





Upstream Petroleum
Business Outlook
2023

Interview with
Minister for
Energy

First Ghanaian
Owned AHTS Vessel
Commissioned to Service
Jubilee Field

Pipefitting to be Introduced as a
Course of Study in Ghana...With
Nine Petroleum Commission
Sponsored Instructors

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Editorial

On behalf of the Governing Board, Local Content Committee, Management and Staff of the Petroleum Commission we present to you the maiden issue of **Upstream Local Content** Magazine.

The Commission has taken the position that pursuant to its mandate as provided among others by Regulation 40 of the Petroleum (Local Content and Local Participation) Regulation, 2013; L.I. 2204 which enjoins the Commission to "...ensure that public education activities are undertaken to educate contractors, subcontractors, licensees and other allied entities, the public and industry stakeholders to educate them about the local content policy and philosophy and to ensure the implementation of these Regulations."

It will use the medium of this magazine to reach out to stakeholders on local content issues in the upstream petroleum industry.

This magazine will be published twice a year and will highlight significant occurrences in local content. We encourage all in the upstream petroleum industry to take an interest in this magazine. We also encourage stakeholders to contribute articles and other relevant materials for publication.

This year's Local Content Conference and Exhibition is under the theme: "**Sustaining Local Content Development Through Enhanced Exploration and Production Activities in the Era of Energy Transition.**" The theme is carefully thought out to put the business of local content at the centre of the event. It is our hope that at the end of the event, all participants would appreciate better the need for enhancing local content in the light of the energy transition among other compelling justifications.

The Commission is desirous of using the platform of this newly launched magazine to provide the needed insights into local content development as well as job role localisation.

Aimed at giving you news about certain developments and signposts regarding local content and job role localisation efforts upstream, the **Upstream Local Content** Magazine will also feature interviews and report on developments.

Among others, the maiden issue of the **Upstream Local Content** Magazine has been developed to serve you the following:

- an interview with the Hon. Minister for Energy
- news on the first Ghanaian-owned vessel servicing an oilfield
- news on the first batch of lecturers/instructors to benefit from a training programme in pipefitting
- projections for upstream activities in 2023

It is our belief that this magazine will become a reference point for all who are interested in upstream local content in Ghana.

Happy reading!

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Steering Local Content, the Role of the Local Content Committee

By Kwasi Agyemang Manu Senya

One of the key functions of Petroleum Commission is to promote local content and local participation to strengthen national development. Section 8(2) of the Petroleum Commission Act, 2011 (Act 821) provides for the establishment of a Local Content Committee to oversee the implementation of the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I.2204) to ensure measurable and continuous growth of local content in all petroleum activities.

This write-up looks at the role of the Local Content Committee as enshrined in L.I. 2204.

First, the Committee has the responsibility to oversee, coordinate and manage the development of local content. Given the fact that the L.I. 2204 intends to promote the maximisation of value-addition and job creation through the use of local expertise, goods and services, businesses and financing in the petroleum industry value chain, the Committee, through the exercise of its role ensures that local content sustains economic development.

Secondly, the Committee is mandated to prepare guidelines, to include targets and formats for local content plans and reporting. Companies at the beginning of every year are required to submit their plans and report to the Commission for review. This is a good way of monitoring how many companies especially indigenous are awarded contracts and are developing their capacities. It also helps in gaining an insight into company's structure such as number of expatriates employed, board structure, directors and number of executed and ongoing projects. Guidelines such as Channel Partnership and Strategic Alliance have been introduced as alternative arrangements for non-indigenous companies participation in Ghana's upstream petroleum industry.

Thirdly, the Committee is tasked to make appropriate recommendations to the Commission for the smooth implementation of the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204). Given the gaps in when it comes to the transfer of skills and technology within the joint venture (JV) companies, it was necessary that The Technology Transfer unit be established to encourage partnerships to facilitate technology transfer between International Ghanaian Companies (IGCs), foreign contractors and service or supply companies. In furtherance to that, a model technology transfer agreement to promote effective transfer of skills, know-how and technology in the industry has been drafted.

Additionally, the Committee sets minimum standard requirements for local content in local content plans where applicable. Benchmarks are set as a guide to what should

be achieved in the industry by a certain period (5-10 years). As stipulated in the First Schedule of the L.I.2204, milestones with specific levels to be achieved in goods and services, recruitment training, fabrication and construction etc by Start, 5years, 10years have been outlined and measured in tonnage, volume, spend and man-hour. Also, in the tender documents, the International Oil Companies (IOC) have a minimum local content requirement they have to achieve as well as use as a certain minimum threshold used in evaluating the tenders before contracts are awarded. Certain goods and services are reserved for indigenous companies only. Such minimum standards facilitates the participation of indigenous Ghanaian businesses and serve as a boost in industry confidence for the local companies.

Furthermore, the Committee takes the initiative to undertake public education. The local Content Conference for example serves as a central point for all industry players to interact, network and discuss the industry challenges, achievements and plans for the future. Workshops such as that on supply chain and procurement, educate companies on how to prepare for a particular contract, what the IOCs look for in a winning tender, how the tenders are evaluated and scored etc. Such information helps in decision making and a company positioning itself in the industry.

Lastly, the Committee, through its work, monitors, and audits local content initiatives by companies. Through the Committees work and recommendations, the Local Content Audit unit was established in 2018 to audit and analyse receipts and invoices accounted for as in-country spend. Similar to the third role above, the Committee ensures that companies are continuously monitored to make sure they are complying with the relevant regulations, laws and agreements.

In sum, the Local Content Committee ensures that there is increased employment of Ghanaian professionals by ensuring the localisation of job opportunities, facilitate technology and skills transfer through training, research and development, local participation by encouraging Ghanaians to have equity ownership and management participation in upstream petroleum activities.

Local Content Committee Members



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Chairman



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Member



Hon. Abdul-Razak Tahidu
Member



Mr. Prince Benjamin Aboagye
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Dr. Alexander Yaw Adusei Jr.
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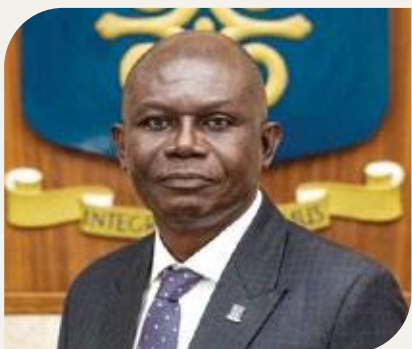
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Upstream Petroleum Business Outlook 2023

Edem Wordi and Fiifi Nyarkoh Otoo

INTRODUCTION

The upstream petroleum industry in Ghana is on a gradual recovery from the disruptions of the Covid-19 pandemic and the conflict between Russia and Ukraine. As companies are beginning to gradually ramp up activities another challenge to them is the energy transition which has seen financial institutions withhold capital to companies investing in fossil fuel.

The Petroleum Commission is thus leading a drive for aggressive promotion and exploration of our petroleum resources to ensure our reserves are utilised to transform the nation.

In 2022 activities in the industry saw several infill wells drilled in both Jubilee and TEN fields by Tullow and partners.

Eni drilled an exploratory well, Aprozuma-1X which has discovered hydrocarbons. Other companies progressed their activities in preparations for drilling next year.

EXPLORATION ACTIVITIES

The following companies currently operate in offshore Ghana under respective Petroleum Agreements (PA).

AGM PETROLEUM

Currently AGM has two drilled exploratory wells (Nyankom-1X and Kyenkyen-1X) in the South Deepwater Tano Contract Area in its block area. The Nyankom-1X has been declared as an oil discovery which merits appraisal. In 2020, AGM was expected to conduct further studies on the discovery and commence planning for appraisal well drilling in 2021 but was unable to achieve the target due to COVID-19 pandemic. AGM carried out the following activities in 2021:

- Subsurface studies,
- Technical economic valuation,
- Support technical qualification,
- Design basis and profiles (Nyankom-1Xprospects),
- D&W feasibility assessment of development drilling and completion of assumed horizontal wells in deep water-short overburden-low temperature environment and selection of Facilities,
- Field architecture of productions system,
- Technology identification,
- Flow assurance/production calculations,
- Cost and field economy in 2021

For the business year 2022, AGM plans to conduct the following activities:

For firm activities, AGM plans to conduct:

- **Geology and Geophysics:**
 - Geochemistry and basin modelling study
 - Software license costs
 - Prospect evaluation – License Maturation
 - Data conditioning and LFP work
- **Exploration Operation:**
 - Nyankom-1X-ST1 memory gauge interrogation

For contingent activities, AGM plans to conduct:

- **Geology and Geophysics:**
 - Well data integration and seismic interpretation – location selection
 - Geochemistry and basin modelling study
 - Detailed appraisal well planning G&G
 - Software licence costs

AMNI

Amni has licensed and evaluated existing seismic and well data over the Central Tano Contract Area. Amni planned to drill its first obligatory well between March and April 2020. However, this plan was suspended due to the effects of the COVID-19 pandemic. Amni has purchased 2 sets of subsea wellheads and is currently monitoring the rig market. Amni has proposed a spud date of Q2 2023.

MEDEA DEVELOPMENT

Medea has acquired, processed, and interpreted 3D seismic data over the East Cape Three Points Contract Area. The Contractor has identified a location to drill its first obligatory exploration well. However, this plan was suspended due to the effects of the COVID-19 pandemic. Medea plans to farm-out part of its interest in anticipation of well drilling prior.

SPRINGFIELD E&P

Springfield acquired, processed, and interpreted new 3D over the West Cape Three Points Block 2 Contract Area. The Contractor drilled its first exploration well (Afina-1X) in 2019 and declared it as an oil discovery. In 2023, Springfield intends to appraise the existing Banda and Odum discoveries, carry out further Geological, Geophysical studies and Engineering activities such as petroleum system modelling, sequence stratigraphy, fault systems analysis, lead and prospect maturation.

ECO ATLANTIC OIL&GAS

Eco Atlantic licensed, reprocessed and interpreted legacy seismic data over the Deepwater Cape Three Points West Contract Area. The Contractor has identified possible locations for drilling and intends to undertake Geological and Geophysical studies, Well Reservoir Engineering studies and Structural analysis of wellhead/bore.

Eco Atlantic Oil and Gas Limited has identified the Albian as a potential hydrocarbon-bearing interval in the eastern part of DWCTPW block and mapped leads and prospects in this regard. Eco Atlantic has been monitoring the rig market and will conclude and contract a rig with the earliest availability by the end of Q2 2023.

OPCO

In the first Quarter of 2022, "GOSCO" changed its name to OSWT & EK Operating Company (OPCO). OPCO has licensed and interpreted existing seismic and well data over the Offshore Southwest Tano Contract Area. The Contractor has identified drilling targets and planned to drill the first obligatory well in the Contract Area in Q3 2020 but deferred the activity to Q2 2022 due to the impact of the COVID-19 pandemic.

For the 2023 business year, the operator intends to finalise subsurface studies, complete processes for the procurement of wellhead and accessories, drill its first exploratory well, Edinam-1X, and conduct post-well analysis. OPCO has issued a request for information to ascertain the interest of drilling contractors for a potential rig sharing. This is scheduled to be concluded by the end of Q1 2023. The contractor is also actively seeking farm in partners in respect of the OSWT contract area.

ENI

Eni Ghana has drilled two (2) exploratory wells, Akoma-1X drilled in 2019 and Eban-1X drilled in 2020 in the Offshore Cape Three Points Block 4 Contract Area. Both made discoveries in the OCTP -Block 4 contract area and are assessed to merit

appraisal. Eni Ghana has submitted a combined appraisal programme for both Eban and Akoma.

In 2022, the operator drilled one (1) exploratory well (Aprokuma -1X) in Q2 of 2022 in fulfilment of its second extension obligation as well as post-well G&G Studies and geophysical studies. The operator is scheduled to submit a confirmation of the discovery's merit of appraisal or otherwise by Q1 2023.

GNPC

GNPC has so far acquired 2538 line km of 2D seismic data over the Voltaian Basin in the first and second phases of the Voltaian basin project.

GNPC commenced the third phase of the acquisition of additional 2D infill seismic data in December 2021. So far 12681km of infill 2D has been acquired in the phase three campaign. The remaining 402-line Kilometres is expected to be completed by Q1 2023. Seismic processing will commence after acquisition is complete.

Over 1610 geochemical samples have also been collected to identify areas over the Voltaian Basin with high potential for hydrocarbon accumulation.

GOIL/GNPC

Goil Upstream is currently the operator of the Deepwater Cape Three Points Block, holding 85% participating interest. Additional drillable prospects have been interpreted and mapped in the Block. Goil is currently undertaking further G&G studies and actively promoting the block to potential farm in partners.

DEVELOPMENT

AKER ENERGY

Aker was in the process of preparing for re-submission of the Pecan Field PoD when Covid-19 struck". The project is planned to be developed in two phases with an FPSO as part of project cost reduction mitigation measures. Post the approval of the Plan of Development of the Field as well as the Final Investment Decision, field development will commence. Aker Energy executed the Geophysical and Geotechnical survey in 2021.

Currently, Aker Energy has optimised the field development in line with the oil price decline.

TULLOW GHANA LIMITED

Tullow Ghana Limited (TGL) plans to drill three (3) wells and complete six (6) wells within the Jubilee Field for the year 2023 as part of the approved Greater Jubilee Full Field Development Plan. The drilling of wells for the Jubilee South

East (JSE) commenced in 2022 with the J63-P well. Currently, the drilling rig is on the J63-P well with J61-P and J62-WI wells to be drilled later this year. Three (3) well are scheduled to be drilled in 2022 (including J63-P). the J59-WI and J60-P were drilled and completed this year within the Jubilee field.

The Jubilee South East (JSE) project is a field expansion scope set to bring to completion the Jubilee oilfield and thus, the completion of the Greater Jubilee Full Field Development Project (GJFFDP). The JSE project aims at bringing the oilfield to its utmost production potential in a final three-phase development with an ultimate recovery of 28 MMstb. It would involve tie-in of subsea infrastructure to the existing FPSO Kwame Nkrumah.

The design philosophy adopted for Greater Jubilee subsea facilities is to maximise the use of existing infrastructure to tie-back wells and to add new subsea infrastructure to access Mahogany South-East, the Jubilee Field High Case and Teak. This new subsea infrastructure includes 6-slot production manifold with additional riser and flowline to form new production loop, an additional umbilical line from the FPSO, 4-slot water injection manifold which will be connected to an existing water injection manifold and additional X-mas trees and jumpers for the new wells. Optimisation of the project is to reduce the cost of the project as compared to the PoD estimated cost.

