

iNSiGHT

The Magazine of the Petroleum Institute of East Africa

4th Quarter, October - December 2021



Managing of Risks

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- Which Way Exploration, Abandon or Gradually Scale Down?
- Risk Management in Oil and Gas

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In this issue

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Bob Paterson
Varun Sharma

Editorial & Production

Jay and Jey Media Consultants
3rd Floor, Mountain Mall
Thika Superhighway
Tel - 0716 652 011, 0780 652 011

Advertising Agency

ADG

Alison and Davis Group Ltd
6th Floor, Town House,
Kaunda Street
Tel - 020 2320083, 0721 845 944
0764 845 944, 0721 234 838
Email: info@energyea.com

Editorial Board

Wanjiku Manyara and Jennifer Kibiru

Contributors

Wanjiku Manyara, Jennifer Kibiru, Vivienne Ayuma, Daniel Muasya, Dorice Itebaluk and Richard Nandi

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Petroleum Institute of East Africa
Fourth Floor, Bruce House
P.O. Box 8936-00200 Nairobi - Phone:
254-20-2249081, 3313046, 3313047
Mobile: 0722 221120
Fax: 254-203-313048
Email: admin@petroleum.co.ke
Website: www.petroleum.co.ke



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2021 PIEA Annual General Meeting – Chairman's Report



Millicent Onyonyi
General Manager, OLA Energy
Chairman, Petroleum Institute of East Africa

This being the year that followed the global health crisis, can be termed as the christening year! We, like all other sectors of the economy, have emerged with revisions and new dawns of our business to meet our business strategies and customer needs and no doubt our industry has significantly contributed to Kenya's economic development.

The Industry has yet again risen to the occasion of facilitating access to petroleum and petroleum products at least cost in spite of abrupt policy directives and slow progress in regulatory amendments that hence respectively blot business predictability as well as ideologies of return on investment and cost recovery.

As you are all aware, we have this year made great headway in advocating for the implementation of the petroleum pricing formula adjustment mechanism which, as at now is provided for in the regulatory framework that is at the final stage of approval and though we are faced with contradicting proposals in the Petroleum Products Levies and Taxes Bill 2021, we

are hopeful that our counter advocacy will be successful and hence unlock the said approval.

We would like to assure Members that the Industry has pulled out all stops to convince Parliament and the policy makers and regulators to expunge the misinformed and unjustified provisos in the Petroleum Products (Taxes and Levies) Bill, 2021 and we are committed to putting up a factual, evidence based rebuttal up to the farthest course of action.

The year has been intense and I must thank the PIEA Directors and Members for making the time to steer the Association in making positive strides and accomplishments with noteworthy progress leading but not limited to;

- Advocacy in enforcement of LN 100 including the quarterly publishing of contravening entities.
- Designing and funding of a model designated petroleum tanker parking zone will be constructed by one County as required by the Petroleum Act 2019.
- Financing of the partial rehabilitation of the dilapidated sections of Nanyuki and adjacent Roads.
- Re-confirmation that operations at SOT will remain uninterrupted beyond 2025.
- Confirmation that current KOT will remain in use for a specified period upon commissioning of new KOT.
- Input in development of the Kenya National Petroleum Master Plan Final Report.
- Input development of the ongoing standalone petroleum policy.
- Sustained lubricants reforms advocacy agenda which has been embraced and supported beyond the industry parent ministry.
- Advocacy in drafting of a national tax policy which is awaiting approval for release to stakeholders for input.
- Development of industry biodiesel position paper upon which the

We would like to assure Members that the Industry has pulled out all stops to convince Parliament and the policy makers and regulators to expunge the misinformed and unjustified provisos in the Petroleum Products (Taxes and Levies) Bill, 2021 and we are committed to putting up a factual, evidence based rebuttal up to the farthest course of action

formulation of Kenya's Biodiesel standard development was justified and has kicked off.

On capacity building, it is commendable that the PIEA School has fully sustained the virtual training programs following the apt transition on account of the pandemic. Further the School developed and commenced implementation of the 2021 strategy which charts a sustainable capacity building path in the backdrop of a myriad of dynamics.

Suffice to note, dividends from the said strategy have started to trickle in with expansion of training offerings beyond East Africa.

Directors and Members have committed to take advantage of the Industry's capacity building arm, whose main objective is to facilitate business support and professional development to members so as to promote the highest possible standards of professional conduct in all cadres of our business.

I wish to recognize with much appreciation, the dedication of the Directors and Members of PIEA.

I look forward to sustained leadership of the new Board and wish every one of us every success as we continue to provide leadership in Industry through PIEA.

Millicent Onyonyi
Chairman, PIEA

Vivo Energy Kenya Opens its 250th Service Station and Unveils National Promotion Campaign

Vivo Energy Kenya (VEK) officially opened its 250th Shell service Station - **Shell Kamakis service station located on the Eastern Bypass** and unveiled a national consumer promotion to reward and appreciate consumers.

The twelve-week promotion, dubbed **'Jaza Raha Na Shell, Shinda Nyumba,'** will see consumers win various prizes daily, weekly, and monthly. The participating brands in this promotion are Shell FuelSave Unleaded, Shell FuelSave Diesel, Shell V-Power, and all Shell Lubricants available at Shell services stations and spare-parts shops countrywide.

"The Jaza Raha Na Shell, Shinda Nyumba promotion affirms our commitment to our customers, who are the key drivers of the transport industry. We want to give them a head start getting into the festive spirit by appreciating and rewarding them with prizes that will boost their economic livelihoods," said Hans Paulsen, Vivo Energy Executive Vice President East and South regions.

To participate, consumers will receive a scratch card to reveal an alphanumeric code upon purchasing Shell Fuels or Shell Lubricants. The Consumers will then dial *384*300#, text the code to follow the prompts, and input the code. Consumers will be notified of their entry to the promotion.

For eligibility to participate, motorcyclists will be required to spend a minimum of Kshs. 300, while motor vehicle drivers will be required to spend a minimum of Kshs.1000.

The grand prize winner for the 'Jaza Raha Na Shell, Shinda Nyumba' will receive a three-bedroomed house, and the second biggest winner will drive off with an Isuzu NMR Truck.

Vivo Energy Kenya also celebrated the opening of Shell Kamakis service station, the 250th service station in its retail network. The fully-fledged service station, which has a capacity to pump 450,000 litres of fuel per month, is strategically positioned to capitalize on the Eastlands and Eastern bypass traffic market.

Convenience Retailing (CR) is a key growth pillar for Vivo Energy Kenya. With a focus on the growing number of consumers in Kenya who have an affinity for quality brands, Shell Kamakis will house several reputable entities in the financial, health, and quick service restaurants sectors, providing both motorists and shoppers the opportunity to experience all round quality services at the service station.

Speaking on the official service station opening, Vivo Energy Executive Vice-President East and South Regions, Hans Paulsen said that the company is always looking to implement new avenues to ensure our customers' convenience is addressed, whenever they visit Shell service stations.

"We are excited by this opportunity to open this new location. The availability of several complementary functions including restaurants, banking facilities, a satellite hospital, drycleaner and a convenience store at this outlet provides a holistic and improved customer experience. The establishment is a prime

example of like-minded companies coming together with the primary objective of providing customer-centric solutions for their customers" said Paulsen.

Vivo Energy Kenya is proud to offer the very best of Shell's products and services in the country. These include Shell's high-quality, differentiated fuels and lubricants, industry-leading technological and technical expertise, and personal dedicated customer service.



Opening of 250th Shell service station

President Uhuru Inspects the New KOT II



President Uhuru Kenyatta addresses the public at the new Kipevu Oil Terminal II.

Minister, Ministry of Foreign Affairs) and his country's Ambassador to Kenya Zhou Pingjiang assured President Kenyatta of China's continued commitment to supporting Kenya's development agenda.

President Uhuru Kenyatta inspected the ongoing construction of the KShs 40 billion offshore Kipevu Oil Terminal, the largest of its kind in Africa.

The construction of the 770-metre long jetty, currently at 96% completion, is wholly funded by the Kenya Ports Authority (KPA) and implemented by China Communications Construction Company.

When complete in April this year, the offshore facility will be able to load and offload very large sea tankers of up to 200,000 DWT carrying all categories of petroleum products including crude oil, white oils and LPG.

Speaking during the inspection, President Kenyatta, who was accompanied by visiting Chinese Foreign Affairs Minister Mr Wang Yi, said the new jetty will enhance supply and ensure price stability of petroleum products in Kenya and the region by replacing the 50-year old onshore Kipevu Oil Terminal (KOT).

