50kg cylinders;
3. The filling time estimated to be 30 seconds per bottle;

Figure 78: Goil Bottling Plant – Kumasi

### *7.5.3 Blue Ocean Bottling Plant – Tema*

The bottling plant is located within the Blue Ocean Investments Limited's Multi-Purpose Depot at Kpone in the Kpone Katamanso Municipal Area of the Greater Accra Region for the filling and distribution of domestic and industrial LPG cylinders on a large scale with a production capacity of 1200 cylinders an hour.

- The facility has an automated carousel with a filling capacity of 1,200 bottles/ hour for 14kg and 6kg bottles;
- The facility currently has eighteen (18) filling heads installed and provision for an additional six (6) units available for installation to bring the total number to twenty-four (24) when need be or required.

Figure 79: Blue Ocean Bottling Plant – Tema

### *7.5.4 Newgas Bottling Plant – Tema*

The LPG Bottling Plant is constructed for the filling and distribution of domestic and industrial LPG cylinders on a large scale with a production capacity of 3,220 cylinders an hour. The site has a total product storage capacity of 1800m$^3$. The facility receives LPG from the Quantum LPG Logistic Limited (QLLL) depot adjacent to it.

1. A 36-point cylinder filling carousel has been installed at the facility for filling 6kg, 12kg, and 14kg cylinders respectively. The carousel has a filling capacity of 1,800 cylinders per hour;
2. An 8-point cylinder filling carousel has been installed at the facility for filling 3kg cylinders. The carousel has a filling capacity of 1,400 cylinders per hour;
3. The facility has 2 standalone filling points with capacities 50kg and above. The point has a filling capacity of 20 cylinders per hour;

Figure 80: Newgas Bottling Plant – Tema

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