Optimised flow assurance and subsea pipeline network/type was completed. This project also requires some modifications and upgrades to be done on the topside of the FPSO. A 3D Survey of existing R16 & R17 turret piping expected to be hooked with new risers have been completed in 2021. Fabrication of the subsea systems which commenced in 2022 post the contract award in 2021 is ongoing. The installation of the subsea topside control systems will commence in 2023.

The TEN enhancement project commenced in 2022 with the drilling and completion of the En21-P. Also, the drilled Nt10-P and Nt11-P wells which were planned to appraise the Tweneboa oil (area at the Riser base) were plugged and abandoned. Three (3) wells are scheduled to be drilled in 2023 to enhance production on the TEN field. The TEN enhancement project includes the following:

1. Infill drilling
 - a. Enyenra has undeveloped areas, broadly divided into
 - i. Enyenra North – well being designed and engineered for late 2022 spud
 - ii. Enyenra Central – some infill wells which will require detailed analysis

- iii. Enyenra South – good potential but question on connectivity
 - b. Ntomme has some areas that may hold undeveloped resource
2. Development of discovered resource
 - a. Tweneboa oil and the area to the south (termed the Riser Base Area) have large, mapped volumes
 - b. Two strategic wells are planned for late 2022
 - c. Ntomme Far West also has good, mapped volumes
3. Progression of prospective (undiscovered) resource
 - a. Two large, mapped prospects to the west of Enyenra: Danta and Tweneboa West
 - b. Other smaller prospects including Ntomme East
4. Gas export from TEN
 - a. Significant non-associated volumes, mostly north of Tweneboa Oil

PRODUCTION AND OPERATIONS

TULLOW GHANA LTD (TGL)

The FPSO Kwame Nkrumah executed a planned shutdown from 29th April 2022 to 15th May 2022. The scope of the shutdown includes integrity and system checks on the topside for the JSE project and other topside maintenance activities including flare tip replacement, modification on inert gas vent, vessel inspections and remediation, seawater system improvements, replacement of emergency shutdown valves.

Production operations have been stable post shutdown except for process upsets which last for some few hours.

Jubilee Field	
Wells	
Oil Producers	20
Water Injectors	15
Gas Injectors	3
Production Summary Per Month (2022)	
Average Oil Production (BBL)	2,568,957.60
Average Gas Production (MMSCF)	5,668.80
Average Gas Export (MMSCF)	2,955.89
Operations	
Oil Offloading System	
2022 FPSO KNK planned shutdown	
CARS replacement	
Gas compression system upgrade	
Additional Lifeboats Installation	
LP Gas Compressor Coolers Replacement	

JSE project
ABS Class Certification
SWI improvements

The TEN Field has suffered flow assurance challenges since the beginning of 2022. The use of gas lift contributed to managing flow assurance challenges for the Enyenra wells. Some of wells within the Enyenra field have low reservoir pressure and thereby making it difficult for the wells to flow to the FPSO. The En10-P and En8-P wells are shut-in due to flare restrictions on the FPSO. The Field has assumed a gradual production decline, and this can be mainly attributed to reservoir challenges.

The oil and gas production from FPSO JEAM has been generally stable with no major issues.

TEN Field Update

TEN	
Wells	
Oil Producers	9
Water Injectors	6
Gas Injectors	2
Production Summary Per Month (2021)	
Average Oil Production (BBL)	722,152.80
Average Gas Production (MMSCF)	4,641.43
Average Gas Export (MMSCF)	340.34
Operations	
Fabric Maintenance	
Multifunctional separator tie-in to the gas processing train	
Field production enhancement	
Deluge impairment remediation	
HUS geostationary tubing blockage remediation	
GTG fuel change-over failure remediation	
Alarm rationalization	
Restoration of lost ECU control functions	

ENI

The FPSO John Agyekum Kufuor (JAK) carried out a planned shutdown operation for three days spanning from 21st February to 24th February 2022. The shutdown was to enable the facility carry out its annual turn around activities. The main annual turn around activities included: Kongsberg software and firmware upgrade, DNV class 5-yearly test on ESD, maintenance on the master control station, inspection of power transformers and load test of essential switchboard. There were no interruptions to production post the shutdown except for process upsets. Oil and gas production generally assumed gradual decline. This was mainly due to subsurface challenges and gas export demands which controls condensate production.

ENI Field Update

OCTP	
Wells	
Oil Producers	10
NAG Producers	5
Water Injectors	2
Gas Injectors	3
Production Summary Per Month (2021)	
Average Production (BBL)	1,062,999.76
Average Associated Gas Production (MMSCF)	4,874.15
Average NAG Production (MMSCF)	5,928.54
Average Gas Export (MMSCF)	5,626.46
Operations	
Acid simulation activities	
Fabric Maintenance	
Inspection Maintenance and Repair (IMR) activities	
Instruments Fault Finding and Rectification	

Petroleum Commission Commences Strategic Promotion of Available Blocks

By Kwasi Agyeman Manu Senya



Minister for Energy, Dr. Matthew Opoku Prempeh and Other Officials at the 2022 Ghana Oil & Gas Roadshow in Aberdeen, UK

Following a slow down in exploration and production activities with the COVID-19 pandemic, there have been limited exploration activities in recent times to support Government's reserve replacement agenda.

In ensuring rapid and aggressive efforts to attract new investments, the Petroleum Commission sought and obtained the approval of the Hon. Minister for Energy to embark on strategic promotion of three Blocks i.e. Offshore Cape Three Points South (OCTPS), Shallow Water Cape Three Points (SWCTP), and South West Saltpond (SWS), that have become available for award through direct negotiation as a result of the termination of their respective Petroleum Agreements. Approval was also sought and obtained for the addition of Goil Offshore's DeepWater Cape Three Points Block (DWCTP) and Base Energy's Expanded Shallow Water Tano Block (ESWT) to the promotion activities for purposes of the two contractors attracting farm-in partners.

The Commission collaborated with all relevant stakeholders to ensure that the planned strategic promotion exercise becomes successful in Houston, Texas on the side-lines of the maiden Houston – Africa Energy Summit and in Aberdeen, Scotland as an exclusive event.

Dubbed the 'Ghana Oil and Gas Roadshow', the maiden promotional events were hosted in Houston, Texas and Aberdeen, Scotland. It provided platforms for Ghana-focused investor engagement sessions which projected the available E&P opportunities to prospective investors.

Notable E&P companies that attended the roadshow events are Apache Corporation, Chevron, Shell, Talos Energy, ConocoPhillips, Amni International Petroleum Resources, ERHC Energy, TGS, Verum Energy, Adelaar Energy, Capricorn, Heritage, Wood, Quanta EPC, Enpro Subsea, Exceed, Baker Hughes, New Horizon, and Moyes & Co.

Led by the Honourable Minister for Energy, the delegation included senior officials from the Ministry, Petroleum Commission, GNPC, GOIL and Base Energy.

So far, there have been at least two visits to the Commission's Data Room by E&P companies following the Roadshows. Other companies are lined up to visit the Data Room next year.

AfCFTA and Upstream Local Content In Ghana

By Priscilla Antwi-Boasiako

The decision to adopt the African Continental Free Trade Agreement (AfCFTA) was at the 18th Ordinary Summit of the Assembly of Heads of State and Government at Addis Ababa, Ethiopia. AfCFTA among others aims at creating a single market for goods and services facilitated by the movement of people to deepen the economic integration of the African continent. The principle of the agreement largely focuses on:

- Progressive elimination of tariffs and non-tariff barriers among member states,
- Enhance the competitiveness of businesses within the continent and at the global level,
- Expand African trade through the harmonisation of policies, systems, and frameworks, and
- Create a liberalized market for goods and services.

The AfCFTA, arguably the largest free trade agreement (by participating members), is expected to be the game-changer to boost intra-African trade, increase regional productivity, and reduce the over-reliance on external partners. Indeed, the COVID-19 pandemic has reinforced the need to have an 'Africa beyond Aid', to strengthen regional trade and build robust supply chains.

The potential benefits from AfCFTA are many. Member countries stand to benefit from the increase in employment opportunities and the availability of skilled labour, lower import prices, access to cheaper raw materials and inputs, increased production efficiencies and possible economies of scale, technology advancement and specialisation, among others.

While the benefits of AfCFTA are imminent, the potential implication of the agreement on the Ghanaian upstream petroleum industry portend challenges, particularly in the development of local content and local participation.

In 2013, the government, recognising the dearth of expertise in the industry, passed the Petroleum (Local Content and Local Participation) Regulations (LI2204) to accelerate the development of local capacities through education, skills transfer, expertise development, transfer of technology and know-how, active research and development programmes, and create petroleum and related supportive industries that will sustain economic development. The Regulations gives preference to Ghanaians and Ghanaian companies with respect to employment, and the provision of goods, materials, and services in the industry.



AfCFTA-Secretariat in Accra, Ghana

Since the passage of the Regulations, the upstream petroleum industry has seen a tremendous increase in the level of local participation. Over US\$1 billion goods and services have been awarded to Indigenous Ghanaian Companies (IGCs) and joint venture companies with at least 10% minimum local participation³. Local businesses have invested in personnel, facilities, and technologies to ensure increased participation in the industry.

However, the success chalked may be eroded as certain provisions in the Regulations appears to conflict with the tenets of the AfCFTA. This is evident with respect to preferential treatment and exclusivity provisions extended to Ghanaians and Ghanaian companies in the Regulations. Consequentially, there are concerns which AfCFTA will derail any gains achieved in local content development if allowed to be implemented in its current state and form.

This write-up focuses on the provisions of AfCFTA, conflicts with some provisions of the Local Content Regulations, and recommendations for further policy implementation.

³ Petroleum Commission database

Key Provisions of AfCFTA

Article 6 of the AfCFTA outlines six key areas of focus for AfCFTA implementation: **Trade in Goods, Trade in Services, Investment, Intellectual Property, and Competition Policy.**

The Agreement makes provisions for Protocols, Annexes and Appendices to be established and to form an integral part of the AfCFTA. It is worth noting that while the first two focus areas have been adopted, member states are yet to negotiate on the last three focus areas which would be incorporated in the agreement subsequently.

The Protocol on Trade in Goods and Services provides for progressive elimination of tariffs and non-tariff barriers while enhancing cooperation and efficiency of customs procedures, trade facilitation and transit. Key provisions under the Protocols on Trade in Goods ((TS) include:

- The provision on **'national treatment'** (Article 5) under Trade in Goods requires that goods and services of other Member States be no less favourable than local goods and services.
- Article 19 of the Protocol in Trade in Services requires **'market access'** to Member States while applying the **'Rules of Origin'** to goods and services from Member States. The Article recommends member states to desist from setting limitations on the number of service suppliers, the total value of service transactions, total number of persons employed, total number of service operations, foreign capital, and specific type of legal entity or joint venture when market access has been granted. Where **'monopoly and exclusive suppliers'** exist (Article 11), the supplier should not act in a manner that is inconsistent with the objectives of AfCFTA.
- Article 24 of the Protocol on Trade in Goods provides for the protection of **'infant industries'** having strategic importance at the national level. However, measures imposed on such industries may be applied on a non-discriminatory basis and for a specified period. Similarly, Member States who intend to impose **'anti-dumping and countervailing measures'** (Article 17) may do so while being guided by the Trade Remedies and the AfCFTA Guidelines.
- The provision on **'Special and Differential Treatment'** under Trade in Services (Article 7) provides for progressive liberalisation of service sectors which will promote growth, and social and sustainable economic development.
- Part III on liberalisation of trade provides for the progressive elimination of **'import duties'** and

charges and prohibits the imposition of new tariffs for products subject to liberalisation. States may regulate **'export duties'** so far as it has an equivalent effect on goods originating from their territories. The Member States shall not apply restrictions on **'payments and transfers'** or any capital transactions which will be inconsistent with the objectives of the Agreement.

AfCFTA vs Local Content Regulations

A critical study of the provisions of the AfCFTA shows several contradictions to the Local Content Regulations and its implementation.

For instance, the 'market access' principles of AfCFTA prohibit measures to restrict the legal entity or shareholding of suppliers in the provision of services. This is inconsistent with **Regulations 4 (2) and (6)** of LI2204 which require that there should be at least 5% and 10% Ghanaian equity participation in the acquisition of blocks and the delivery of goods and services, respectively. The consequential effect is that new entrants would resist the Regulations and existing JVs will dissolve. This will inadvertently deny IGCs the needed skills, technology, and know-how envisaged by the Regulations to build local capacities.

Equally, the 'national treatment principle' is inconsistent with preferential treatment and protection provided to Ghanaians and Ghanaian companies under the Regulations. **Regulation 9** of L.I.2204 provides for first consideration to be given to qualified Ghanaians with respect to employment, goods manufactured in-country, and services provided in Ghana.

Similarly, **Regulations 12 and 15** provide for a 10% price advantage as a competitive differentiator to ensure local companies are not marginalised in procurement and contract award processes. **Regulations 10 and 19** also reserve lower and middle-level positions for Ghanaians. The national treatment provision in the AfCFTA therefore, nullifies any requirement by the Regulations or practices to favour or ring-fence positions, goods, and services for Ghanaians or Ghanaian companies.

Again, the requirement for professional services to be preferred by indigenous Ghanaian companies as stated in **Regulations 27, 29, and 31** of L.I.2204 (insurance, legal and financial services) would be inconsistent with provisions such as the national treatment and market access principles. Countries such as Nigeria, Egypt and South Africa will eventually dominate the upstream industry.

How Can the Conflict be Resolved?

- The infant industry argument first espoused by Alexander Hamilton, has been used by emerging and developing

economies to protect nascent industries from foreign competition especially in trade agreements such as the AfCFTA. Article 24 of the Agreement allows for Member States to impose measures to protect infant industries within a specified period. Article 15 of the AfCFTA also provides for waivers. The Government should therefore activate the Article 24 and seek waivers to delay the implementation of conflicting provisions.

- Government should explore Article 12 of the AfCFTA on Anti-Competitive Business Practices where foreign companies unfairly use market power to compete with local companies. This happens when foreign contractors commit to long-term global sourcing deals and bulk purchases to supply their clients and affiliates thus enabling them to substantially negotiate lower prices. Such deals might be viewed as anti-competitive if they disadvantage capable domestic suppliers.
- Part V of the AfCFTA on progressive liberation makes provision for State Parties to negotiate sector-specific obligations. Since the Protocol on Competition Policy is yet to be negotiated by Member States, the Government should make the 'political harmony' argument often used by hydrocarbon-producing countries to avert the crisis in affected communities. Political harmony could be described as the need for the government's objectives to be aligned with that of society. In Nigeria, local content rules have been used to prevent crises, especially within the oil-producing communities. Similarly, Liberia and Sierra Leone use the same rules to achieve post-conflict harmony⁴.
- Alternatively, the government may amend the Local Content Regulations to factor in the nuances in the AfCFTA as a last resort.

What must be Done to take Advantage of AfCFTA?