When operational, President Kenyatta noted that the new offshore jetty will save the country in excess of Shs 2 billion annually in demurrage costs incurred by oil shippers thereby contributing to a significant reduction in fuel pump prices.

"This terminal once commissioned in a few weeks time will result in the saving of almost Shs 2 billion that we are currently paying every year because of demurrage occasioned by the long queues of vessels parked outside our harbour waiting to discharge their product."

The President hailed Kenya's development partnership with China saying the arrangement had helped deliver key infrastructure projects, adding that the populous Asian nation was progressively opening up its expansive domestic market to Kenyan exports.

"Our partnership with China is not a partnership based on China telling us what to do. It is a partnership of friends, working together to meet Kenya's socio-economic agenda. The old Kipevu Oil Terminal which for many years we have struggled with, was not able to meet the demands of increasing population, to meet the demands of the growing economy. We needed this facility to be able to cater for those demands and China was there when we asked for partnership in developing it," the President said.

Minister Wang Yi, who was accompanied by Qian Keming (Vice Minister, Minister of Commerce), Wu Jianghao (Assistant

The new terminal is an off-shore facility at the Mombasa port, opposite the existing Kipevu Oil Terminal that consists of one offshore island terminal with four berths whose total length is 770 metres and one work boat wharf at the Westmont area for landing facilities.

The facility also has five sub-sea pipelines, which were buried 26 metres under the seabed to allow for future dredging of the channel without interfering with the pipes.

KPA acting Managing director John Mwangemi said the new facility is capable of handling six different hydrocarbon import and export products. It is also fitted with a liquefied petroleum gas facility, crude oil and heavy fuel oil.

Mwangemi added that the terminal has provisions for handling three types of white oil products — aviation fuel, diesel and petrol.

"The new oil terminal will effectively replace the old Kipevu Oil Terminal situated on the mainland Port Reitz, which was built in 1963 to serve the then East Africa Oil Refinery, which later became the Kenya Petroleum Refineries Limited," said Mr Mwangemi.

A New Board Takes Over National Oil to Spearhead Turnaround



CS Petroleum & Mining Hon John Munyes with the new National Oil Corporation of Kenya Board of Directors.

Industry icon Eng. Patrick Obath was appointed by H. E President Uhuru Kenyatta to lead a new look National Oil Corporation of Kenya Board in October 2021. Engineer Obath has wide experience in management at the national and international level in the oil and gas sector and in addressing social, government and development issues will lead a pulsating board whose aim is to quickly turnaround the Corporation into profitability.

Speaking during the inauguration of the new board, Cabinet Secretary for Petroleum and Mining John Munyes noted that despite facing a myriad of legacy and financial challenges, he was optimistic and confident the new Board and Management will turnaround the Corporation.

"We are delighted with the new board Chair and members. I am very confident in its (Board) ability combined with the new vibrant management in restoring the pride of this Corporation to the people of Kenya. I expect them to move with speed and spearhead this Corporation into better days that all Kenyans can be proud of," said the Cabinet Secretary.

The new Board chair noted that the new board would get into work quickly with a view of establishing mechanisms to turnaround the Company.

"My vision is to lead this vibrant Board in turning around this Corporation whose potential is immense. This Corporation's role is very vital and strategic to this Nation and we have to all join hands and embrace the changes that will come to bring back the Corporation to its rightful place" said Eng. Obath.

The new board members include Cecilia Ng'itit, Mundia Geteria, Surea Roble, and Dorothy Marami. Others are Robai Musilivi (company secretary), Godfrey Waluse, Ogutu Okudo, and Victoria Karugu.

Other members of the board include Ambassador Ukur Yatani, Cabinet Secretary National Treasury and Andrew Kamau, Principal Secretary, State Department of Petroleum and Mining.

National Oil Chief Executive Officer Leparan Morintat expressed optimism of the new board appointment saying this will propel turnaround efforts of the Corporation.

"We are happy with the kind of credentials and expertise that the government has selected and brought into our board. With this kind of mix, we couldn't have asked for a better board," said Morintat.



**SCHOOL OF PETROLEUM STUDIES
PHYSICAL TRAINING SESSIONS | TRAINING CALENDAR FOR YEAR 2022**

CODE	COURSE TITLE	DURATION	DATE	LOCATION
(A) LEGAL & REGULATORY COURSES				
SPS 001A	Petroleum sector legal and regulatory framework	1 day	24-28/JANUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 002A	Contractor & service providers regulatory training requirements	1 days	8-11/FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 003 A	Petroleum sector regulatory training on LPG Bulk storage facilities	1 day	3/FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 004A	Petroleum sector HSSE regulatory training requirements	1 day	30/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(B) OIL AND GAS RETAIL AND MARKETING COURSES				
SPS 002B	Service Station Accounting Course for Dealers	5 days	18/FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 003B	Service station management course	5 days	14-18/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 008B	Stocks management Level 1	5 days	21-25 FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 009B	Stocks management Level 2	5 days	21-25/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(C) HEALTH SAFETY SECURITY AND ENVIRONMENT COURSES				
SPS001C	Petroleum sector occupational health, safety & security (HSSE) management course	5 days	7-11/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 003C	Occupational health and risk assessment	2 days	14-18/FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 005C	Contractor safety management course Level 1	5 days	7-11/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(D) AVIATION FUEL MANAGEMENT COURSE				
SPS003D	Aviation operations & management course	5 days	20-25/FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(E) LPG OPERATIONS SALES & MARKETING COURSES				
SPS001E	LPG sales, operations and marketing management	5 days	21-25/FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(F) RISK MANAGEMENT COURSES				
SPS 005F	Joint Incident Command System training course Level 1	5 days	31 FEBRUARY- 4/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(G) PETROLEUM PRODUCTS LOGISTICS & HANDLING COURSES				
SPS003G	Petroleum depots operations & distribution management	5 days	28 FEBRUARY-1/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS004G	Introduction to the Oil & Gas Sector	5 days	28/FEBRUARY-3/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 006M	Petroleum tanker driver certification	5 days	21-25/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(J) EXECUTIVE MANAGERIAL COURSES				
SPS001J	Highlights of The Amendments to The Companies Act, 2015 by the statute Law (Miscellaneous Amendment Act 2019)	1 day	31/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS002J	Executive Introduction to the East Africa Oil and Gas sector	1 day	30/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS 003J	Corporate governance course for Boards and Management (Board of Directors and Senior Management)	1 day	24/MARCH//2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(K) HUMAN RESOURCE MANAGEMENT COURSES				
SPS 002K	Supervision leadership and management	2 days	5-8/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(L) PERSONAL DEVELOPMENT COURSES				
SPS001L	Reinventing yourself at the workplace	1 day	7/FEBRUARY/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
SPS002L	Work life Balance In the context of COVID-19	1 day	9/MARCH/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba
(M) FINANCING OIL AND GAS PROJECTS				
SPS001M	Financing Oil and Gas Projects	1 day	18/APRIL/2022	Nairobi/Nakuru/Naivasha/Eldoret/Kisumu/Busia/Mombasa/Kampala/Dare-es- Salaam/Kigali/Juba

Additional information:

Charges for physical training:

Open courses:

5-day course PIEA member Kshs. 49,000+VAT (USD \$ 563)

PIEA non-member Kshs. 62,500 +VAT (USD \$ 718)

3-day course PIEA member Kshs. 35,000 +VAT (USD \$ 402)

PIEA non-member Kshs. 40,000 +VAT (USD \$ 460)

1-2-day course PIEA member Kshs. 25,000 +VAT (USD \$ 287)

PIEA non-member Kshs. 30,000 +VAT (USD \$ 345)

Training charges indicated are per person basis.