- IGCs – must know about procurement opportunities in the region; source for cheaper raw materials in the region to become competitive; identify countries with low capacities and provide services in 'low hanging fruits. Already, companies such as Zeal Environmental, Rigworld International, BajFreight, OMA, etc. are operating in some African countries.

Where IGCs currently do not have the requisite capacities, such companies should form joint ventures, alliances, or strategic partnerships to obtain the

requisite technology, skills, and know-how to increase capacities and capabilities.

IGCs need to undertake business strategic planning, invest in a skilled workforce and workforce productivity, develop personnel, and export the same to countries with a skill shortage.

IGCs should identify key infrastructure gaps (soft and hard) in the region to develop and facilitate trade, explore cheaper sources of finance in the region and access the right mix of finance; and invest in production technology to increase productivity.

- The government – must provide the requisite infrastructure and investment to make Ghana competitive; streamline local content policies and regulations in the region to optimise local content; and advance the infant industry argument to support key services identified in the petroleum sector as strategic and develop such services.

Government should also strengthen the local supply chain, manufacturing and industrial sectors to obtain a competitive advantage in the region.

Conclusion

The AfCFTA will create the largest free trade area in the world with 55 countries expected to ratify the agreement. The agreement proffers various opportunities for local businesses to become competitive locally and operate in the region. However, the inconsistencies in some provisions in the AfCFTA may derail local content gains achieved in the upstream petroleum industry. The Regulations and the Agreement would have to be streamlined to facilitate the required benefits in the industry.

⁴ Warner, M. (2011), Local Content in Procurement: Creating Local Jobs and Competitive Domestic Industries in Supply Chains, Greenleaf Publishing

Interview with Minister for Energy on Local Content Issues

Kofi Abrefa Afena

Our ULCM correspondent sits with the Minister for Energy, Dr. Matthew Opoku Prempeh (MP) and delves into his personal, educational, and political background. He shares his position on local content development in Ghana's upstream oil and gas industry.

Dr. Prempeh also expresses his views on the current energy transition conversation and how he is canvassing a narrative of an equitable transition.

ULCM - Good day Sir. Grateful that you made time to grant this interview. Before we start, we would like to know more about you, Dr. Matthew Opoku Prempeh.

MOE - I am sure if I want to tell you about myself, we won't finish today, but for want of time, let me try to be brief. My name is Matthew Opoku Prempeh as you already know. People affectionately call me 'NaPo' which is perhaps a coinage from my 'house name' Nana Poku. The phenomenon of having a name at home other than what is in the school register is quite common in Kumasi. Perhaps, its common in Ghana. That is what we call 'house name'... I spent my formative years in Kumasi, Ash Town as a child where I benefitted from the broad tutelages of parents, uncles, aunties and the entire extended family system. I was trained in the prestigious Prempeh College in Kumasi. You know there are only two Secondary Schools (as it was then called) in Ghana, Prempeh College and the others. After Prempeh College, I moved to the Kwame Nkrumah University of Science and technology where I trained as a Medical Doctor. In the University, I won the Local NUGS Presidency for 2 years running. In the second time, I was also concurrently, the 1st Vice President for the larger body NUGS. These were the periods 1990-1991 and 1991-1992 respectively. After school I worked in Ghana for a while until 1995 when I left Ghana to pursue further studies in Erasmus University in the Netherlands. After my Master's degree, I worked as a trainee surgeon in the United Kingdom, obtaining my MRCS (Glasg) in 2002

In 2003, I returned to Ghana, my motherland to pursue careers in business and also in politics, avenues through which I felt I could give back to my society. I eventually entered Parliament in 2009 as Member of Parliament (MP) for Manhyia. The constituency was split ahead of the end of my first term as MP and so till date I am the Member of Parliament for the



Dr Matthew Opoku Prempeh
Minister for Energy

good people of Manhyia South. I am grateful to them for the enormous confidence in me.

By the grace of God and the kindness of President Akufo Addo, I got the opportunity to serve in his first term as Minister responsible for Education, where I successfully led the implementation of, by far, the biggest social intervention in our education sector in the history of our country; the Free Senior High School Policy. This policy saw the country's High school population leap from 800,000 in 2016 to 1.2 million by January 2021 by removing cost barriers to high school education. I also led other novel interventions which are matters of public record. I am grateful to God and the President for the opportunity to be used as a vessel to touch the lives of many young Ghanaians in this positive way.

In the second term of President Akufo Addo, he once again has reposed confidence in me, to be in Charge of the Energy

Sector. I have received a number of awards which continues to humble me as a political leader. However, the flipside is that it encourages me to do more for my people and my country. I continue to work hard to ensure the welfare of our citizenry, which is the pivotal theme around which the enterprise called politics revolves.

ULCM - We know you are a man of many hats – a medical doctor, a politician, a former Minister for Education, and now leading stakeholders to build Ghana’s energy sector. What would you consider the biggest hurdle you’ve had to overcome in your working life?

MOE - The biggest hurdle I have been able to overcome without a blink, I will say is piloting the Free SHS policy to a successful outcome. If you are an ardent follower of the political discourse in Ghana, I am sure you will be well aware of the mountain of opposition which this policy was met with, right from it being a manifesto commitment and even up to the point of implementation. Some even said the policy will undermine the quality of high school education in our country. But, by the grace of God in the year 2020, the first batch of Free SHS students under this all-important policy came out with the best WASSCE results in West in Africa. As the leader of this implementation process, witnessing the antagonism and the skepticism we faced, it was a hurdle I crossed against the odds and therefore worth mentioning. I give God the glory for the resilience and fortitude he granted me.

ULCM - Over a year down the line, what have been your general impressions about the Ministry following your assumption of office as the Minister for Energy?

MOE - My impression about the Ministry of Energy is that, it is a very sensitive Ministry and therefore the work approach must also be a serious one. I do not say this to downplay the enormity of work in other ministries, but the energy sector is a very critical one, a key backbone for our national economy. We have a responsibility to keep the lights on and the nation moving. If you remember the period between 2013 and 2016 when Ghana reeled under the pervasive ‘Dumsor’, It brought about so much frustration leading to the collapse of businesses and many losses. This delineates and puts into perspective the seriousness of the work we do as policy makers here, to ensure that Ghanaians get the necessary comfort by way of power stability and the availability of petroleum products, among other important daily interventions. We are determined and remain committed to doing this, through the needed synergies within and outside the energy sector.

ULCM - And in this new role, what footprints do you hope to leave behind?

MOE - I intend to leave behind a Power sector that is robust enough to support the economic transformation of our country. I do this anchored on the fact that, the biggest expectation of the citizenry is having their lights on for domestic and industrial use. I very much believe we are on course. I also intend to leave behind a petroleum sector that will be viable to support Ghana’s economic growth. I believe that Ghanaians must have the full benefit of our hydrocarbon potential across the entire petroleum value chain spanning upstream, midstream and downstream. By the grace of God, at the end of my tenure as Energy Minister, the record, I believe will be clear for all to see.

ULCM - Still on hurdles and challenges...it has been a rough year for most companies in the upstream petroleum industry in the aftermath of the COVID-19 pandemic. How would you evaluate the status of the upstream petroleum industry?

MOE - Yes COVID-19 no doubt has been a set back to our upstream petroleum industry. But I believe in the popular saying that, “every setback is a setup for a stronger comeback”. I believe that we are currently on the path of a sustained recovery. Companies in the industry, I believe are also bouncing back. With 3 offshore and 1 onshore basin currently engaging in active E&P activities, the continued presence of 12 Operators with 14 Petroleum Agreements, 3 Producing fields – Jubilee, TEN and SankofaGyeNyame producing steadily with an average daily production of 150,000bbl/d and 380mmscf/d of gas, I believe the future is not bleak at all.

Again, with the existence of a healthy pipeline to support upcoming E&P projects and activities, about 63,000 sq. km of offshore acreage open for E&P Activities, an available Infrastructure – 3 FPSOs, pipelines, Gas Processing Plant etc., anchored on a robust regulatory framework, I want to reiterate my optimism about the future of Ghana’s upstream petroleum industry providing the needed support for the Ghanaian economy.

ULCM - There have been divergent views on the resilience of Ghana’s upstream petroleum industry in the face of the classical case of investors vs. local content obligations and its rippling effect, particularly on indigenous participation. Can you share your opinion on this?

MOE - I am a firm believer of Local Content and Local Participation. In fact, for me, it is almost an article of faith. I strongly believe that Government’s policy intention as anchored on the local content law is that Ghana should not only be the recipient of direct revenues from petroleum operations, but also create value through local participation. Across the world, there is no country that has judiciously

utilized its hydrocarbon potential or energy resources as a whole without paying proper attention to local content and the participation of its citizens in the industry.

Investors, I believe recognize this and therefore to the extent that the law as I know has no intention of hounding them or making them uncomfortable, they must understand that it is a very legitimate way of making our citizens participate in the industry as 'resource owners'

As sector Minister, with support from you the regulator, I continue to drum home this narrative to investors that, we will provide a sound business climate for them to operate, of course with due regard to the relevant laws. In all honesty, I do not think we must split heads with investors over this simple matter.

ULCM - To what extent does the country's local content policy protect indigenous companies?

MOE - As I said, my commitment to local content is non-negotiable. To this extent, my preoccupation is to ensure that indigenous companies thrive within the context of LI.2204 as amended to LI. 2435

Now, one of the important steps in securing indigenous Ghanaian company interest was the requirement by Non-Indigenous Ghanaian Companies (foreign service companies) to incorporate Joint Venture Companies (JVCs) with Indigenous Ghanaian Companies as a pre-requisite for participating in the upstream petroleum industry. This is to ensure technology transfer, among other key capacity building initiatives. However, the implementation of the Joint Venture requirement as the only avenue for participation for foreign companies has the propensity of stifling the growth of local content development. We have thus, for the purposes of enhancing local content development, particularly considering emerging trends in oil and gas investments and the energy transition underpinned by L.I. 2204 as amended by L.I.2435 introduced 'Channel Partnership' and 'Strategic Alliance' as options alongside the incorporation of JVCs to further deepen local content and local participation in Ghana's upstream petroleum industry.

The guidelines on these options as well as the local content and local participation thresholds as clearly set out in the law, I believe strongly, will work in the interest of the indigenous company operating in the upstream oil and gas space.

ULCM - Ghana has witnessed a slow pace of E & P activities because of COVID and the general world economic order thus limiting the contract opportunities for local companies. What policy initiatives is the Ministry putting

in place to revive the pace of activities within the industry and local content development?

MOE - I think not just the Ministry as the policy regulator has a role in this but importantly the sector regulator, in this case the PC. I believe that the expansion of the upstream sector through increased investment in the space will trickle down, most definitely to the local companies. For example, enhanced E&P operations by operators under the regulation of the PC will ensure that local companies have the opportunity to undertake contracts in various oilfield services such as construction, welding, fabrication, material supply services, waste management services, general rig operations, among others.

It is on the back of this that the Ministry is currently leading a massive oil and gas investment drive through strategic roadshows. We are showcasing available E&P acreages and farm-in opportunities to prospective investors. I am encouraged by the interest shown in Ghana in Houston, Aberdeen and other strategic conferences. These investors, when they finally come to Ghana, will form partnerships per the dictates of the local content law, hence providing a vehicle for local content development. We continue to work assiduously in this regard.

ULCM - How do you think the Energy transition will impact Ghana's petroleum sector in the medium to long term and on local content development and what is your Ministry's policy response?

MOE - No doubt, the subject matter of energy transition remains topical across the global energy landscape. But as a leading voice on the transition, Ghana continues its advocacy of not being against the transition in principle. However, we think that the conversation must be had within a very careful context; taken into consideration Africa's current growth trajectory and economic circumstances. Some of us have barely found the hydrocarbon resource or yet to fully realize the economic benefits of the resource. Therefore, to push us to transition in the same pace as the those who have really benefited from the resource will not be fair at all. We therefore continue to advocate for an equitable and a just transition.

So, even in the face of the energy transition conversation we continue to seek investment for our untapped hydrocarbon resources for enhanced economic growth. To the extent that investors 'flock' to invest in Ghana's upstream petroleum space, the legal and regulatory regime, will continue to ensure that the local interests are protected. To answer your question directly, I do not foresee the energy transition advocacy having any negative effect on our oil and gas activities. In fact, we will leverage on the oil and gas resources to transition gradually and if you like, on our terms.

ULCM - Ministry of Energy recently amended L.I. 2204. What is the rationale behind such amendment and what provisions were amended and its expected impacts on the industry?

MOE - Regulation 49 of L.I. 2204 has been amended by Regulation 2(a) of L.I. 2435 to provide for channel partnerships and Regulation 49 of L.I. 2204 has been amended by Regulation 2(d) of L.I. 2435 to provide for strategic alliance. As I said, we thought it prudent to introduce these options backed by law, alongside the incorporation of JVCs to further deepen local content and local participation in the upstream petroleum industry. For the avoidance of doubt, Channel Partnership is where an indigenous Ghanaian company and a non-indigenous Ghanaian company including a distributor, a vendor, a retailer, a consultant, a system integrator, an original equipment manufacturer or a value-added reseller to market and sell the products, services, or technologies of the non-indigenous Ghanaian company in the country. Strategic Alliance on the other hand is where a Non-Indigenous Ghanaian Company and an Indigenous Ghanaian Company by which the responsibilities of each partner are clearly defined and partners agree to share resources to undertake a specific mutually beneficial project while each retains independence. So, if you look at these explanations critically, the law has now provided for a broadened nuance in the context of these partnerships, which will now be responsive to the scenarios I have alluded to. These are all efforts at consolidating the local content and local participation front of our fledging industry.

ULCM - What is the outlook for upstream petroleum industry domestically and internationally?

MOE - I think the outlook is very positive especially as it has become glaringly evident, that global energy demand has outpaced renewable energy generation thereby subjecting the world to a potential energy deficit if renewable energy will be relied on solely to power the world. Germany, Austria and the Netherlands are notable examples of countries who announced in June this year, an emergency restart of coal power stations. This is a testament of the current times we find ourselves. The scramble for energy in Europe as a result of the Russia-Ukraine war is a testament of the inadequacy of renewable energy to meet global energy demands. We therefore need to find a balance between renewable and fossil fuel investments. This is where oil and gas investment come in strongly. So, I remain confident about the bright international and domestic future of upstream petroleum activities. We continue to pitch favourably for Ghana as the destination of choice because of our stable political and business climate, simple and attractive fiscal system as well as our robust legal and regulatory framework, among others.

ULCM - As we conclude this interview, we'll be honoured to have a glimpse into a day in the life of Hon. Dr. Matthew Opoku Prempeh.