The dollar rate used is subject to change depending on current foreign exchange rate fluctuation

The minimum number required to form quorum for training is at least 12 individuals

We also have online courses available and are scheduled in a separate calendar

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SCHOOL OF PETROLEUM STUDIES
ONLINE TRAINING SESSIONS | TRAINING CALENDAR FOR YEAR 2022

Location: Online via Microsoft teams/Google Meet

CODE	COURSE TITLE	DURATION		DATE
(C) HEALTH SAFETY SECURITY AND ENVIRONMENT COURSES				
SPS001C1	Occupational Health, Safety, Security, and Environment (HSSE) course (Part 1)	2 hours	Module 1: HSSE Legislation, Standards and regulatory framework Module 2: OSHA Principles Policies and Development for petroleum Module 3: Risk assessment and management Module 4: Incident investigation and reporting	25/JANUARY/2022 9.15a.m-1.15 p.m. 26/JANUARY/2022 9.15a.m-1.15 p.m. 27/JANUARY/2022 9.15a.m-1.15 p.m. 28/JANUARY/2022 9.15a.m-1.15 p.m.
SPS001C2	Occupational Health, Safety, Security, and Environment (HSSE) course (Part 2)	2 hours	Module 1: Emergency response and planning Module 2: OSHA health, safety and general welfare provisions Module 3: Compliance audit, offences and penalties Module 4: Fire protection and prevention	1/FEBRUARY/2022 9.15a.m-1.15 p.m. 2/FEBRUARY/2022 9.15a.m-1.15 p.m. 3/FEBRUARY/2022 9.15a.m-1.15 p.m. 4/FEBRUARY/2022 9.15a.m-1.15 p.m.
ONLINE WEBINAR	CONSTRUCTION OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT WEBINAR	1.5 hours	<ul style="list-style-type: none"> Challenges in construction safety management How to excel in construction safety management Challenges in monitoring and evaluation of contractors 	28/3/2022 10.30 a.m-12.30 p.m.
(D) AVIATION FUEL MANAGEMENT COURSES				
SPS003D1	Introduction to Aviation operations & management course (Part 1)	2 hours	Module 1: Production knowledge Module 2: Fundamentals of supply and demand Module 3: Distribution and logistics Module 4: Standards and quality control test measures for jet fuel Module 5: Jet fueling equipment and Facilities	7/3/2022 10.30 a.m-12.30 p.m. 8/MARCH/2022 10.30 a.m-12.30 p.m. 9/MARCH/2022 10.30 a.m-12.30 p.m. 10/MARCH/2022 10.30 a.m-12.30 p.m. 11/MARCH/2022 10.30 a.m-12.30 p.m.
(E) LPG OPERATIONS SALES & MARKETING COURSES				
SPS 004E	Introduction to the LPG sector	2 hours	Module 1: Product knowledge & legal regulatory framework Module 2: LPG infrastructure and business models Module 3: LPG innovations & emerging opportunities	2/FEBRUARY/2022 12.30 pm-1.30 pm 3/FEBRUARY/2022 10.30 a.m-12.30 p.m. 4/FEBRUARY/2022 10.30 a.m-12.30 p.m.
ANNUAL GLOBAL SUMMIT TRAINING WORKSHOP	PIEA-WLPGA AFRICA LPG SUMMIT, EXHIBITION & TRAINING WORKSHOP (HYBRID)	3 days (2-day Summit & 1-day Training Workshop)	PIEA WLPGA training is an annual LPG Summit with panel of well knowledgeable speakers and exhibitors and also has a training workshop where participants receive globally recognized certificate.	11-13/MAY 2022 1.00 p.m. - 4.00 p.m.
SPS 005E 2	LPG HSSE course for LPG cylinder refilling, installers and operations staff	3 days	Module 1: LPG product knowledge and supply chain Module 2: LPG HSSE during refilling and cylinder handling Module 3: LPG HSSE during LPG installations Module 4: LPG Emergency Planning and response Module 5: LPG Fire Protection, prevention and Suppression	21/FEBRUARY/2022 10.30 a.m-12.30 p.m. 22/FEBRUARY/2022 10.30 a.m-12.30 p.m. 23/FEBRUARY/2022 10.30 a.m-12.30 p.m. 24/FEBRUARY/2022 10.30 a.m-12.30 p.m. 25/FEBRUARY/2022 10.30 a.m-12.30 p.m.
(F) RISK MANAGEMENT COURSES				
SPS002F	High level insurance and risk management training for directors, chief executive officers, managing directors and heads of departments (HOD's)	2 hours	Human capital risks, financial risks & business disruption risks	28/MARCH/2022 10.30 a.m-12.30 p.m.
(G) SAFE PETROLEUM PRODUCTS LOGISTICS & HANDLING COURSES				
SPS003G1	Petroleum depots operations & distribution	2 hours	Module 1: Petroleum product knowledge Module 2: Legal and regulatory framework Module 3: Petroleum product storage and distribution infrastructure Module 4: Petroleum product measurements and measuring equipment Module 5: Stock accounting and quality control Module 6: Depot HSSE management	7/FEBRUARY/2022 9.15a.m-1.15 p.m. 8/FEBRUARY/2022 9.15a.m-1.15 p.m. 1/FEBRUARY/2022 9.15a.m-1.15 p.m. 10/FEBRUARY/2022 9.15a.m-1.15 p.m. 11/FEBRUARY/2022 9.15a.m-1.15 p.m. 14/FEBRUARY/2022 10.30 a.m-12.30 p.m.
SPS004G1	Introduction to the Oil & Gas Sector	2 hours	Module 1: Exploration & production Module 2: Legal and regulatory framework Module 3: Integration of renewables in the oil and gas sector Module 4: Petroleum product regional supply chain Module 5: Petroleum market trends and analysis	16/FEBRUARY/2022 10.30 a.m-12.30 p.m. 17/FEBRUARY/2022 10.30 a.m-12.30 p.m. 18/FEBRUARY/2022 10.30 a.m-12.30 p.m. 21/FEBRUARY/2022 10.30 a.m-12.30 p.m. 22/FEBRUARY/2022 10.30 a.m-12.30 p.m.
(H) LUBRICANTS COURSES				
SPS001H1	Lubricants Competency Course (Part 1)	2 hours	Module 1: Fundamentals of lubricants and lubrication Module 2: Lubes blending operations and base oil classification Module 3: Coolants, special and general-purpose greases Module 4: Lubricants safe handling, storage and disposal (HSSE)	15/FEBRUARY/2022 10.30 a.m-12.30 p.m. 16/FEBRUARY/2022 10.30 a.m-12.30 p.m. 17/FEBRUARY/2022 10.30 a.m-12.30 p.m. 18/FEBRUARY/2022 10.30 a.m-12.30 p.m.
SPS001H1	Lubricants Competency Course (Part 2)	2 hours	Module 1: Lubricant's standards legal and regulatory framework Module 2: Automotive, Synthetic and industry specific lubricants Module 3: Lubricant's market, supply chain and distribution	2/MAR/2022 10.30 a.m-12.30 p.m. 3/MARCH/2022 10.30 a.m-12.30 p.m. 4/MARCH/2022 10.30 a.m-12.30 p.m.

CONVERSATIONS WITH INDUSTRY CAPTAINS WEBINARS TOPICS 2022

PAY TO ATTEND WEBINARS

For this webinar attendees must pay a fee to attend given that the speakers are well knowledgeable managers in the areas of discussion in the Oil & Gas Sector.
Attendees will be awarded a certificate of participation

Fee: Kshs. 1,740 per person (USD \$ 18*)

DATE	TOPICS	SPEAKER
Q1		
24/MARCH/2022	Embracing Inevitable Change at the Workplace and Data Driven Human Resource	Guest Speaker
Q2		
23/JUNE/2022	Cyber Security in the Oil & Gas Industry by Data Dimensions	Guest Speaker
Q3		
22/SEPTEMBER/2022	Lubricant Markets, Growth, Trends, COVID-19 impact and future outlook	Guest Speaker
Q4		
24/NOVEMBER/2022	Aviation Fuel: Managing a Sustainable Supply Chain by Kenya Civil Aviation Authority (KCAA)	Guest Speaker

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The membership forums are free of charge webinars that educate individuals on the various topical issues in the Oil & Gas Sector.

DATE	TOPICS	SPEAKER
Q1		
17/February/2022	Curbing Fuel Theft in road transportation by Power Governors Limited (PGL)	Guest Speaker
24/March/2022	Hybrid Workplace: Driver to business transformation	Guest Speaker
Q2		
28/April/2022	Tracking LPG progress in Achieving Clean Energy Access for All by 2030	Guest Speaker
23/June/2022	Convenience and Experience: The new anchor to attracting and retaining customers-Rubis Energies	Guest Speaker
Q3		
18/August/2022	Status of Biodiesel as a Viable Alternative Fuel in Kenya by Gil Oil Limited	Guest Speaker
22/September/2022	Clean energy Integration by Total Energies Kenya	Guest Speaker
Q4		
19/October/2022	The Future of I.T: An Oil & Gas Perspective	Guest Speaker
24/November/2022	Accelerating Access to Clean Cooking across Households in Africa	Guest Speaker

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*The price indicated in \$ USD is subject to current currency fluctuations USD/KSHS*currency exchange

Amplifying A Safety Culture in Risk Management Preparedness at OLA Energy

OLA Energy Kenya embraces a strong Risk Management process as an integral part in the prevention of potential risks and their negative impact on the business and community at large. In this regard, the organization has a working Business Continuity Plan (BCP) that is tested and properly deployed.