MOE - In the week days, I normally would wake up at 5am and by 7am I will be at work. I believe that the early bird catches the worm. My day is often a juggle between the work at the Ministry, Parliamentary duties, meetings, among others. My normal closing hours are between 7 and 8pm but can stretch sometimes even till 11pm because of the exigencies of the moment. When it happens like that, I am not worried because duty calls and we must serve the people.

In the weekends, you know as a politician, my weekend can never be a free one. Constituency duties which have sideline events such as funerals, etc. must be attended as well as other social and cultural demands. My Saturday would normally start at 11am and normally by 8pm will be home. After exercising, I get some rest. On Sunday, I give God his due. But you see, largely, I do not have a regular day. Anything can happen at any time, all in the service of the people; a sacred duty, I believe. So, that's a snapshot of my mundane life.

ULCM - And of course, on football, what is your favourite football team?

MOE - I am a Kumasi Asante Kotoko fan. Outside, I support Manchester United.

ULCM - Thank you for speaking to us

MOE - It's my pleasure



OMNI ENERGY

Incorporated in 2008, Omni Energy Ltd is a wholly owned indigenous Ghanaian company offering specialized products and boutique services in the Oil and Gas and Energy industry.

Omni Energy specializes in the delivery of oilfield services to companies in the upstream petroleum sector and is a leader in the supply of commodity chemicals. In addition, the Company delivers comprehensive solutions for complex and large-scale energy projects tailored to the needs of our clients, using the very best in technical support services towards the supply, transmission, and distribution of Energy and the provision of integrated environmental services in the Oil and Gas industry in Ghana, Ivory Coast, Congo, and Gabon.

The Company's desire is to be considered the first class-provider of solutions and applications for Energy, Oil and Gas in Ghana, Africa and beyond, and so operations are geared towards providing and maintaining an unbeatable track record for service.

Key clients include but are not limited to: ENI E&P, Tullow, Schlumberger/MI, CNR International, Halliburton, Baker Hughes, Nopci, Foxtrot, Prosafe BW Offshore, and Maersk Drilling.

Omni Energy has established strategic relationships with manufacturers and suppliers in Europe and Asia, and leverage on these partnerships to provide the highest quality products and services, delivered on-time.

Omni Energy's chief priority is to ensure the safety and wellbeing of every employee and stakeholder at any and all of its facilities and whilst delivering its services.

Facilities & Services

The Company's operations are supported by several facilities;

1. A 6000sqm warehouse facility for the storage of dry chemicals. This also houses a 2000sqm Decanting platform for the transfer of liquid chemicals for onward supply to clients, in Yabiw- Takoradi

2. A 2000sqm depot for the storage of the Company's fleet of Offshore Cargo Carrying Units also in Yabiw- Takoradi
3. A Sling Fabrication and Inspection Services Unit at Apowa-Takoradi
4. A Thermal Desorption and Sludge Treatment Plant in Eshiem - Takoradi

All of Omni Energy's operations and facilities are accredited to ISO 9001:2015 and ISO 45001:2018 standards.

Omni Energy's services include;

1. Supply of drilling chemicals such as Barite, bentonite, calcium chloride and several others
2. Supply of production chemicals such as Methanol, Mono ethylene glycol, Tri ethylene glycol
3. Sale and Rental of Offshore Cargo carrying units (IMO MSC/Cir. 860; EN12079-1:2006; DNV2.7-1:2.6)
4. Inspection services (OCTG, BHA, Drill Pipe Inspection, Lifting Equipment Inspection, NDT Inspection)
5. Fabrication of slings and lifting accessories
6. Tank cleaning and waste management services
7. Fishing and Mud logging services

Omni Energy is led by MD Michael Zormelo and the Deputy Managing Director Pamela Zormelo, ably supported by a multi-skilled, efficient workforce.

OMNI ENERGY LTD - Our Purpose

Omni Energy Ltd, has been a leading provider of Engineering and Value Added Oilfield Support Services in the Oil and Gas industry for over 10 years. We believe that our presence should count for something so our greater purpose is to contribute to the growth of the Ghanaian industry and its sustainable development. We combine economic success with environmental protection and social responsibility. Through various value-added interventions, our company demonstrates its commitment to improving productivity, incomes and employment opportunities in Ghana and across Africa.

Women in Technical Roles in the Upstream Petroleum Sector

By Sarah Quayson Danquah



Some ladies in Technical Roles in the Oil and Gas Industry

Enhancing productivity is the hallmark of every oil and gas company. Thus having women in technical roles helps to achieve the objectives of the business entities. Globally, women represent 23 per cent of oil and gas workforce and 13 per cent of the technical workforce (nsenergybusiness.com). In terms of the offshore workforce, Oil and Gas UK reports that women represent only 3.6 per cent of the total offshore workforce. Although women form a small percentage of the workforce, they still play an important role in the industry.

The problem of untapped female talent is common in the oil and gas industry and stakeholders should put in place strategic policies to resolve issues resulting in such challenges. It has been observed over the years that oil and gas companies even fail to retain many of the comparatively few women they attract in the first instance due to gender and cultural issues.

Increasing the employment of women in the upstream oil and gas industry is a major strategic policy of the Petroleum Commission, the Regulator of the upstream industry. The Commission has therefore set for itself a target to achieve at least 30% of employment of women in the upstream in its four-year Corporate Strategic Plan. This strategic target is in

line with the Petroleum (Local Content and Local Participation) Regulations, 2013 L.I 2204 to enable Ghanaians fully participate and benefit from Ghana's oil and gas resources.

There is a general belief that organisations that employ women especially in senior leadership positions are more effective and perform better than their industry competitors who do not. Unfortunately, the oil and gas industry has struggled over the years to attract, retain and increase the number of women in technical roles even though women had been involved in the industry long enough as men have.

Addressing this problem is important as the sector faces an aging workforce as well as demand for new kinds of skills in areas such as advanced analytics, machine learning, and automation in the industry.

Dynamics in the Industry

Over the years the upstream industry has seen many changes in technological innovations and it has become imperative for companies to understand the specific reasons why female participation is low especially in core technical roles and then create specific solutions to address them for the benefits to be realized.

As the technical needs of the industry evolves, companies operating in the sector need to put in place specific interventions in their hiring to expand the range of requirements to accommodate and create more employment opportunities for females.

Women in Technical Roles in Ghana's Upstream Industry

Employment statistics from the Annual Localisation Plans and Reports indicate that overall women's employment in the upstream was 24% as of the end of December 2019.

The Commission's policies and engagement with companies working upstream have resulted in increased participation of women. There is currently about 12.5% of females employed in core technical roles as at end of December 2021.

International Oil Companies and International Service Companies such as Tullow Ghana Limited, Modoc Production Services, Yinson Production West Africa, TechnipFMC, Baker Hughes, ENI, TecAfrica and Halliburton among many others have employed women to work in their technical operations both offshore and onshore.

Women employed in the upstream sector in Ghana can be found in key areas working as Operations Engineer, HSE and Quality Assurance, Commercial and Contracts Engineer, Electrical Engineers, Well Test Engineers, Offshore Controls Technicians, Subsea completions and well installation and retrieving of Christmas trees and jumpers. Most of these roles are usually held by men but women have managed to break through and assumed such roles.

Bridging the Gap for Women in Ghana's Upstream Technical Job Roles

In addressing the gender gap, upstream oil and gas companies should expand their hiring requirements to attract more female candidates.

There is also the need to increase the number of females studying STEM subjects through robust training and a higher awareness of technical job roles available in the upstream oil and gas sector. This can be achieved through individual, company, and community collaborations and investments.

Upstream oil and gas companies should also have proactive policies designed to encourage females to develop an interest in upstream technical subjects and support efforts towards their retention and progression.

To retain more young women and provide more flexibility to everyone, companies may want to consider developing alternative career paths that do not require moving women to remote environments.

Conclusion

Creating clear career paths that allow women to step out of their operational roles based on their personal circumstances and communicating that to them will make a way to balance career and family life and make it more convenient for women to stick to their job roles.

The impact of employing women also has repercussions throughout the broader community. When greater income equality is distributed across women and men, poverty diminishes over the generations. When women hold assets or gain income, that money is more likely to be spent on their family's nutrition, medicines, education, and housing. As a result, children are healthier, and communities do better. In addition, research indicates companies that include women have heightened social and environmental stewardship. Examples of such benefits range from lower water usage to returning a greater share of the company's profits to the community through various forms of community engagement.



RIGWORLD SOLUTIONS

Rigworld Solutions Bolts & Nuts Division

is a 100% indigenous Ghanaian engineering company specialized in the manufacture and supply of coated and uncoated stud bolts/nuts, bespoke fasteners, and various engineering supplies for a varied range of customer applications in oil and gas, power generation, fabrication and construction, mining, marine engineering, and food processing. We manufacture for local consumption as well as for export.

Our products are made to:

- i. International standards
- ii. Special specifications according to customer or project drawings

In our broader range of supply, we have available Spectacle Blinds, Spade-Spacers, and Flanges, in collaboration with our partners Marla Group (UK).

Further, we provide a wide range of pipes, tubes and pipe fittings, also from our UK partners Marla Group

From our partner Garlock, we supply gaskets, Flange insulation kits, seals, expansion joints, butterfly valves and compression packing.

Our focus is to provide turnkey engineering solutions for our customers' needs in the aspect of fasteners, piping and piping accessories

PT FE Coating

We have a state-of-the-art PTFE Coating Line as part of our manufacturing capacity in Takoradi that enables us to develop and provide high-grade surface coatings for the industries we serve.

Coating combinations are designed for specific applications that require optimized corrosion protection and resistance to wear (for example: subsea installations) Surface preparation is carried out using a sandblasting process before coatings are applied.

We are a bespoke company focused on providing high-quality solutions and in keeping with that objective, we have customized coatings in different colors for situations where a standard one is not able to provide adequate protection

Gaskets

We supply gaskets in a wide range of metallic and non-metallic materials for applications covering many different media in a very broad temperature and pressure ranges. Industries served are oil and gas, power generation, fabrication, construction, mining, marine engineering, and food processing.

Non-Metallic Gasketing (e.g.: compressed fiber gasketing) Metallic Gasketing (e.g.: Spiral wound gasket)

FLANGE ISOLATION KITS

Flange Isolation kits are used to electrically insulate one flange from the mating flange. This is necessary to prevent corrosion caused by the passage of electric current.

SPECIALIST HOSE SOLUTIONS

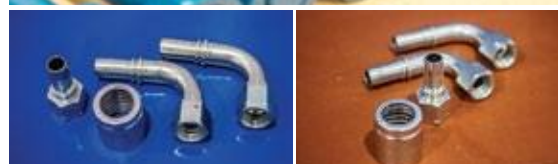
We provide a wide range of specialist hose assemblies along with complementary products to the 011 and gas industry. Below are some of our specialist hose requirements

INDUSTRIAL & HYDRAULIC HOSES

We are a leading supplier of industrial and hydraulic high and low-pressure hoses and have a wide variety of specialist hose assemblies and complementary products to meet a diverse range Of requirements within the ml and gas industry in Africa and

Beyond. Our hoses are made from standard exotic materials assuring our Clients of getting the best value for money.

Each manufacturing facility is equipped with a fully functional laboratory where each batch of the compound is tested for compliance to the controlled specification - this is prior to usage in the manufacturing process.



First Ghanaian Owned AHTS Vessel Commissioned to Service Jubilee Field

History was made in the upstream petroleum sector on 5th November, 2021 with the commissioning of the first ever fully indigenous Ghanaian owned vessel, the MV Flat Confidence at the Takoradi Harbour.

The vessel is owned by Messrs. Flat C Marine Offshore Limited, an indigenous Ghanaian company.

The ownership of the vessel was made possible by the fact that Tullow Ghana Limited (TGL) operators of the Jubilee and TEN Fields together with its partners, the Ghana National Petroleum Corporation (GNPC), Kosmos Energy, PetroSA awarded a contract to Flat C Limited to provide Anchor Handling and Tug Services (AHTS) services to support offtake activities of the FPSO Kwame Nkrumah.

The background to the award of the contract to Flat C Marine Offshore Limited is that TGL and its partners of the one part and the Petroleum Commission, of the other part worked together to arrive at a sub-sector adoption strategy. Under the strategy, the Commission and TGL agreed to indigenise certain activities along the upstream oil and gas value chain. One of the sub-sectors adopted is the marine and allied services subsector.

Flat C Marine Offshore Limited's acquisition of the vessel was made possible through financial arrangements with ABSA Bank, Prudential Bank Limited and Saham Insurance.

Launching the Flat C Confidence vessel at the Takoradi Harbour, the Hon. Minister for Energy, Dr. Matthew Opoku Prempeh, whose speech was read on his behalf by Hon. Andrew Mercer, a Deputy Minister for Energy lauded all who played various roles to make the ownership of the vessel by Flat C Limited possible. "The synergies that have been deployed to achieve this feat are worth placing on record.

We look forward to such collaboration between International Oil Companies (IOCs), Indigenous Ghanaian Companies (IGCs) and all entities in our upstream space. Hopefully, this bold step by TGL and its partners as well ABSA Bank and Prudential Bank Ghana Limited in supporting Flat C Marine Offshore Limited will spur others to commit to helping our companies that service the upstream petroleum sector to do more with the needed financial support.

Chief Executive Officer of the Petroleum Commission, Mr. Egbert Faibille Jnr said commissioning of MV Flat Confidence marks an epoch in local content journey in the upstream petroleum sector. "Vessel ownership is divided into 64 shares or parts and from what I have been told, the Flat C Confidence has all its 64 parts owned by Flat C Limited," Mr. Faibille Jnr said. He said the fact that Flat C Limited as an indigenous Ghanaian company owns the vessel is a testament for all others in that category who aspire to reach the very top in their respective areas in the provision of services to the upstream petroleum value chain.

The Flat C Confidence Vessel





Hon. Andrew Egyapa Mercer flanked by Officials from the Petroleum Commission, Tullow, ABSA and the Captain of the Flat C Confidence Vessel

Flat C Limited's ownership of the Flat C Confidence gives impetus to the provision of Regulation 1 sub-regulation (a) of the Petroleum (Local Content and Local Participation) Regulations, 2013; L.I. 2204 which states: "The purpose of these Regulations is to promote the maximisation of value-addition and job creation through the use of local expertise, goods and services, businesses and financing in the petroleum industry value chain and their retention in the country."

The MV Flat Confidence is manned by a crew of 18. The vessel is captained by Captain Akai Kpani. The Captain and all the rest of the crew are Ghanaians.

The commissioning of the Flat Confidence attracted various invited guests, including naval officers and ratings, officers and men of the Ghana Army, officials of the Petroleum Commission and the Ghana Ports and Harbours Authority.