With our team providing health and safety expertise from various business sections, we champion an elaborate risk assessment process of identifying, monitoring, and handling of potential risks associated with financial records, equipment, machines, product quality and operational environment of our facilities such as the oil and gas terminals and the retail outlets.

For instance, product (oil) spills, cyber-attacks, security breaches, system failures, and natural disasters, are some of the potential risks that could occur and damage an organization's reputation from a safety perspective.

As a founding member of the industry led not-for-profit Oil Spill Mutual Aid Group (OSMAG); OLA Energy invested in equipment to aid in pollution control owing to oil spills especially in Kenyan waters. OSMAG forms part of the response team which trains quarterly.

At OLA Energy, we are fully committed to protecting people and organization's Safety, Health and Environment (SHE) in line with our SHE policy. Therefore, Management of Risk is at the core of OEKE operations for ongoing processes, new projects and products.

Our core objectives are in line with creating a platform where there are no accidents, and people are protected from any harm and protecting the environment from any damages. As a result, prevention of accidents is our priority.

Safety, Health and Environment Management System (SHEMS)

OLA Energy has a robust Safety, Health and Environment Management System (SHEMS) which consists of various elements. The system is specifically designed in management of risks to persons, environment, company assets and our reputation. We endeavor to ensure that we have a flawless operation and risks are eliminated or mitigated to acceptable levels.

1 Risk Management System

The risk management system is in place to support the OEKE vision, "Our First Priority is Preventing Accidents" in a bid to identify safety, Health, security and environment hazards and evaluate prevention and mitigation measures for management of the risks. This ensures that there are periodic Risk Assessment requirements in all our facilities, terminals, depots, transportation, Retail and commercial customers' site and Lubricant Oil Blending Plant (LOBP) that is ISO 9001:2015 Certified, a globally recognized standard for the last 24 years. The ISO 9001:2015 certification assures high quality products through strict procedures throughout the entire process from receipt of raw materials, blending, testing, packaging, warehousing, to dispatching of lubricating oils.

2 Personnel Selection and Training System

The personnel selection and training system ensures OEKE recruits, trains and place employees to meet specific job requirements with regard to safety, health and environment. Building capacity of the employees is aimed at having no incidents



Daallo Airlines Country Manager Parveen Cockar presents Service Excellence Award to OLA Energy Kenya Accounting and Finance Manager Jean Lopy

occurrence due to lack of skills and knowledge.

The system has put in place a comprehensive induction, training and refresher training requirements for all our employees and contractors. This include both regulatory and OLA training requirements.

3 Occupational Health and Safety System

"No harm to people" is the OEKE goal, a system that helps to identify activities that expose personnel (employee & contractors) to occupational health and safety risk.

The system Occupational Health and Safety system covers the identification, evaluation and control of workplace safety with regard to chemical, biological, radiation, physical, ergonomic and public health hazards.

Identification of hazardous materials and products is also vital to protect the personnel and ensure the provision of protective gear when handling the materials and products.

The system also brings out the establishment of information requirements and training programs to inform personnel of the hazards and their control measures.

Through medical surveillance, the Occupational, Health and Safety system prioritizes employee health management and Health and Safety awareness programs.

4 Operations and Maintenance System

Through development, implementation, and updating of operational & maintenance procedures, the Operations and Maintenance system ensures that operations and facilities are within established parameters and no incidents or significant near misses occur as a result of lack of proper operating, maintenance or inspection procedures, failure of critical equipment and lack of control of idle or abandoned facilities.

These preventive maintenance programs for critical equipment comply with the established procedures to ensure that this critical equipment is reliable in times of need.

All types of operating procedures (including work instructions) are updated including higher risk operations at specified intervals and when changes occur. Environmental aspects are also addressed and controlled in consistency with policy and regulatory requirements.

While managing emissions and waste disposal, the system ensures that procedures are reviewed periodically.

Interfaces such as Shift hand-over between operations are identified, documented, procedures developed and the associated risks understood by all personnel involved.

5 Permit to Work System

This system covers the controls and requirements that are necessary to manage risks when performing maintenance and construction work at Libya oil sites with the objective of prevention of Safety, Health and Environmental incidents during maintenance and construction work as a result of inadequate application of permit to work and/or permitting procedures.

6 Management of Change System

In the Safety, Security, Health, and Environment sphere, the Management of Change system ensures that change shall not result in unacceptable risks. These changes include; change to Personnel, contractor, operating procedures, facility or change in the external environment. Being in the oil and gas sector, OLA Energy strives to achieve industry and economic objectives through formulating an effective and elaborate risk management process that serves as an awareness instrument to our organization.

As we continue to redefine a safety culture in the Safety, Health and Environment Management System (SHEMS), our diverse clientele are beneficiaries of our impact in the implementation of environmental preparedness.

In April this year, the OEKE Aviation Management team at OLA Energy Kenya received a Service Excellence Award from DAALO Airlines, a national carrier for the Republic of Djibouti, for its commitment to the highest safety and excellent service standards with the airline for over 20 years.

Risk Management in Oil and Gas



Humphrey Indire
Head of Engineering & HSSE, Lexo Energy

Oil and gas demand is expected to strongly recover towards the end of 2021 but remains lower than where it was before COVID-19- at best 4% lower into 2022 on a medium-term forecast. In a similar case, oil prices and energy stocks have up to 10% underperformed base

metals. In as much as the industry is used to economic cycles of highs and lows, the downward spiral in the last year is unlike any other. Coupled with existing challenges of the value chain of this dynamic sector; survival and risk management have been the buzz words to test the endurance of many.

Risk management creates the perfect equilibrium to steer the fuel business into steady accelerated recovery. This must be initiated at the top management levels with executives providing clear direction and vision. The rest of the business will then coalesce around the set vision to optimize business performance. Top management is therefore able to sustain a profitable business environment and creation of shareholder value through clear strategic planning and/or external influences correctly anticipated in the risk breakdown structure (RBS) tool. From this point, the various risk categories in the business as a whole from upstream to retail operations are dissected based on the risk assessment matrix (RAM) procedures, training, quality assurance and impact

review. The RAM must be implemented from the procurement processes in supply chain to road transport and retail operations to prevent vulnerabilities and potential for damage to people, assets, environment or reputation.

Operational risks

The operations at fuel stations must be done to keep the risks 'As Low As Reasonably Practicable' (ALARP) as this contributes to up to 60% of potential incidents in the oil and gas value chain. The ALARP acceptability criteria must be met before a risk is cleared in the station after a look through on all related sections.

Of the different sections in a fuel station, the forecourt is the busiest with almost all hazards being traced back to it. The top event in all cases is always loss of containment or loss of control leading to spills, injuries and even fires. The location of the hazard starts from the tanker delivery point where there could be tank overflow or spills into the environment. The mitigation measures for this can range from automation processes, overflow

protection mechanisms and review of fuel delivery procedures amongst others. In addition to the tank farm area, loss of control of moving vehicles on the forecourt sits high on the list as well. Customers and fuel attendants can be hit and equipment damaged especially when vehicles are made to pass through restricted access, under structures or on sloping grounds. The traffic control and management plan (TCMP) organizes the station to prevent such incidents from happening. Inspections and checks must however be done beforehand to assess the existing controls and pick additional requirements if needed. All operational equipment have to be kept protected from any forms of impact and be strategically located within easily accessible reach and away from impact in the event of an incident.

On the other side, to manage hazardous wastes from the forecourt, the Solid and Hazardous Waste Management Plan (SHWMP) provides guidelines. This emphasizes waste reduction, segregation, collection, and disposal practices in accordance with EMCA 1999 revised 2015 and Waste Management Regulations 2006, industry & International best practices, to avoid deterioration of the natural environment and negative impacts. The site inspections to come up with SHWMP must be performed by the Health, Safety and Environment (HSE) Officer. The site inspections should be done on a regular basis and formally documented each month. Inspections will ensure that all commitments in this SHWMP are being enforced and that specific waste management elements are verified. This is followed by implementation of the waste hierarchy principles requires that destinations and quantities of residual matter are monitored. A register of waste material should be maintained to ensure the measurement of eliminated waste and of residual matter sent for reuse, recycling, and reclamation.

Lexo Energy consolidates the register to enforce the waste management plan and contractually obligates third party contractors and tenants to meet the requirements. Education is to be provided to each staff member prior to commencement of work, and regular refresher sessions are to be undertaken in the form of toolbox talks or training sessions throughout the operations of the contractor or tenant. The trainings are done together with other associated risks such as storage of flammable materials and assault or robbery due to poor security measures or noncompliance with standards.