The Flat C Confidence Vessel



Interview with Captain Francis Boakye, CEO of Flat C Marine Offshore

By Linda M. Kosi

Captain Francis Boakye, CEO of Flat C Marine Offshore shares his journey with ULCM on how he and his partners came to acquire the first wholly Ghanaian-owned and Ghanaian-flagged marine vessel to support operations in the Jubilee and Ten Fields.

ULCM: Welcome Sir and congratulations once again on leading your company to acquire the first fully owned Ghanaian vessel in the upstream petroleum industry.

Captain: Thank you

ULCM: How does this feat make you feel?

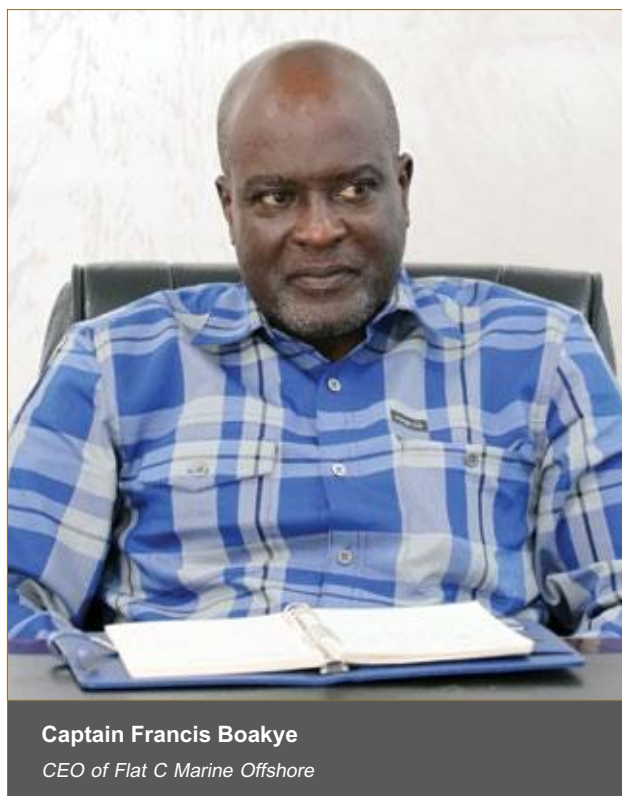
Captain: It's an awesome feeling, I must say, because this is novel -- to Ghana and to the marine offshore business. That a local company has finally won a contract to provide Anchor Handling and Tug services with a wholly Ghanaian-owned vessel. We are excited to be the first to make this happen.

ULCM: What was your main motivation behind the acquisition of the Flat C Marine Vessel?

Captain: I was on a Canadian ship and my company gave me an opportunity to travel to Equatorial Guinea to start managing ships for the first time. This presented a good opportunity for me to learn the management side of the shipping industry. It expanded my perception and knowledge about ship management, especially the commercial side.

Ghana had just found oil in 2007 and just about that time I was sent to Ghana by my company, Maersk to inspect a ship they had brought to the dry dock. When I came, I realised that everything was new, and industry was rife with opportunities especially for local companies. With my experience offshore as a captain and following discussions with my partners, we assessed the environment and realised that we could provide marine support services.

I believe that the passage of the local content law played a key role in pushing us to achieve our business objectives, because it would have been very difficult to compete with foreign competitors without a regulatory body like the Petroleum Commission pushing local companies to take advantage of opportunities in the upstream petroleum industry. Honestly, looking at how competitive the upstream petroleum industry is, I don't think we would have made it this far without the



Captain Francis Boakye
CEO of Flat C Marine Offshore

support of the Petroleum Commission to ensure that local companies are given opportunities within the industry.

ULCM: Can you share challenges you faced trying to acquire this vessel and how you overcame them?

Captain: Financing is the biggest challenge for any Ghanaian who will attempt to do this. You know, first, a ship is not like a car. You can't just dip your hands into your pocket and purchase one. Secondly, you need the technical know how to manage it. There's often the perception that you could be the weakest link in the chain to supply services that an IOC needs.

Most Ghanaian banks were unwilling to provide support because of the risk involved - we didn't have a ship at the time;

all we had was a team of very experienced men who were determined to make a difference and take on opportunities in the marine offshore space.

Although we put in a bid for the contract without owning a ship, I believe the IOCs, Tullow especially, considered the expertise of the team and the ship we intended to purchase and were confident that we could deliver.

Later, with the support of the Commission behind us, and assurance from the PC, Prudential and ABSA Banks provided financial assistance to acquire the vessel. On the part of our insurers, Sanlam provided credit risk guarantee to give comfort to the banks.

I must take the opportunity to thank them for their support because at one point no one believed in us, but now because of their support I believe we have paved the way for many others to follow.

UCLM: A year down the line following the arrival of the vessel in Ghana, are you somewhat satisfied with progress of operations?

Captain: Oh yes. Tullow contracted us on November 9th, 2021, so we are just about a year old. Aside a few teething problems which we experienced and is expected in every new endeavour, it's been quite a smooth ride. Tullow has been very helpful. They know we are new, but they've being nice and, provided a very conducive working atmosphere.

UCLM: What advice can you give to indigenous Ghanaian companies who want to follow in the steps of Flat C?

Captain: I'd urge local companies to venture into the upstream petroleum industry and not only in the marine space. It's never going to be an easy journey, but the results are rewarding. It took us about 14years to get here. We lost some contracts along the line, but I consider the journey a learning curve.

Our advantage as local companies is that we have the backing of the local content law and the Commission on our side. The IOCs are business oriented. They're here to make profit and honestly, I think it's cheaper for IOCs to engage the services of local companies than foreign counterparts. However, you must work to meet international standards. Once you have that, entry into the space is much easier and sustainable.

As local companies, we help to build the nation. All the revenue that comes in stays in-country and does not go anywhere else. Every single crew member is Ghanaian, and spends his money locally unlike foreign companies, everything goes away.

So all our funds that we are accruing right now, everything is safe, in a Ghana bank account, our crew are Ghanaians, they get paid and they're still here. I believe in local content, and I believe what we've done will make the task ahead much easier for anyone who wants to walk in our footsteps.

UCLM: Thank you for your time

Captain: My pleasure!

Human Resource Development and Job Role Localisation

By Sarah Quayson Danquah

The discovery of oil and gas in commercial quantities and its benefits to a nation are enormous. Citizens expect to see immediate improvements in their way of life through increased participation in the form of employment, business, and better remuneration and spending. These expected outcomes make it imperative for governments who are entrusted with the resources to make bold decisions on how policies, agreements, and contracts are drafted to ensure impact on the citizenry.



Some Ghanaian Successors playing various Technical Roles in the Oil and Gas Industry

In April 2018, the maiden conference for job role Localisation in Ghana's upstream was held in Accra to officially outdoor the Petroleum Upstream Human Resource Localisation initiative, and to foster effective collaboration with all stakeholders to promote local content in the country.

Potter, (1989) defines Job Role Localisation (JRL) as the replacement of expatriates by competent host country nationals. Thus, JRL specifically targets the local workforce and ensures that they are given first consideration in all employment opportunities as well as trained to assume roles previously occupied by expatriates. The legal requirement requires that job roles in the upstream oil and gas industry are localised over ten (10) years from the inception of each upstream operation.

In the Ghanaian context, JRL requires planned and systematic efforts in building the capacities of the local workforce as well as identified Ghanaian successors for key technical roles such as Offshore Installation Managers, Production Technicians, Development Geologist, and Drillers, among others whose job requirements place responsibilities on expatriates employed in such roles to follow training and development plans to transfer knowledge and skills to the Ghanaian successor understudying them over a period of time, referred to as the "localisation period." This period is expected arrived at with an agreement between the Regulator and the employing company. However, since the upstream industry requires highly skilled technical expertise in all the seven (7) stages of the exploration and production life cycle (Exploration, Discovery, Appraisal, Development, Production, Plugging and Abandonment and Decommissioning); ensuring that competent locals assume or replace expatriates in their job roles has become a challenge.

These challenges include lack of core technical skills, non-recognition of certificates awarded by Technical Training Institutions (TTI) in Ghana, coupled with inadequate resources in TTIs including teaching resources, accreditation, and affiliation with international accreditation bodies. It has become imperative that Ghanaians are trained through the transfer of skills by expatriates who are allowed to work in the sector.

As provided for in Regulation (18) of LI.2204, it is imperative to build a skilled local workforce to provide a pool of competent and competitive local labour for the upstream sector in Ghana. The Regulator, therefore, ensures that international oil companies and international service companies operating in Ghana comply with these provisions.

To ensure JRL, several strategic policies and guidelines have been made by the Regulator in line with the provisions in L. I. 2204.

A major policy decision has been the flagship programme: the Accelerated Oil and Gas Capacity Programme (AOGC) initiated by His Excellency the President of the Republic of Ghana, Nana Addo Dankwa Akufo Addo, which aims to build the capacities of Ghanaians through skills development as well as providing funding for the accreditation and certification of Technical Training Institutions in Ghana.

The programme has since in 2019 trained Five (5) Ghanaian Welders and Nine (9) Welding and pipefitting Instructors at the Northern Alberta Institute of Technology (NAIT) to acquire international welding qualification and certification (CWB) to support teaching in key technical courses such as welding and fabrication and Pipefitting which are used extensively in upstream operations in effort to build a pool of competent and qualified skilled workforce.

In pursuit of this same agenda, one hundred and fifty (150) Ghanaian graduates were selected from across the country to participate in a sponsored training at the Jubilee Technical Training Centre (JTTC) situated at the Takoradi Technical University. The training was aimed at four (4) critical upstream technical job roles: Electrical, Mechanical, Process and Instrumentation Technician. The graduates were awarded City and Guilds International Vocational Qualification Level 3 certification which has made them field ready for upstream job roles.

Another major strategy has been the implementation of the Guidelines on Employment, Training and Capacity Development and Succession Planning which all employers in the upstream sector must follow when recruiting to fill vacant roles. It ensures that competent Ghanaians are given first consideration in all employment opportunities by utilising the

data in the Upstream Professional Database set up by the Regulator.

Where employers prove beyond doubt with evidence to the Regulator that no competent Ghanaian has been identified for a role, they are allowed to engage an expatriate who is required to transfer skills to an identified Ghanaian successor during the agreed localisation period. This is where the PC collaborates with the Ghana Immigration Service to facilitate work permit applications for expatriates engaged to work in the upstream industry. Here, the Regulator reviews all such applications to ensure they comply with the guidelines on employment, training, and succession.

Another approach is the review of the Personnel on Board (PoB) of vessels and facilities working offshore such as supply vessels, construction vessels, Floating Production and Offloading (FPSOs) facilities, and Drill Ships among others. The review of the PoB helps the Regulator to engage the operators of these vessels and FPSOs in employing Ghanaians in middle and low-level roles and help to regulate the employment of expatriates (in job roles such as) floor hands, stewards, cadets, welders, etc.

The Regulator has also initiated and implemented the Ghana Upstream Sector Internship Programme (GUSIP). Through this programme, Ghanaian graduates are allowed to work with expatriates on upstream projects such as drilling, production, health and safety, construction, engineering, etc to enable the graduates to acquire on-the-job training and prepare them for upstream job roles. Several of these interns have since transitioned into permanent employment with upstream companies.

Several milestones have been chalked with the implementation of the Localisation Strategy and today Ghana can boast of Ghanaians who have assumed roles previously occupied by expatriates such as Night Drilling Supervisors, Drillers, Production Superintendents, Health and Safety Advisors, Instrumentation Technicians, ROV Pilots, Well Engineers, Reservoir Engineers among others.



Up-Close with Magdalene Africanus-Mensah, Quality Inspector with Amaja Oilfields

Interview by Nana Ekua Sekyiwa Darko

A product of Akosombo International School and St. Louis Senior High School, Kumasi, Magdalene Africanus-Mensah attended Kwame Nkrumah University of Science and Technology (KNUST) and graduated with BSc. Telecommunications Engineering with an ambition of working in the telecoms sector. Today, Magdalene works in Ghana's male-dominated industry of oil and gas as a Quality Inspector for Amaja Oilfields. Our Local Content Magazine (LCM) correspondent caught up with her for an interview.

LCM: Good morning and thank you for granting us this interview. Can you give us an insight into yourself?

MAM: My name is Magdalene Africanus-Mensah and I am twenty-eight (28) years of age. I had my basic, Junior High school education at Akosombo International School and continued to St. Louis Senior High School, Kumasi for my secondary education.

I later gained admission to Kwame Nkrumah University of Science and Technology (KNUST) to study BSc. Telecommunications Engineering. I had my Master's degree in M.Sc. Engineering and Management with Coventry University, UK. I am currently a certified Non-Destructive Testing (NDT) Level II holder in Ultrasonic Testing (UT), Penetrant Testing (PT), Eddy Current Testing (ET), interpretation of Radiography films (RT, Magnetic Testing (MT/MPI) and Visual Testing (VT) with Trinity NDT at Bangalore, India.

LCM: Tell us a bit about your family

MAM: I come from an immediate family of four. I am the last of the Africanus-Mensah family which includes my parents and older brother. We are Fantes. My parents are from the Central Region. Specifically, my father is from Elmina and my mother is from Shama.

LCM: How was your formative years like?

MAM: After my National Service and a working contract opportunity with Schlumberger Ghana, I sent my curriculum vitae to several companies; Amaja inclusive and subsequently I got called for an interview and here I am.

LCM: What fascinates you about your role at Amaja

MAM: My formative years were very interesting. My father loved mathematics and luckily, I found myself enjoying mathematics also. I spent more time with my books than with my friends growing up and now I appreciate that sacrifice.

If I had any spare time, it was with my close-knit family. I was an avid sports woman. I played hockey and basketball but preferred hockey during my Senior High School years rising to become the captain of the team in my 3rd year. I believe that everyone has a process that he or she goes through whilst growing up but what makes you stand out are the choices and decisions you make along the way.

LCM: Tell us about how you joined Amaja Oilfields?

MAM: After my National Service and a working contract opportunity with Schlumberger Ghana, I sent my resume to several companies. Amaja Oilfields was one of the companies which called me for an interview and here I am.

LCM: What fascinates you about your role at Amaja?

MAM: Well, the fact that I have gotten used to a field that I never dreamt of after leaving KNUST with a BSc. Telecommunications Engineering. I was thinking I will be going in straight to work with a telecommunications company such as Ericsson, Vodafone, MTN, and the likes. It just happened that a new career path had been chartered for me and I am enjoying each opportunity.

I see myself growing daily in this field and I feel very proud. The way I have developed a love for the industry certainly overwhelms me personally and I yearn to see what the future will bring. Again, the fact that I am the only female that works on the field with the guys makes me rather confident than intimidated. With this, the respect and the joy people have when they meet me on the field is everything. In relation to this, I ought to have a high sense of responsibility, and I am always pushed to catch up with targets because to "whom much is given; much is expected".

LCM: Can you share with us your daily routine?