Environmental Risks

Every OMC is mandated to protecting the environment, reducing waste and making a positive contribution to biodiversity. Minimising environmental impact and setting goals to improve helps OMCs find better ways to operate. Ensuring there no hydrocarbon (HC) leakage into the environment and that clean water is available for everyone is a global challenge recognised by UN Sustainable Development Goal 6. This is a goal that all marketers must strive to attain.

At Lexo Energy, we have taken care of this risk by working together with our transporters to enhance safety, fraud management, and journey plan discipline to minimize the associated product leakage risks. This comes both in terms of training and investment in technology to reduce the human interface and physical handling of fuel. Being a leader in retail operations innovation, Lexo Energy has taken advantage of this competitive edge to track the wet stock movement/reconciliation at site through Automatic Tank Gauge (ATG) systems, leak detectors, and CCTVs. With this technology, it is possible to avert the loss of product into the environment that could not have been earlier traced through traditional means of tank dipping. Proper offloading processes

are also used as part of the procedures to ensure an end-to-end solution.

The same excellence in risk management has been cascaded to contractors and suppliers through standardization of systems and ways of working with Lexo Energy.

The Future

Despite the listed risks, there is still a very real energy demand, and oil and gas play a major part in filling that demand. Oil and gas companies remain some of the most heavily traded public companies and this will continue.

Risk management in oil and gas is therefore not to blindly take risks, but to proactively prevent and mitigate these risks. This will significantly reduce the risk of loss and provide compensation for any risk of loss. Oil and gas operations have large investments and future operations could change depending on price fluctuations, changes in demand, regulatory measures on climate change, political risks on approval of projects, and delays in the reimbursement for shared price stabilization costs in the continued wake of the variants of COVID-19 (coronavirus) pandemic.



Stanbic Bank, A Universal Bank with Full Oil & Gas Banking Offering

The oil and gas sector is a capital intensive venture that requires heavy cash flow for the day today running. Stanbic Bank sets itself apart by providing the much needed financial solutions to its Oil & Gas sector clients with robust solutions through its specialist teams.

During the PIEA quarter 4 Membership Forum, Stanbic Bank Trade Finance Specialist Geoffrey Nyanaro and Renato D'Souza, Head of Oil and Gas said that the bank provides financial solutions across the Oil and Gas value chain.

Upstream exploration activity is typically not funded by banks but rather by way of equity. Once commercial viability is confirmed, various funding options are available such as reserve based lending, pre /post -export financing to name a few.

The midstream sub-sector encompasses refining, storage and transportation of petroleum crude oil, natural gas, natural gas liquids, and related byproducts. Infrastructure is typically funded through long term financing solutions such as project financing particularly in cases where projects have no historical cashflows. Typical project financing structures would apply for large projects including creation of special purpose vehicles funded by combination on debt and equity contribution from the project sponsors.

Downstream sub-sector which involves selling and distribution of petroleum products as well as bulk importation of refined product can be financed through various forms of working capital facilities. Stanbic bank has played a significant role in this space providing working capital support to a number of Oil Marketing Companies (OMCs). Some of the financing structures include short term loans, Collateral financing, Invoice financing and invoice discounting facilities.

The bank has recently come up with an innovative financing solution targeting fuel distributors. Through their dealer financing

- MJEKI, the bank avails short term financing (7days) to dealers to finance working capital.

"Financing is made available to support dealers for stocking up. After receiving a drawdown request from a dealer, we mark the exposure of the dealer and funds disbursed to Anchor/OMC instantly.

The bank establishes credit limits on qualifying dealers, based on existing agreements with Anchors and dealer's affordability. Scoring is off trading/purchases data. This program is offered through a digital platform available all through including weekends and public holidays" said Nyanaro.

Benefits to "ANCHOR" Ltd

- Better management of trading - relationships between Anchor Ltd and the dealers
- Increased sales through dealer network by unlocking underutilized potential
- Improved cashflow
- Guarantees definite receivable days for Anchor Ltd thus aiding proper planning

Benefits to Dealer

- Access to instant working capital
- Increased Liquidity
- Improved cash flow
- Increased sales resulting from ready access to stock
- Prior history with the Bank not required as new to Bank dealers can access funding
- Features
- For purchase of products from Anchor Ltd by the dealer
- No recourse to Anchor Ltd
- Revolving short-term working capital facilities
- Master agreement between the Bank and Anchor Ltd
- All interest and other Bank charges to be borne by the dealer



HSE Management System is Key in Risk Mitigation



Peter Murungi
Managing Director, Vivo Energy Kenya

Risks in the oil marketing industry are inherent to all oil marketers. Major incidents such as the Deepwater Horizon rig explosion in the Gulf of Mexico in 2010, Sachangwan Fire in 2009, and Sinai Fire tragedy in 2011 led to the loss of human lives and business loss.

In averting such incidents, there is a need for risk management, which involves identifying the hazards and developing risk management systems. Unmitigated OSH (Occupational Safety and Health) risks can affect the company's bottom line as well as the reputation among customers. Therefore, the management of risks makes business sense.

For employers, the emerging and constant challenge is the need for resilient systems that can mitigate OSH risks at the traditional workplaces and the emerging workspaces.

Running an oil-marketing firm takes the integration of hard work and constant management of emerging risks as well. The hydrocarbon products that we deal in

are highly flammable and require cautious handling at every stage of the supply chain (Ship - shore - depots-pipelines-road/rail transport-point of sales and the consumer.)

The nature of our business demands strict development and adherence to rigorous HSE (Health, Safety, and Environment) standards and procedures. HSE is the heartbeat of our business and is an integral part of every aspect of our business.

The focus of the hydrocarbon supply chain should be on safety. One of our critical areas in HSE

as Vivo Energy Kenya is Goal Zero, which implies no harm to people, assets, and our environment. To attain Goal Zero, we have a robust HSE management system. Goal Zero is actualized through detailed arrangements to cover asset integrity, operational procedures, competence, emergency response plans.

The mantra for asset integrity is to keep hydrocarbons safe in tanks and pipelines and ensure containment measures to prevent spills that lead to catastrophic incidents. These measures involve allocating resources, ensuring scheduled and timely reactive maintenance complemented by frequent inspections/audits.

Competent workers guided by tested operational procedures are required to sustain process safety. Well-designed facilities have people as the weakest link and hence need to invest in training and competence management processes. We have done this from the recruitment stage to internal on-job training.

HSE controls are not complete without recovery measures. For instance, what to do in the event things do not go as planned. Tested onsite Emergency

Response Plans (ERPs) ensure immediate arrest of minor occurrences and if they escalate a crisis management plan. There are incidents, which are beyond the ability of one oil marketer to respond and threaten the industry as a whole. Concerted efforts as oil marketers will enable us to minimize industry-related risks. The industry has come together through Depots Safety and Security Committees, OSMAG (Oil Spill Mutual Aid Group), and PSSEC (Petroleum Sector Safety and Environment Committee) to ensure a collaborative response to disasters. OMCs must be part of these groups for completion of their ERPs.

As an organization, we have updated onsite emergency response plans to ensure a timely and appropriate response to minimize casualties, operational disruption, and environmental damage. Response plans entails possible scenarios, and their responses. Employees and contractors must be well trained and equipped to resolve incidents and crises.

HSE Plans are dependent on an organizational culture embedded in safety at all levels. Safety culture-building blocks are things like Tool Box Talks, Safety Days, Incentive Schemes, and Potential Incidences Reporting to mention a few.

Safety Tool Box Talks involving all the stakeholders in running an oil marketing company are essential. We religiously have weekly Safety ToolBox talks that involve management, staff, contractors, transporters, and engineers. These talks contribute to building a safety culture that moves safety from the head (mind) to the hearts of everyone. These worker-led talks give an opportunity of learning from one another as well as adopt best safety practices.

There is also feting/awarding of people with outstanding performance on safety, which motivates everyone to put their best foot forward when it comes to matters HSE. We also have HSSE Stand downs, where we stop our business and focus on safety. It is a time for Vivo Energy Kenya staff, road transporters, contractors, drivers to have a hearts and minds talk on HSSE.

One of our HSE events is an annual themed Safety Day. This is an opportunity for all employees and contractors at Vivo Energy to refocus on the importance of HSE. As an organization, we dedicate the day to taking stock of our HSE gains and losses. This year, on 27th October 2021, we held our Safety Day that focused on "Competent + Prepared = Safer."

To the build-up of this day, we invited colleagues to record examples of visible safety leadership they had experienced across the business. Entries were submitted, across a range of categories including the environment, health, product quality, reputation, safety, and security.