MAM: On a normal day, as a Quality Inspector and a Buck-on Operator, my day starts with incoming inspections of every pipe that comes to the yard both to be manufactured and repaired. I do my online inspections of the machine after threading has taken place. I take my measurements to ensure that customer needs are met and conduct final inspections to ensure that all tools comply with quality standards before I sign off to be released to clients.

LCM: From the nature of your role, can you tell us how challenging it is?

MAM: My role demands that I pay critical attention to details. I have to be 100% sure of the information and tools that goes out of our yard. I have to be precise in confirming that each tool is threaded per set standards. It also brings me to the point where my inter-personal skills have to come to play. On the whole, I have adapted to the system that could have been a hindrance and channelled it as a learning phase in my career path. I believe in continuous improvements and training. I can say that with much more extensive training in this field, I will be the very best.

LCM: As a career woman, can you share with us how you are able to balance work and family?

MAM: well, I am not a mother yet, neither am I married so balancing work and family is not so difficult a thing to do. Amidst the busy schedules, I take it as a priority to make out time for family. Hopefully, someday, I can answer this question better.



Magdalene Operating a Machine

LCM: Where do you want to see yourself in the next five years

MAM: In the next five years I expect to grow in the Oil and Gas sector. I should gain mastery and accumulated knowledge to help impact the industry and its upward trajectory in the country. I aspire to have my own company and an engineering training institution established to give the younger generation, especially women, the platform to gain practical quality training in the various engineering fields.

LCM: What advice do you have for young females who want to go into the study of Science, Technology, Engineering and Mathematics (STEM).

MAM: I would say that they should go all out. It is okay to aspire to work in a particular field even dominated by men. Females should be open-minded, focused, and determined to strive to be the best no matter the circumstances and the fear of competition among men. Interestingly, most people squirm about science and always assume a degree in medicine.

Science is not all about medicine. There are many disciplines in the branch of the sciences that equally pay off.

LCM: Would you encourage other women to study the sciences and penetrate this industry?

MAM: Definitely. There are more opportunities in the sciences and personally, it saddens my heart to see few women being keen to get involved. If men can do it and get to the top, women can equally do it and I encourage the ladies to never forgo their dream as a field engineer if they are convicted.

LCM: What do you do during your Leisure time?

MAM: During my leisure hours, I read, swim, listen to music or teach dance.

LCM: Thank you for your time

MAM: You are most welcome.



Magdalene in Blue Hard Hat with some Colleagues

Vignettes of the 2019 Local Content Conference and Exhibition





Pipefitting to be Introduced as a Course of Study in Ghana... With Nine Petroleum Commission Sponsored Instructors

As part of Government's agenda to ensure job role localisation in Ghana's upstream sector, the Petroleum Commission took a giant step in that direction with the recent graduation of nine instructors selected from a number of technical universities/institutions in pipefitting, welding and millwright at the Northern Alberta Institute of Technology (NAIT), Edmonton, Alberta, Canada.



The Nine Instructors with their Lecturers During their Graduation at NAIT

The nine instructors who are expected to lead efforts to introduce pipefitting as a course of study in Ghana for the first time trained at NAIT under a Becoming a Master Instructor (BMI) Programme.

The graduation of the nine brings to 14 the number of Ghanaians who have been sponsored to train at NAIT through Government's Accelerated Oil and Gas Capacity Building Programme (AOGC).

In a speech read on his behalf by Hon. William Owuraku Aidoo, Deputy Minister for Energy, the Minister for Energy, Dr. Matthew Opoku Prempeh reiterated Government's vision to steadily and deliberately introduce policy interventions that will ensure that qualified Ghanaians get the opportunity to work in oil and gas and thereby help reduce the cost of

exploration of oil and gas. "Today is a significant day in our nation's history. These nine instructors are expected to return home to Ghana and work with their respective institutions to introduce pipefitting as course of study to our youth. In the end, we will no longer be bringing in expatriate workers to undertake pipefitting jobs in our country. I congratulate the nine instructors, the Petroleum Commission and NAIT for making this vision possible." Dr. Prempeh said.

Peter Leclaire, Vice President (Academic) of NAIT, in a speech congratulated the nine instructors for successfully undergoing the bespoke training under the sponsorship of the Petroleum Commission. "This is the second time NAIT has trained and graduated a group from Ghana. For both groups, we at NAIT have been most impressed by their quality. You have very

good human resources in Ghana from what we have seen and NAIT stands ready to give them the necessary training to link them to job roles in the petroleum and other industries in your country.”

For his part Egbert Faibille Jnr, Chief Executive Officer of the Commission said “We at the Commission are happy that all the nine instructors we sponsored for this programme have come out successfully. We set out with a clear vision of ensuring that pipefitting is introduced as a stand-alone and certificated course in Ghana. The joy is even manifold when one considers the fact that the institutions these Instructors have been selected from are itching to introduce pipefitting as a course of study for our young ones. We also expect of the nine instructors that they will work with the relevant authorities in Ghana to make pipefitting a very attractive course for our youth.”

Speaking on behalf of the nine, Gladys Perpetual Awudi thanked NAIT and their instructors for the very practical manner, the BMI programme was rolled out to them. She also thanked the Government of Ghana, the Ministry of Energy and the Petroleum Commission for the faith reposed in them. “We are now apostles of pipefitting and will go back to Ghana mindful that we have a role to play in the plan to roll out pipefitting as a course of study in Ghana.”

The nine have since returned to Ghana. They are Gladys Perpetual Awudi, Koforidua Technical University; Esi Quainoo, Takoradi Technical Institute; Isaac Opong, Kikam Technical Institute; Abdul Hamid Mohammed, Tamale Technical University; Samuel Gariba, Cape Coast Technical University; Daniel Kyei Kankam, Takoradi Technical University; Frank Nana Osei, Takoradi Technical University; Wise Kwashie Klomegah, Ho Technical University and Emmanuel Marcus Abaidoo, Takoradi Technical Institute.

Apart from upstream petroleum operators and service companies, entities like Ghana National Gas Company, Volta River Authority, Tema Oil Refinery, Bulk Oil Storage and Transport Ltd (BOST), GOIL, mining companies, automotive assembly companies, the breweries and related entities stand to cut down on costs in the engagement of expatriate pipefitters with the full rollout of plans to introduce pipefitting as a course of study in Ghana.



Deputy Energy Minister, Hon. William Owuraku Aidoo with the Nine Instructors, PC Officials and NAIT Officials at the Graduation Ceremony

The Nine AOGC Beneficiaries Share their Experiences During their Training at NAIT

By Ama Sika Baako and Priscilla Kwarteng Boampong

Earlier this year, some nine instructors from various technical institutes and universities in Ghana were sponsored by the Petroleum Commission in line with its mandate under the Accelerated Oil and Gas Capacity Building Programme (AOGC) to undergo training at the Northern Alberta Institute of Technology (NAIT) in Edmonton, Canada.

These nine were trained over a period of 10 months and have acquired professional certifications in pipefitting under a 'Becoming a Master Instructor (BMI) Programme as well as Welding and Millwright/Mechanical Technicianship at NAIT.

The main purpose of the sponsorship was to tackle capacity issues in the area of pipe fitting and welding in the country and to minimise the number of expatriates that enter into the country.

The nine who recently graduated at a ceremony held in Edmonton were selected from a pool of about 40 instructors from various technical universities and institutions across the country, after a series of interview processes.

These beneficiaries are from Koforidua Technical University, Cape Coast Technical University, Ho Technical University and Tamale Technical University.

The rest are from Takoradi Technical University, Kikam Technical Institute and Takoradi Technical Institute.

On their arrival to Ghana, the nine visited the Commission to announce their safe return and to express their gratitude for the opportunity. They shared with the Commission their experiences, suggestion and their preparedness to assist their various institutions and universities in reshaping the welding and pipefitting industry in Ghana.

Their experiences, comments and suggestion are captured below:



Emmanuel Marcus Abaidoo, Takoradi Technical Institute

- There is a very big difference between what we do here and what they do in Canada. Take a technical institute or technical institutions in Ghana for instance, as I mentioned early on, NAIT has all the necessary

equipment, so they are able to teach students effectively and efficiently

I believe the Ghana Welding Bureau is actually a good idea because in Canada, certificates are required before one can work in any mechanical or engineering industry. A similar institution in Canada called the Canadian Welding Bureau (CWB) is in-charge of issuing those certificates. So if Ghana can also have such a nice and necessary institution for the industry it will really help.



Wise Klomegah Kwashie, Ho Technical University

- When it came to the academic work, it was an eye opener; technology and, cultural wise and even how they communicated was different and quite advance as compared to Ghana in terms of the availability of

technology and equipment for learning. You have to pay more attention than usual because of the accents. So I had to pay very close attention enable me to learn so I improve my learning skills.

In order to make sure this process yields effective results; we must fast track some of these things by integrating what we have learned to any institution that needs it. And after that the next step is getting the support of industry players to support some of institutions.



Gladys Perpetual Awudi, Koforidua Technical University – In my report I've stated that after going through everything including the tough selection process, the challenges we faced with the preparation even before getting the visa and then the first time we entered Canada, the

snow, winter and summer was a great experience.

Also my viewpoints on this whole skill training have changed because I've learned some techniques that I will be able to impart to even my colleagues, so that we will use as a department to train our students. As an individual, I have built my skills and my confidence that I will be able to use to help the nation too.



Esi Quainoo, Takoradi Technical Institute – It hasn't been easy from when I began my education in welding. Because there were few women in the field, we got discouraged by our male colleagues in the class who would tease us to go and cook for our husbands instead of taking up the

challenge of becoming a welder as it assumed the course is for men.

I had personally heard of pipefitting, but it was beyond my imagination. At NAIT, the materials at our disposal, the projects and consumables involved was educating. Everything was new to me as I had no idea about the course and with me joining the group late, I had to put in my best to catch up with everything.



Isaac Oppong, Kikam Technical Institute – when we began our training, I realised they have lots of equipment and they have even designed a curriculum which contains both practical and welding. It's not like what we have been doing here. Here, it's more theory and less practicals because we do not have the required

equipment. I call myself a welding instructor or welding teacher here, but some of the welding structures and equipment I saw at NAIT, I haven't even seen them before.

When we heard that they are going to build a Centre for Excellence, we were happy because I knew definitely that they are going to install the kind of machines, and everything will be available for us to start training the students.



Frank Nana Osei, Takoradi Technical University – I'm of the view that the development of a curriculum with specification in training between us and industry players will help us provide their standard of training to students. I will also recommend that safety rigging should be a paramount

course in the new curriculum so we can improve our level of safety and further promote safety awareness.



Abdul Hamid Mohammed, Tamale Technical University – In Canada, we heard about the launch of the Ghana Welding Bureau (GWB), and I believe it has come at a great time. The nine of us are going to be ambassadors of the GWB if we are given the chance to support. It is

going to solve a lot of problems as the Bureau will sort out certification issues and shape the education system when it comes to welding.



Samuel Gariba, Cape Coast Technical University - When we went to NAIT, we realised we did five programs, I recommend that, if possible, the next batch be allowed to do pipe fitting for a year and focus on it as well as other fields.

I also realised that the industry supported the institutions with consumables so if we can have more industry linking up with the institutions as well, I believe this will really help to address all challenges.



Daniel Kyei-Kankam, Takoradi Technical University – The benefit of our training will become visible when we acquire the necessary equipment, we need to train our students. Once the facilities are available, it will benefit me and my institution as I will impart all the new knowledge I have

learnt. Without the facilities, it will be of no point to transfer the new knowledge as it would be the same old way of teaching.

HARLEQUIN OIL AND GAS LIMITED



Harlequin Oil and Gas Limited (HOG) began operations in September, 2015 as a joint venture between Tarkus Logistics & Engineering Supplies Ltd and Harlequin International (GH) Ltd (now the parent company of HOG). Harlequin International (GH) Ltd started operating in Ghana in 1998 to serve the mining industry and has grown into a renowned engineering and hydraulic service provider.

HOG was set up to provide support services to the upstream Oil and Gas industry. In 2018, Harlequin Oil and Gas became a fully owned Indigenous Ghanaian company and is now one of the leading upstream support service companies in Ghana. HOG specializes in the turnkey fabrication of subsea equipment, including suction piles, manifolds, steel bend restrictors, holdback anchors and mud mats.

HOG has provided various support services to leading players in the Upstream Oil and Gas Industry including but not limited to MODEC, NOV, FMC Technologies, and Tullow among others. Our commitment to excellence and superior customer satisfaction has culminated in HOG being adjudged Ghana's Local Content Achievement Company of the year 2020 by The Oil and Gas Year Book (TOGY), one of the most prestigious Oil and Gas Journals in Africa; as well as Indigenous Upstream Oil and Gas Company of the year 2020 by Ghana Oil and Gas Awards.

OUR SERVICE OFFERINGS

- Project Management; Procurement of raw materials; Fabrication for upstream services covering both topside and subsea equipment requirements; Surface preparation (shot blasting) and coating

for topside, subsea structural and subsea pressure piping; Hydraulic and pneumatic support services for both the supply and repair of high pressure hydraulic/air systems, components such as cylinders, valves, pumps, etc.; Engineering of all types of machined components both CNC and conventional specifications and standards including mobile on-site services; Dimensional inspection (metrology); Factory acceptance testing; Transport and delivery; Documentation package (manufacturing data book); Specialized plating systems; NDT testing; Calibration of Welding Machines (all brands/makes) and calibration of the following measuring instruments (Torque Wrenches - up to 1500Nm; Pressure Gauges - up to 700bar/10,000Psi; Vernier Calipers – up to 1000mm; Temperature gauges)

OUR DEALERSHIPS

- Gedore – SA, and Germany, general and industrial quality tooling
- Lincoln – worldwide, welding equipment & consumables and authorised service centre for repairs & maintenance
- Enerpac – worldwide, hydraulic tooling and authorized service centre for repairs & maintenance
- Parker Industrial Hydraulic Equipment
- Tranter Heat Exchangers and support services – worldwide

OUR FACILITY

We have a 50-acre facility. Developed and workable areas cover 15 acres (60 600m²). We have plans for future expansion for the remaining undeveloped 35 acres. Yard and Laydown Area has a total floor space of 30,000 m², Engineering Workshop has a total floor space of 800m², Fabrication Workshop - A total floor space of 4800m², Hydraulic Workshop - A total floor space of 800m²

SUBSEA STRUCTURAL, PIPING, FABRICATION & WELDING

Holdback Anchors - Mud Mat Type (x 2)



The Ghana Welding Bureau – The Story So Far

By Dr. Paul Frempong



Ghana Welding Bureau (GWB) Logo Unveiled at the Launch

Ghana Welding Bureau (GWB) has been established in Ghana, by the Petroleum Commission (the Commission), as a professional association to promote the development of welding in Ghana to international standards. GWB since its establishment, has also become a Responsible Member Society (RMS) of the International Institute of Welding (IIW), acquiring an enviable position as the 49th member of IIW alongside Iran and Mexico. GWB is on the right path, as GWB explores the avenues to become an Authorized Nominated Body (ANB) of the IIW. That will enable the GWB to implement the IIW Qualification System, to train international welders in Ghana, which could be used to achieve localization objectives. There are still some outstanding programmes that should be supported by the Commission if GWB is to achieve its full potential.

The nation has over the years lost revenues due to non-availability of internationally certified welders in the country though there are thousands (1000s) of Ghanaian welders available especially in the informal sector. Numerous certified expatriate welders were hired for the construction of the Atuabo Gas Processing Plant and West Africa Gas Pipeline project to facilitate the transportation of gas in the Western Region. The main welding job roles did not have an appreciable number of Ghanaians involved.

Unfortunately, the welding industry in Ghana is not well developed and saddled with challenges such as non-regulation and organisation of the education, lack of qualification and certification of welding personnel in accordance with internationally acceptable standards, making the industry uncontrolled, uncoordinated, and underdeveloped. There is therefore an urgent need to accelerate the training and skills development of Ghanaian welders to benefit from this and subsequent projects enabling the State to make huge cost savings and directly support the local welding industry.

The Commission upon whose mandate all these challenges rest, through the local content regulation (LI2204), decided to organise the welding industry in Ghana, and the initial stage started from the formation of a professional body called GWB. The need to address the above challenges led to the formation of the GWB.

The Ghana Welding Bureau (GWB)

GWB is a non-profit non-governmental professional association or body that represents the welding profession in Ghana, and are involved in the certification and registration of companies and individuals involved in the welding and allied operations, and aiming to foster the development of welding science, technology and engineering in Ghana, and promoting the optimum use and innovation in welding and joining technologies, and ensuring international standardisation, and quality through education, training, qualification and certification of individuals and companies for a safe and sustainable welding industry in Ghana.

Goal of GWB

Facilitate the development of welding science, technology, and engineering in Ghana, and promote the optimum use and innovation in welding and joining technologies.

Justification for the Formation of GWB

Below are some of the justifications of the establishment of Ghana Welding Bureau:

- To oversee the development of the welding industry in Ghana,
- To create a critical mass of qualified and certified Ghanaian welding/NDT professionals, to maximise benefits of exploiting the country's oil, gas, and minerals resources, and
- To create a pool of trained and internationally certified welders who are immediately available to develop other sectors of the economy where their skills sets are needed.

The Stakeholders of GWB

Stakeholders were selected from 14 institutions forming the original team who initiated the discussions of forming a welding association, under the auspices of Petroleum Commission, and eventually led to the formation of GWB

Activities Undertaken by GWB

Since the establishment of the GWB on 27th May 2021, there have been a number of activities including:

Assessment of Existing Welding Facilities

Toward the development of welding and fabrication industry in Ghana through the establishment of the Ghana Welding Bureau (GWB), a team of thirteen (13) members with representatives from the above stakeholders was tasked to assess the facilities and human resource capabilities in various welding training institutions in Ghana. It was concluded that many of the welding centres generally do not meet international requirements, protocols, and standards.

Development of GWB Policy

A welding policy was developed to ensure that Ghanaian welders are properly trained and certified to international standards, specifications, and requirements such that they are able to compete with their international counterparts fairly and equitably for welding job opportunities within the framework of the upstream oil and gas and other allied industries in Ghana and beyond.

Development of GWB Constitution

In addition to the above policy, the team also developed the GWB constitution.

The GWB constitution provides the basis for governance of the Association. This was essential to making sure that the interest and needs of everyone in the are addressed

Establishment of GWB Governing Board

A seven-member Governing Board has been established to see to the governance and the overall management of the GWB.

Registration of GWB with Registrar General's Department

To give it administrative and legal power to exist as an association, the GWB went through the process of registration required by the Registrar General's Department detailing the particulars of GWB. This was in line of Registration of Business Name (the companies Act 1963 (Act 179)). The GWB was officially given its name as Ghana Welding Bureau as a Public Company Limited by Guarantee (GWB PCLG). The registration was done in May 2021.



Minister for Energy, Dr. Matthew Opoku Prempeh giving a Speech at the Launch of GWB

GWB Membership with International Institute of Welding (IIW)

The PC embarked on Ghana registering with IIW and become a Responsible Member Society (RMS) of the International Institute of Welding (IIW). The aim was to institutionalise welding in Ghana (having a national body) that will lead or champion development of welding standards, affiliating to recognised international associations and/or obtaining international certifications and qualifications in welding related activities.

Launch of Ghana Welding Bureau

After the establishment of GWB in June 2021 as a professional association there was the need to launch GWB and present it to the public for the first time. The launch was done on 23rd February at the Shippers House in Accra. The objective of the launch is to showcase the association and introduce its vision to the public. The launch also marks GWB's opening of its membership to professional welders, suppliers, service providers and training organisations. It will also foster collaboration with academia, industry, and relevant research agencies, amongst others, and to strengthen GWB position as a professional association.

Consultative Forum and Road Show presentations of GWB to the welding industry and institutions in Ghana

Given the spread of the welding industry across the nation in the areas of Oil and Gas, automotive, agriculture and mining industries and so on, it is important that the welding industry

is well informed across all regions about GWB through these consultative fora. Consequently, GWB is currently running several consultative fora in all regions across the country to reach out to the public with the aim to:

- Inform the public about the existence of Ghana Welding Bureau (GWB)
- Do presentations to the welding industry and welding training institutions in Ghana.
- Provide a background of GWB, aims, objectives, Justification, purpose, mandate, objectives, stakeholders, opportunities, benefits, and achievements of GWB
- Register prospective applicants; companies, institutions, organisations, individuals, students etc to become members of GWB.
- Show the public how to register and become members of Ghana Welding Bureau
- Address any Questions and Concerns from the public about Ghana Welding Bureau
- Solicit views, contribution, recommendations, and advice from participants to incorporate them into GWB programmers and activities to enrich the Association.

So far two regions Takoradi and Cape Coast consultative fora have been completed and it was very successful resulting in the registration of 250 individuals and companies to join the GWB. The consultative forum would be moved to Greater Accra Regional capital in January 2023.

GWB to Apply for Authorised Nominated Body (ANB) Status

An Authorised Nominated Body (ANB) is an in-country Welding Association (i.e., GWB), that has gained such status, or standing from the International Institute of Welding (IIW), that enables the association to implement the IIW Qualification System for any qualification level.

Benefits And Opportunities of GWB Membership with IIW

- Collaborative global operating model that enables technology innovation and transfer.
- Globally harmonised education, training, qualification, and certification programmes.
- Access and contribution to the collective knowledge of IIW including appropriate welding technologies for different economies.
- Peer review of technical work and publications.
- Advances in work health and safety and environment.
- International standardisation for local welders.

- IIW events and networking worldwide.
- Young professionals programme and events

Outstanding Programmes and the Way Forward

- Application to IIW to become an Authorised Nominated Body (ANB)
- Develop a Legislative Instrument to the Parliament of the Republic to give GWB a legal legal/regulatory basis.
- Nomination of individuals to man GWB Secretariat, management, and Technical Committees
- Registration of prospective applicants (companies, institutions, individuals, students etc) to become members of GWB
- Set up a GWB independent Secretariat of GWB separate from AOGC
- Development of guidelines, course syllabi and policy implementation.
- Training of international Welders in Ghana (IW, IWP, IWS, IWI, IWT, IWE).



Board Members of the Commission at the Launch of the GWB

Indigenous Participation in the Oil Industry - The Zeal Story

By Nana Ekua Sekyiwa Darko

Zeal Environmental Technologies Limited Ghana (Zeal) was founded by Mr. Kwaku Ennin in 1977. His vision was to setup a company to serve emerging and existing industrial commerce by providing them with corrosive engineering and structural maintenance services. AngloGold Ashanti at a point contracted Zeal Ghana Limited to maintain its mining infrastructure and other facilities around the country from 1989 to 2002.

Today, Zeal Environmental Technologies, with over thirty-five (35) years serving various industries from a relatively small company, has extended coverage to the Oil, Gas and Marine industries to become one of the giants in the field of corrosive engineering services serving various industries in Ghana.

The company is touted as one of the premier companies managing environmental waste and waste generated from oil and gas drilling both onshore and offshore in West Africa. Zeal is an example of Ghana's Local Participation and Local Content LI. 2204 success story.

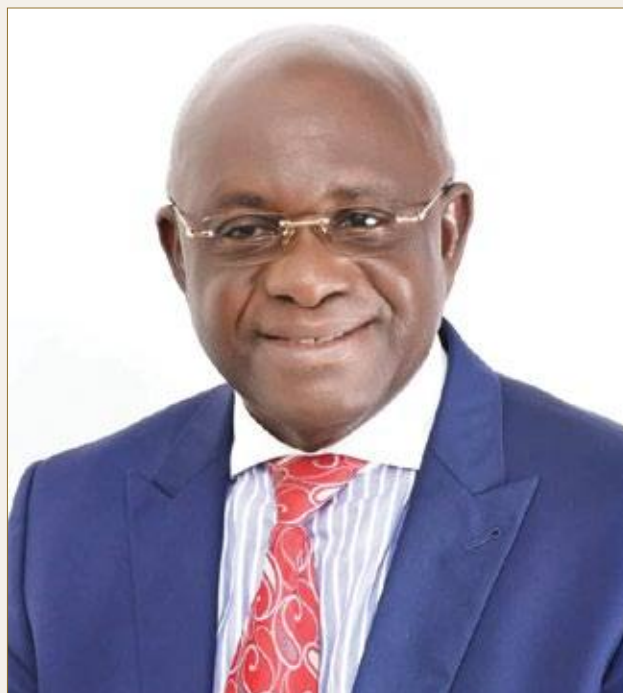
Chief Executive Officer of the company, Mr. Kwaku Ennin, an Entrepreneur and Business Management Consultant says the driving pillars of the organisation are to provide safe, efficient, cost-effective, end-to-end onshore and offshore environmental services and solutions to their cherished clients in the upstream industry.

Sharing his story with Upstream Local Content Magazine (ULCM), he explains that with a cross-industrial presence, the satisfaction of working in Ghana's upstream petroleum industry enhances Ghana's image as the preferred destination for oil companies in the Gulf of Guinea.

The Zeal CEO enumerated challenges confronting the business as high-interest rates when sourcing funding from banks coupled with the high cost of custom on duties at the port on imported equipment, process chemicals, and other consumables to provide efficient delivery of its services.

Having earned a reputation on Health and Safety as key foundations of his business, he believes they are key to its agenda for growth, development and building confidence in the work force to maximise performance. *"Avoid cutting corners especially when it comes to adherence to industry standards and Health and safety requirements"* he emphasised.

These principles, he underscores, have helped nurture, maintain, and sustained long-term relationships with their cherished clients.



Mr. Kwaku Ennin

CEO of Zeal Environmental Technologies Limited, Ghana

"As a fully indigenous Ghanaian company with a proven track record, the success story has been proven that a wholly indigenous Ghanaian company can also provide key services when it comes to the petroleum, mining and industrial waste management and thereby encourage other Ghanaian entrepreneurs that they can excel in their chosen fields".

Additionally, he has contributed to major oil and gas operators to cut-down costs which would have been incurred from transboundary management of their waste. An activity he notes with smiles will enable the Government of Ghana to realise more taxes and increase revenue from operators and also maximise profitability.

For Mr. Ennin, the foresight to establish the first oilfield waste management company in Ghana and the satisfaction of contributing to the reduction in unemployment amongst the youth is fulfilling since the government cannot do it all but needs support from the private sector.

Just like any other business operation, the outbreak of the coronavirus pandemic has impacted the operations of the company, Zeal. He contends that the effect of the pandemic on the oil and gas industry has transcended operations, leading to low productivity, reduction in revenue, locked-up capital, underutilised equipment, consumables and supplies.

Zeal Environmental Technologies is however well-positioned to continue taking advantage of opportunities in the industry with Petroleum Commission's commitment to local content and local participation. It is also their resolve to keep upgrading with the latest technology in the Industry.

Evidence of this is the current installation of a new incinerator with a capacity of 1000kg that can run for 24 hours and comes with a high waste reduction efficiency. The incinerator will help Zeal Technologies serve more clients in the petroleum and mining industry at a lesser cost.

With a reputation of upholding local content, Mr. Ennin entreats indigenous Ghanaian companies in the industry not to allow themselves to be agents for foreign companies seeking to exploit them through joint ventures that will only lead to the repatriation of all resources earned to foreign countries as well as block knowledge, technology and skills transfer to young

Ghanaians and in turn deny the growth of the industry and Ghanaian economy.

As a way of bridging the gap between industry and academia, the CEO of Zeal Environmental Technologies has served as a guest lecturer on several occasions at the University of Cape Coast (UCC) notably in Entrepreneurship classes as well as organising the annual educational tour for UCC School of Business students to his company, an initiative he supports with full funding.

His company, ZET-L has been an active partner of the UCC School of Business since 2012 and supported the establishment and resourcing of the UCC Business Incubator. He provides coaching and mentorship to students, young entrepreneurs, and staff at UCC School of Business.

Additionally, he participates in knowledge sharing through international conferences organised by the UCC School of Business in partnership with Bonn-Rhein-Sieg University of Applied Sciences in Germany.

A practicing Christian, Mr. Ennin is happily married with a wonderful family. A game of table tennis is what engages him during this pastime.



Incineration Plant (Old Unit)



OFFSHORE DE-MUCKING



OFFSHORE DE-Mucking (Tank Cleaning)



Dry Bulk Tank Cleaning

Oil Spill Response



Promoting an Equitable and Fair Insurance Regime for Ghanaians in the Upstream Petroleum Sector

By Abdul-Karim Adam and Priscilla Antwi-Boasiako

Introduction

Due to the elastic nature of the petroleum industry, many oil and gas-producing nations have leveraged the exploitation of their petroleum resources to develop other industries to stimulate economic growth. The legislative framework of Ghana's oil and gas industry reflects this ambition. For instance, one of the key objectives of the Petroleum (Local Content and Local Participation) Regulations 2013, (L.I. 2204) is to create petroleum and related supportive industries that will sustain economic development.

The insurance and reinsurance industry has been singled out as one of the vital supportive industries to the upstream sector with the potential to grow exponentially if the right policy guidelines are implemented. In support of this, Regulations 27 and 28 of L.I. 2204 require that priority should be given to Ghanaian insurance brokers and insurance companies in the procurement of offshore insurance services to ensure local retention and capacity building.