The leading examples of safety improvement in each of these categories have been showcased and shared across the Vivo Energy group, to encourage replication of this best practice.

Anticipating potential incidents and learnings from actual incidents offers a basis for risk mitigation. At Vivo Energy Kenya, we are equally diligent in reporting incidents and identifying potential incidents. The reporting has become part of our culture and has extended to employees, contractors, and partners alike. Indeed, for our employees, adherence to HSE policy and practice is a performance target.

There are emerging risks that require business innovation to mitigate since traditional controls do not address these risks. One such risk is Cybercrime. It has become an emerging risk as technology advances. Lack of data security poses a serious risk that can open an opportunity for data breaches from external sources through phishing and data leaks. It is imperative for us as oil marketers to have a robust IT security framework that protects our data from breaches. Conducting regular training for our employees and contractors does minimize exposure to cybercrime risks.

Since March 2020, COVID-19 is a threat to our industry since our biggest asset is people. Vaccination of our staff members has enabled us to build back better as an industry from the impact of COVID-19. As Vivo Energy Kenya, we are glad to have over 95% of our staff members fully vaccinated. OMCs should encourage and facilitate workers to undertake vaccinations.

Lastly, we also need to engage the public on how hazardous our products can be in the event of an accident or uncontrolled exposure. On July 19th, 2021, the country woke up to heartbreaking news of a fuel tanker explosion in Siaya County. It was unfortunate for the loss of lives and several casualties hospitalized with burns. We can ensure public safety through

strategic partnerships with like-minded organizations, the government, and the media to avert such tragic incidences. As oil marketers, we are prone to situations that may significantly threaten the safety or well-being of people, the environment, our company's reputation, and the financial bottom line. We have a responsibility for the safety of the people. We need to invest significantly in training, technology, and the adoption of best practices to improve safety.

There are emerging risks that require business innovation to mitigate since traditional controls do not address these risks. One such risk is Cybercrime. It has become an emerging risk as technology advances. Lack of data security poses a serious risk that can open an opportunity for data breaches from external sources through phishing and data leaks. It is imperative for us as oil marketers to have a robust IT security framework that protects our data from breaches.



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Tullow Oil Committed to Health and Safety

Tullow Oil plc is committed to the highest standards of health and safety and strives to maintain a positive safety culture across its business. The company has a culture of working hand in hand with its contractors as one team in order to keep everyone safe and healthy.

We adhere to all laws and regulations governing safe working and, in many cases, our internal standards go above the requirements of the law. We at Tullow continue to monitor key health risks related to the company's operations and take preventive action where possible. A known risk, for example, is malaria and we had no recorded cases among staff and contractors that have no immunity to Malaria in 2020.

Managing Tullow's response to the COVID-19 pandemic dominated much of the year. Thorough risk assessments and plans were put in place across our operations, both on the FPSOs and in the office to protect the health of our staff and contractors, whilst maintaining safe COVID-19-free production operations and work environments.

Tullow's safety performance in 2020 for lost time injury rate (LTIR) and total recordable injury rate (TRIR) indicate that we injured more people in our operations compared to 2019. Fortunately, none of the events were life changing, but never-the-less, we strive to eliminate injuring people associated with our operations.

Notable occupational safety achievements in 2020 included zero total recordable injuries at our Ghana offshore TEN and Jubilee floating production storage and offloading facilities (FPSOs) and zero total recordable injuries in our Kenya facilities. Despite these positive aspects of our safety performance, during 2020, we experienced a similar number of high potential incidents (HiPos) compared to 2019. Although we work to avoid HiPos, transparent reporting of them is vitally important and actively supported at Tullow, so that we can continually learn and make improvements. Following a number of HiPo events associated with our Tullow Ghana operations, the Tullow Ghana leadership held a series of safety stand-downs across all parts of the business.

In 2020 we spent time analysing similar or repeated incidents that have occurred over the years at our Ghana operations. These reviews have informed where our assurance activities are to be focused and are leading to improvements to our incident investigation processes. Part of these improvements included the company wide implementation of a new incident reporting, investigation and action tracking software tool.

"Tullow's 2020 IOGP lifesaving rule awareness campaign was the most inspiring and engaging I've ever participated in and I am confident will translate to a better safety performance in 2021" noted Rowland Wright, Environment, Health, Safety and Asset Protection Manager, Tullow Ghana

The highlight of 2020 was Tullow Ghana's IOGP lifesaving rule awareness raising campaign. We spent a significant effort launching the IOGP life saving rules, which supplemented our existing procedures with a set of industry wide and strictly enforced rules aimed to reducing the likelihood of fatal incidents. The rules provide lifesaving actions over which an individual has control at the worksite, to protect themselves and colleagues from injury and fatality. The awareness campaign spanned a three month period, involved senior leadership and all contractors involved in our operations, promoting each rule and involved presentations, experience sharing, quizzes and more.

In 2021 we have embarked on a one year campaign to promote the IOGP process safety fundamentals (PSFs), to significantly enhance the understanding of process safety and engage our workforce in relation to how our actions play a vital role in preventing process safety events from happening. Process safety events can have catastrophic outcomes with multiple fatalities. There causes are often complex, with many barriers failing to prevent the event. The PSFs are a set of basic principles for front-line workers, supervisors, and managers that emphasise existing good practices to prevent fatalities from process safety events. It is intended that the adoption of fundamentals will provide focus for process safety on the front line, enable process safety concerns to be raised more readily and move towards an industry wide language for process safety.

Source: Tullow PLC





Eric Fanchini (C), the TotalEnergies Managing Director launches the third edition of the Startupper of the Year Challenge by TotalEnergies, looking on is John Muchunu (R) the Strategy and Corporate Affairs Director and Lawrence Gichatha the Finance Director. The Challenge will offer three young Kenyan entrepreneurs financial support worth Kshs 1,650,000 each, coaching and media visibility for their projects or business ideas.



Eric Fanchini (L), the Managing Director presents a gift voucher to a customer during the launch of the ShikaMore ya Krismasi promotion at selected service stations countrywide. Looking on is Winnie Kimotho, the Commercial & Marketing communications manager



A brand ambassador poses with some of the vouchers for the Jaza Raha na Shell Shinda Nyumba Promotion vouchers during the launch.



Vivo Energy Executive Vice-President East and South Regions, Hans Paulsen (left) Vivo Energy Kenya Managing Director, Peter Murungi (center) and Vivo Energy Kenya Retail Manager, Saadallah Adel (right) pose for a photo in-front of a dummy house that was shown on screen during the official launch of Jaza Raha na Shell Shinda Nyumba promotion.



L-R President World Petroleum Congress (WPC) For Fjaeren, CAS Petroleum Dr. (Eng) John Mosonik, NOCK CEO Leparan Morintat (C) Romania Energy Minister & Chairman WPC



A Doctor conducts an eye screening to a you boy from Kwale County during National Oil and eni Kenya B.V. free eye screening and treatment medical camp



The Nairobi Depots Safety and Security Committee (NDSSC) joint emergency drill out late in the quarter at TotalEnergies Nairobi LPG Plant.



NDSSC members debrief post joint emergency drill. Left to Right: George Maranga OLA Energy, Eric Wachira Vivo Energy, Dickson Mwai RUBiS Energy and Cyprian Mungume of TotalEnergies.



PIEA Membership Chairman, Varun Sharma gives a vote of thanks to members of the Petroleum Industry during the 2021 PIEA Annual Golf Tournament held at Muthaiga Golf Club.



From L-R Jaco Rensburg, Alex Njoroge and Timothy Opar, the overall winners of the tournament received Adidas golf shoes award from Renalto D'Souza, Stanbic Bank Head of Oil and Gas. Stanbic Bank was the event's title sponsor.



J.K Maingi, the winner in the men Category, receives his award from PIEA Vice Chairman and Vivo Energy Managing Director Peter Murungi.



David Bailey won the 'Nearest to Pin' award handed over by Mark Musembi, PIEA Director and General Manager, VTTI Kenya.



Millicent Mellow receives the 'Lady Winner' award from Petroleum Institute of East Africa (PIEA) Director and Total Energies Managing Director, Eric Fanchini.



Rosemary Mkok receives her 'Longest Drive Lady' award from Anthony Muraya, General Manager, Kencor Petroleum Limited.



Members of the Petroleum Industry their dinner during the 2021 PIEA Annual golf tournament dinner.



Kipevu Oil Terminal (KOT) II as it Nears Completion

On 6th January 2022, H.E. President Uhuru Kenyatta, inspected the new Kipevu Oil Terminal in Mombasa as the construction work entered the home stretch. The 40 billion shillings project christened Kipevu Oil Terminal - KOT II, can accommodate more than one vessel at a time, and its infrastructure comprises among other facilities:

- i One offshore island terminal with four berths whose total length is 770m,
- ii One work boat wharf at Westmont area for landing facilities,
- iii Five sub-sea pipelines and risers each dedicated to a separate oil product,
- iv Six onshore pipelines/piping, each dedicated to a separate oil product, to existing Kenya Petroleum Refineries Limited (KPRL) and Kenya Pipeline Company Ltd. (KPC) tanks in tank storage areas.
- v Piping and other topsides facilities, Marine loading arms for crude, refined, fuel oils, and slop handling facilities.
- vi Firefighting and detection facilities.
- vii Electrical power distribution system and utilities.
- viii Telecommunications SCADA (supervisory control and data acquisition) and control monitoring systems.
- ix Container terminal crossing and Beach Valve Station (BVS).
- x Breasting dolphins, mooring dolphins, two loading platforms, one central platform (including operators' accommodation and control desk facilities and utilities), support platforms/dolphins for trestles, trestles, gangways, and walkways.
- xi Piging facilities.

The facility has a loading/backloading flowrate of:

- a 32-Inch DPK Line 4800/2400 m³/hr
- b 36-Inch AGO Line 4500/2300 m³/hr
- c 32-Inch PMS Line 5000/2400 m³/hr
- d 24-Inch LPG Line 2500 m³/hr
- e 32-Inch Dual Line Crude Oil 5400/3000 m³/hr & Heavy Fuel Oil 4000/2000 m³/hr

Consequently, KOT II is set to radically transform the handling of refined petroleum products in the Country and the region. Some of the benefits include increased efficiency of intake of oil products in Kenya and her competitiveness in East Africa's oil market. The terminal can handle up to four (4) vessels simultaneously compared to the current one that handles one ship at a time. There will be reduced vessel discharge turn-around time from 4 days to 2 days and guaranteed security of supply for the region.

The industry expects a significant reduction in demurrage costs and enhanced LPG importation facilities, leading to a possible decrease of LPG costs and more LPG uptake in the Country.

The need to construct a new Oil handling Terminal at the Port of Mombasa was necessitated by the need to expand capacity ahead of the envisaged increased demand and the development of the oil and gas in the East African sector in the region.

"This project is a gamechanger because it will help the country salvage KSh. 2 billion lost from demurrage due to long queues of vessels waiting to dock," said President Kenyatta.



Main island KOT(S7)



Beach Valve Station area (S4)



Work Boat Jetty



Dongo Kundu Area: Welding sub sea



H.E. President Uhuru Kenyatta inspects KOT II accompanied by KPC Managing Director Dr. Macharia Irungu and Chinese State Councilor Minister of Foreign Affairs Mr. Wang Yi.



Board of Directors and Management of Kenya Pipeline Company receive the Company of the Year Award (COYA) in the Human Resource Management and Customer Orientation and Marketing categories



Equity Bank's Group Chief commercial Officer Polycarp Igathe with the KPC team led by GM Operations and Maintenance Joshua Mutea during the DRC trade mission in Kinshasa.



VIVO Uganda paid a courtesy call to KPC's head office to introduce their new Managing Director, Johan Grobbelaar.

KPC Receives The Prestigious Company of Year Award

Kenya Pipeline Company had a fruitful outcome at this year's Company of the Year Award (COYA) gala. The Company won the Human Resource Management and Customer Orientation & Marketing categories.

COYA Awards, a prestigious corporate event, recognizes organizations that have embraced the Organizational Performance Index (OPI) Business Excellence framework. COYA is run by the Kenya Institute of Management (KIM) to encourage excellent business practices and sharing of ideas.

The business excellence categories for COYA are; Leadership & Management, Human Resources Focus, Customer Orientation & Marketing, Financial Management, Innovation, ICT, Knowledge Management, Corporate Citizenship, and Environment and Productivity & Quality. Out of the seven categories, KPC won two. KPC was praised for its diligence in operating while ensuring that the customer, employee, and stakeholders receive excellent services.

Market Visit to Democratic Republic of Congo

KPC's team joined a team of Kenyan investors who participated in a trade mission in the Democratic Republic of Congo (DRC). The mission covered the major commercial towns of three regions, namely, West Region (Kinshasa), East Region (Goma) and South Region (Lubumbashi).

The trade mission was part of an Equity Group-backed partnership with the governments of Kenya and DRC to foster trade and investment ties.

The East and South DR Congo markets mainly import petroleum products through the Northern Corridor Transit Route (NCTR) and the Central Corridor Transit Route (CCTR).

The team used the opportunity to market the Kisumu Oil Jetty (KOJ), a game-changer for the transit market as the landed cost of the product to regions like Goma, Eastern DRC will significantly be cheaper. Oil Marketing Companies in DRC have demonstrated a keen interest in the facility.

Which Way Exploration, Abandon or Gradually Scale Down?

Significant reduction in investment



Daniel Muasya
Strategy and Operations advisor specializing on Energy

Recent years have witnessed substantial moves in the oil and gas exploration space. Notable changes are evident in the way major oil and gas companies have reshaped their exploration teams and how hydrocarbon exploration activities have been scaled down in major parts of the world, mostly being replaced by investment on renewable green energy and environmentally friendly energy initiatives.

In addition, Covid-19 pandemic pushed many Oil majors to cut down on their spending significantly, aiming to preserve cash and sustain profitability. Indeed, the low global oil prices and decline in oil and gas demand in key markets like Asia, Middle East, and Europe in 2020 and 2021 has presented a significant challenge to energy companies keen in retaining profitability and maximizing shareholder

values, consequently prompting organizations to significantly cut down on capital expenditure as well as non-capital budget items.

Within the non-capital budget cuts, human resource has been the most affected with all major oil organizations initiating significant staff cuts and office closures across the world.

In 2021, UK's Oil major BP reduced its geologists, engineers, and scientists to less than 100 from a high of 700, in addition to cutting over 10,000 jobs across the organization within the same period. This represented a 15% reduction on its entire workforce. Similarly, Shell is believed to have cut down around 9,000 jobs in the same period, an initiative which also included reducing its upstream spending by 40%, reducing its production hubs to only include Gulf of Mexico, Nigeria, and North Sea: and reducing the number of its global oil refineries from seventeen to ten.

Whereas these initiatives will generally result to steady profitability and cashflow availability, organizations will most likely confront key risks on reserves replacement due to less investment in new frontiers, to a great extent a decline in fuel driven global development, and reduced talent growth in the oil and gas industry.

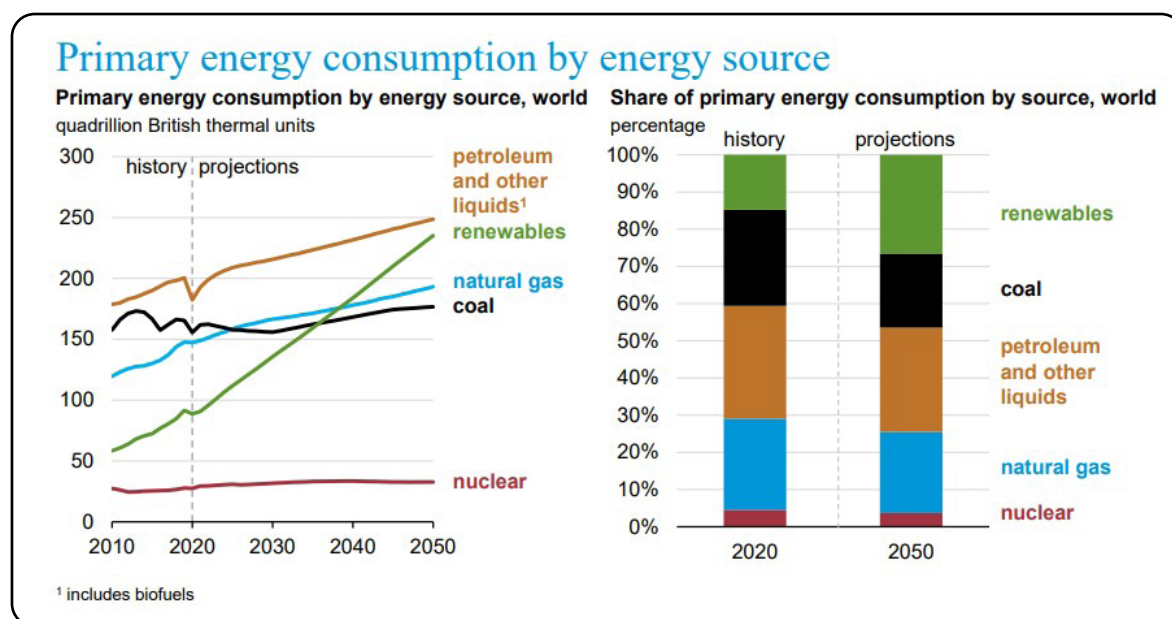
It could be argued that oil and gas driven development will be replaced with investment in renewable energy projects, but the already existing robust chain of oil and gas subcontractors will need to significantly review their business strategies to cover up for the huge cash outlay that has been synonymous with drilling campaigns and development projects in the oil and gas sector, and this will indeed take time.