The National Insurance Commission is the statutory body mandated to regulate insurance in Ghana per the Insurance Act 2021, (Act 1061). However, being the regulator of the upstream petroleum sector, the Petroleum Commission under Section 21 of the Petroleum Commission Act 2011, (Act 821) collaborates with the National Insurance Commission to ensure the effective participation of indigenous Ghanaian companies in the placement of insurance in the upstream sector.

The asset value for offshore installations is very high. For instance, the value of an average Floating Production Storage and Offloading Vessel (FPSO) is over one billion United States Dollars. The insurance for such high-value assets has associated risks of heavy claims which will be burdensome for a single insurance company to bear. Globally, the insurance arrangements for such high-value assets are diversified among several insurance and reinsurance companies to spread the risk.

Ghana Oil and Gas Insurance Pool (GOGIP)

In the quest to overcome this challenge, about 23 Ghanaian insurance companies came together to form the Ghana Oil and Gas Insurance Pool (GOGIP) in 2014. The ambition was to use GOGIP as a single window for underwriting insurance in the upstream oil and gas industry.

To give legal backing to GOGIP, the Petroleum Commission in collaboration with the National Insurance Commission developed a Protocol for Insurance Placement in the Upstream Petroleum Sector in 2014. The objectives of the Insurance Protocol are as follows:

- Build in-country insurance capacity thereby reducing foreign exchange outflow
- Develop manpower capacity and technical expertise in the insurance of oil and gas-related risks
- Ensure oil companies within Ghana are charged competitive premium rates that will enhance profitability and stabilize the insurance market
- Provide technical support and advice to Pool members on matters relating to risk management and oil and gas-related risk



Despite the active participation of GOGIP in the upstream petroleum sector, the aggregate capacity of the Ghanaian insurance market is very low relative to the value of the sum insured for offshore assets. For instance, as of 2019, the capitalisation of Ghana's insurance industry was two hundred and fifty million United States Dollars (USD 250 million) whilst the sum insured for an FPSO is about one million United States Dollars (USD 1million)³.

The Protocol for Insurance Placement requires that GOGIP should be the primary insurance holder for all offshore insurance. Where it cannot insure the total sum, it collaborates with the asset owner to arrange for reinsurance for the remaining sum insured.

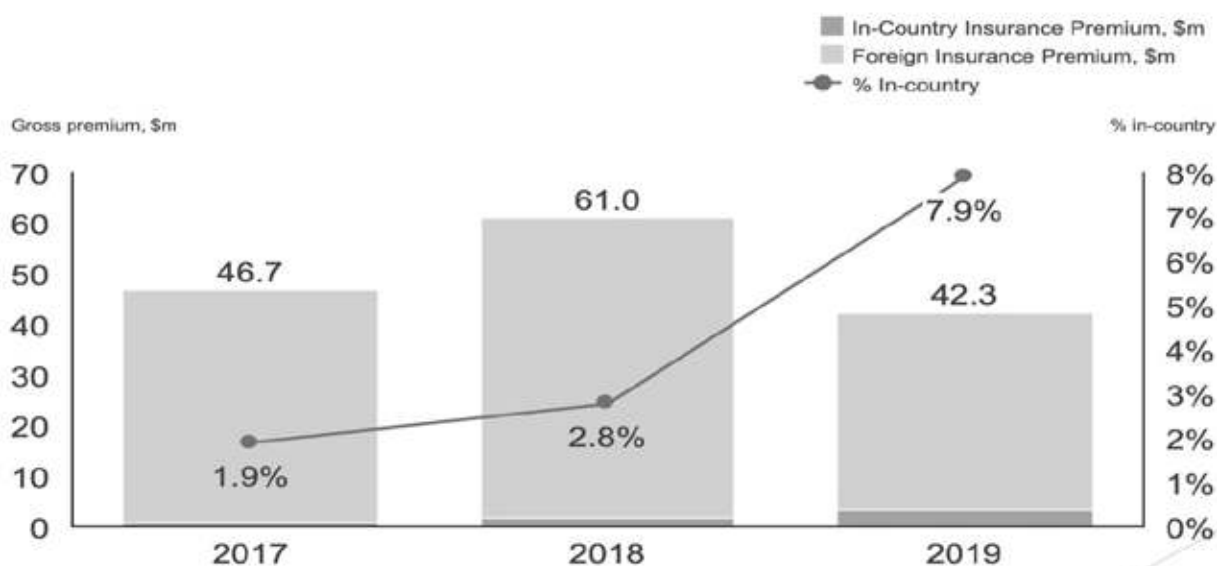
Achievements of GOGIP

With the support of the Petroleum Commission and the National Insurance Commission, GOGIP developed sound management and effective stakeholder engagements that instilled confidence and trust among operators and oil service companies. As a result, GOGIP insured the following assets in 2018:

- 3 FPSOs on three producing fields
- 4 drill ships
- 15 Offshore support vessels (PSV, AHT, CSV, etc.)
- Over 70 exploration, appraisal, development and producing wells
- Subsea infrastructure including wellheads, umbilicals, risers, etc.

Over the past three years, GOGIP has built the capacity of its members and trained over one hundred (100) underwriters and brokers on upstream and offshore energy risks. Also, the Pool increased its underwriting capacity from USD24 million in 2014 to USD175 million in 2018.

Furthermore, local retention in the Ghana oil and gas insurance market increased from 2% in 2017 to 8% in 2019 as depicted in the chart below.



Source: GOGIP, 2020

In line with the targets stipulated in L.I. 2204, GOGIP has set an ambitious goal to increase local retention from 8% in 2019 to 40% by 2025.

Challenges

Despite the successes achieved, the industry is still faced with numerous challenges including:

- **Knock-for-knock Arrangements:** Operators and international service companies provide insurance for their personnel on 'knock-for-knock' insurance arrangements that insulate them from liabilities. On the contrary, Ghanaian subcontractors do not take such insurance arrangements thus exposing their workers, facilities, equipment, and properties to high risk in the event of accident, injury, or death. The impact of the

³ GOGIP 2019, Maximising Local Retention in Upstream Oil and Gas Insurance whilst ensuring "A" rated Security requirements of Assureds.

non-existence of such arrangements was seen in the aftermath of the helicopter accident in 2014 during an offshore operation for the Lukoil field. Survivors of the accident are still battling to be compensated.

- **Inadequate insurance cover for offshore workers** – although Section 92(3) of the Petroleum (Exploration and Production) Act, 2016 (Act 919) requires that ‘a contractor, licensee or the corporation shall ensure that a sub-contractor insures the employees of the sub-contractor to the same extent as the contractor or licensee insures their employees’, most companies only provide workmen's compensation insurance cover for its employees which is insufficient to cover injury or accident. This is exacerbated by the inadequate regulations or guidelines on the minimum insurance limits for upstream workers.
- **Limited Domestic Underwriting Capacity** – the low volume of activities in the industry coupled with short-term operations of some offshore contracts impedes capacity-building opportunities for insurance companies to increase their capabilities and competitiveness.

The Petroleum Commission and the National Insurance Commission have commenced processes to address some of the challenges to creating fair and equitable insurance for Ghanaians and Ghanaian companies in the industry.

Conclusion

The participation of GOGIP in the placement of insurance in the upstream sector has been hailed as one of the key achievements of the Local Content Regulations (L.I. 2204). The Petroleum Commission plans to develop similar initiatives for other related sectors of the upstream petroleum industry.

Notwithstanding the strides made by GOGIP, Ghanaian workers in the offshore oil and gas industry do not have personal insurances due to the ‘knock-for-knock’ insurance arrangements in the upstream petroleum sector. These insurance arrangements tend to favour expatriate workers who work directly for operators and international service companies and exclude Ghanaians working for the subcontractors of international oil and gas companies.

To address the issue, the Petroleum Commission and the National Insurance Commission has commenced the process of amending the guidelines on insurance placement to ensure that there is fair and equitable insurance for the marginalized Ghanaian offshore workers.



Petroleum Commission Trains Five Ghanaians in Advanced Welding

By Mustapha Hameed

In June 2019, the Petroleum Commission with sponsorship from Baker Huhges GE, an upstream oil and gas service company sponsored some five Ghanaian welders to be trained in advanced stainless steel welding at the Northern Alberta Institute of Technology, Edmonton, Canada at a cost of \$250,000.00.

The five were drawn from selected technical schools across the country. The beneficiaries schools are Takoradi Technical University, Takoradi Technical Institute and Kikam Technical Institute. Among the five was an artisanal (street) welder from Bomso, Kumasi in the Ashanti Region.

This particular training was under the government flagship policy of Accelerated Oil and Gas Capacity Building Programme (AOGC), as part of measures to develop competencies in core technical areas of the upstream value

chain. The AOGC is an initiative of the Government of Ghana, that seeks among several other things to equip Ghanaians with the requisite technical skills to take up job roles when they become available in the upstream oil and gas industry.

The five beneficiaries are Michael Atobra and James Bewiekah from Kikam Technical Institute in the Ellembele District of the Western Region, Joseph Ghunney and Bright Oduro of the Takoradi Technical Institute.



The fifth beneficiary, Rahman Dayankrah is a graduate of the Islamic University with a certificate in Public Relations from the University of Ghana. After his struggle to find a job after the mandatory post-tertiary education national service, he enrolled himself as an apprentice at a welding workshop at Bomso, Kumasi to acquire a skill to enable him change career path. Mr. Dayankrah's story makes a compelling case for a switch in career paths from the arts to a competency based technical/vocational skill area.

They underwent a year's intensive training in advanced welding at NAIT and successfully sat for the prestigious Canadian Welding Bureau (CWB) Certified Welding Inspector (CWI) exams after which they returned to Ghana in July 2020 where they were assigned as welding instructors at Kikam Technical Institute, Takoradi Technical Institute, Takoradi Technical University, and the Kumasi Technical Institute. Since 2020, the five beneficiaries have been part of the training of welding students, passing onto them, the skill and knowledge they acquired from their training in Canada both as professional welders and welding inspectors.

Petroleum Commission Trains 150 Technicians at JTTC

By Mustapha Hameed

A hundred and fifty Ghanaians have been trained under the government's flagship policy programme of Accelerated Oil and Gas Capacity Building Programme (AOGC) in key technical trade areas at the Jubilee Technical Training Center (JTTC) of the Takoradi Technical University.

The AOGC is an initiative of the government of Ghana launched in 2017 which seeks to among other things, train Ghanaians in key technical areas of the upstream value chain so as to enable them with requisite skill required to take up job roles when they become available.

The beneficiaries underwent a 6 months training comprising, 4 months training at the JTTC and 2 months industrial attachment. Some of the place the trainees had their internships include Ghana Gas, MODEC, ENI, WAYOE Engineering, ECG, GRIDCO, VRA, BOST, TOR, Technip FMC, Flat C, Harlequin Oil and Gas, among several others.



THE 150 TRAINEES IN A GROUP PHOTO AT THE FORECOURT OF THE JTTC

The 150 beneficiaries were selected from a pool of 3000 applicants after a series of aptitude tests and interviews. The aptitude tests were held in four regional capitals; Accra, Kumasi, Tamale and Takoradi serving all the 16 regions. 1500 applicants were shortlisted for the interview after the exams after which 150 were selected for the training.

The primary aims of the training were to equip the trainees with the requisite skills and competencies, as well as to give them the opportunity to acquire internationally recognised certifications which would enable them to work not just offshore Ghana, but on any platform in any part of the world.

The shortlisted beneficiaries were trained in four major areas based their respective backgrounds and area of interests; Mechanical technicianship, electrical technicianship,

instrumentation technicianship and oil and gas production process to City & Guilds certifications. The Commission spent an amount of some 6 million Ghana cedis including boarding and lodging, tuition, certification, PPEs, consumables, and monthly stipend.

In line with the original aim of the training, the 150 beneficiaries have been enrolled onto the Commission's Localisation Department's skillset database and will be used to fill job roles when they become available offshore. So far, about 30 of the 150 have been successfully placed in various job roles with companies operating not just in the petroleum industry, but allied industries as well. The Commission is working assiduously to ensure all the beneficiaries gain employment.

The Journey of the Accelerated Oil and Gas Capacity (AOGC) Programme So Far

The Accelerated Oil and Gas Capacity (AOGC) is Ghana government initiative aimed at deliberately and systematically training Ghanaians to international standards to replace expatriates in the upstream petroleum sector. It is a series of fast-tracked capacity building implementable programmes that details a process of developing and strengthening the skills, competence, and the abilities of Ghanaians in the shortest possible time to enable them work in the oil and gas industry, in furtherance of job role localisation. Since its inception in 2017, the AOGC has made significant strides, aimed at the progressive inclusion and participation of Ghanaian citizens, and enterprises in the oil and gas industry. The President of the Republic of Ghana, H.E. Nana Addo Dankwa Akufo-Addo launched the AOGC Programme in November 2017. This write-up gives the summary of the journey of the AOGC programme so far.

1. In July 2019 five Ghanaian welders were selected to undergo training in Northern Alberta Institute of Technology (NAIT), Canada, for a 10-month welding inspector/instructor training course, leading to CWB level 1, Welding Inspector certification. The five who were sponsored by Baker Hughes, are currently deployed across technical Institutions in the country, to transfer knowledge and skills to welding students.



2. In September 2021, a group of 150 young Ghanaians were also selected to undergo training at the Jubilee Technical Training Centre (JTTC) of the Takoradi Technical University (TTU). The trainees had successfully completed the Level 3 International Vocational Qualifications (IVQs) in Oil and Gas Operations (8510) from the City and Guilds of London Institute in their specific area of specialisation, Mechanical, Electrical and Process Technicians.



3. The Commission sponsored nine instructors/lecturers from selected Technical Universities and Technical Institutes to Northern Alberta Institute of Technology (NAIT), Canada, to pursue a 10-month initial craft in 'Becoming a Master Instructor' (BMI) programme, in the following critical disciplines of Pipefitting, Welding and Millwright/Mechanical Engineering. The beneficiaries have successfully completed their programmes and have been posted to their respective institution to among other things introduce and develop pipefitting curriculum to be used in their respective institutions.



4. Ghana Welding Bureau (GWB), a non-profit, non-governmental, professional body that seeks to represent the development of welding science and profession in Ghana has been established in Ghana, by the Commission under the AOGC programme. GWB has also become a Responsible Member Society (RMS) of the International Institute of Welding (IIW). GWB is currently running several consultative fora in all the 16 regions across the country to reach out to the public. GWB is responsible for the certification and registration of companies and individuals involved in the welding and allied professions.



5. The PC has initiated the construction of Welding and Pipefitting Centre of Excellence (WPCE) in Takoradi Technical university. The Centre when completed will provide the needed training and certification required to address the skills gap needed to achieve localisation targets of the government of Ghana at a much lower cost. The land has been acquired and Inception mission team from NAIT will arrive in the country early next year to do among other things the scoping of the project.

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