The Energy Transition Dilemma

Whereas it is agreeable that the changes are necessary and inevitable due to global shift to renewable energy space, and the need to reduce global carbon footprint, it is imperative that organizations endeavor to maintain the right balance and avoid shifting too early but also avoid being left out as players position themselves strategically in the renewable energy industry.

In Figure 1 below, the US Energy Information Administration (EIA) projects a global increase in energy demand driven by new emerging markets. The projects also suggests that oil will remain a key component of global energy mix in future as well as the primary source of energy for heavy commercial and industrial activities, while clean and renewable energy will be the primary source of energy for light industrial and retail user like transportation and lighting.

Figure 1



Source: U.S. Energy Information Administration

This presents a significant paradox to energy companies and nations as to whether to completely abandon exploration activities or to scale down operations by primarily focusing on natural gas exploration activities.

Most organizations appear to have adopted the latter model where fewer high potential exploration activities are currently underway or have been carried out in 2020 and 2021, and despite the decline in investment in upstream activities, it is worth noting that the largest possible (unproven) oil discoveries in 2021 were made in Africa, a new region that has never experienced oil boom before compared to other world regions.

Canada's Reconnaissance Africa released preliminary results from its exploratory wells drilled in the Kavango Basin suggesting a potential discovery of 120 billion barrels of oil, in addition to ENI's discovery of 2 billion barrels off the coast of Côte d'Ivoire in September 2021. This potentially marks the beginning of a promising decade for the continent and positioning it as the world's final frontier for hydrocarbon exploration, however, this is

further complicated by the timing of the discoveries due to global energy transition campaigns as well as decline in global investment in oil exploration activities.

The civil society and activists opposed to fossil fuels argue that oil and gas drilling has a serious impact on wildlands and communities. In addition, drilling projects operate around the clock generating pollution, fueling climate change, disrupting wildlife, and damaging public lands that were set aside to benefit all people. Therefore, these groups advocate for a complete abandonment of all exploration activities, contending that more than sufficient oil and gas has already been found to match the maximum amount of consumption possible if the world is to keep emissions below the level of danger.

This drastic proposal has provoked opposition from energy companies and nations that have committed to gradual reduction of carbon emissions to net zero by 2050. In addition, companies and nations have some strong lines of defense, beginning with the fact that oil demand globally continues to rise and so long as the world's population still uses petrol to

drive vehicles with internal combustion engines and uses natural gas to power heating systems, hydrocarbons will be needed suggesting that the reality of energy transition has barely begun.

Additionally, Hydrocarbons still account for eighty per cent of global energy needs, Renewables—led by wind and solar—are certainly growing, but account for little more than five per cent of supply. The companies and nations therefore argue that in a market driven by population growth and the spread of prosperity, hydrocarbons will remain predominant for a long time to come and therefore their abandonment will be immature.

The Right Balance

The call to shift from the burning of fossil fuels to more environment-friendly alternatives like solar or wind energy has become stronger and whereas an immediate shift to renewable energy may be attractive to energy activists and environmentalists, its feasibility appears implausible.

Significant investment in consumption pattern changes and innovation on energy storage batteries for heavy industrial and commercial use is required. In addition, right skilling of human resource is essential if the industry to sufficiently sustain the shift in addition to the need for new underlying technology buttressing that this cannot happen overnight.

It is therefore necessary that energy companies gradually embrace renewable energy initiatives while addressing the global environmental concern raised by all relevant parties. A good example would be initiatives that net off or reduce the current carbon emissions from the existing or new fossil fuels being exploited like Shell's commitment to support reforestation initiatives globally and gradual construction of electrical charging vehicle stations in UK.

The gradual adoption of renewables while addressing the global concern of carbon emissions will also allow energy organizations and new frontiers like Africa sufficiently enjoy benefits from fossil fuels while conserving the environment.

The writer is a Management and Strategy Advisor: Daniel. Muasya@TheBluediamondke.com

National Oil to Raise \$1bn for Oil Project



Leparan Morintat
National Oil Corporation of Kenya CEO

The National Oil Corporation of Kenya is set to fund raise for its upstream project after the project partners submit the field development plan.

The oil company is planning to raise \$1bn of debt to acquire a stake in Tullow Oil-operated \$3.4bn oil project.

NOC of Kenya CEO Leparan ole Morintat has hinted that the fundraising for back-in rights in the field will commence once the project partners submit the development plan. Fundraising is expected to take place in 2022.

National Oil has been negotiating with Saudi Aramco and other undisclosed firms for a non-equity partner for the downstream business.

"We are looking at signing a public-private partnership deal from a national oil corporation. Depending on how much capital outlay they are going to put in we

can agree on the duration and terms and the kinds of security they want" the CEO told reporters.

However, the firm intends to move ahead with expensive local capital in case it fails to secure a partner. NOC of Kenya plans to use the fundraiser as an equity injection.

The latest move by Kenya's oil company comes at a time when Tullow and its partners are seeking strategic investors for the oil project.

The project partners, which also include Africa Oil and TotalEnergies, are due to submit a development plan by December 2021.

The project will also include the construction of a pipeline to the coast to allow exports. The field's gross oil recovery is expected to be around 585 million barrels over its life.

Insights to Uganda Upstream Developments

In 2022, the Ugandan economy is expected to benefit from a raft of foreign investments ultimately intended to make the country a commercial oil producer within the next three to four years.

Backed by a government policy to encourage local participation, Ugandan companies could earn up to \$1.5 billion from contracts associated with the development phase in the Kingfisher and Tilenga oilfields as well as the construction of the East African Crude Oil Pipeline (EACOP) and Kabaale Petrochemical city.

The \$3.5 billion EACOP will connect the oilfields in western Uganda to the Tanzanian seaport of Tanga while the Kabaale complex will become the processing hub of Uganda's budding oil and gas industry. An international airport is also nearing completion.

In a recently published report, Uganda Tilenga Project Development Stage and East Africa Crude Oil Pipeline (EACOP) Outlook 2021 - 2025 Nairobi-based analysis firm, OilNews Africa, provides a detailed look into the various aspects of the development phase starting with the nine proposed oilfields and the supporting facilities such as workers' camps.

The report is the first free industry outlook for Uganda's upstream sector, highlighting the activities of current leading players, TotalEnergies (Tilenga) and China National Offshore Oil Corporation Uganda Limited (Kingfisher).

OilNews Africa Lead Researcher, Mwambia Mbote said, "We have since inception envisioned a platform that would open up the oil

This outlook allows local businesses in Uganda to be part of this multi-billion dollar development phase at all levels including in various segments that have been ring-fenced for local companies" he said.

We do believe that local companies can be involved through all levels (technical, skilled and unskilled) through mutually beneficial joint ventures with international companies.

and gas sector and level the field for local players who see great potential in this area, but lack the know-how on ways to engage.

“This outlook allows local businesses in Uganda to be part of this multi-billion dollar development phase at all levels including in various segments that have been ring-fenced for local companies” he said.

“We do believe that local companies can be involved through all levels (technical, skilled and unskilled) through mutually beneficial joint ventures with international companies.”

According to the report, Uganda has already taken the early steps in the development phase. The engineering, procurement, construction, and commissioning (EPC) services contract for the Tilenga Project was awarded to a consortium made up of a subsidiary of McDermott International Limited and China’s Sinopec International.

Located in the Lake Albert Basin, the Tilenga project comprises six oilfields and 426 planned oil wells. It will consist of 31 well pads connected to a central processing facility (CPF) via buried flow lines.

This is the centerpiece of the oil projects and together with other related infrastructure will attract total investments of about \$15 billion to Tanzania and Uganda.

The report looks into initial project schedules, including assessments of first dives into the expected contracts during the first six months and overall project timelines.

It also addresses the preliminary well pad schedule for the three rigs as well as services and goods to be provided by Ugandan companies.

This is particularly important as the government pushes for local content in the project and the license holders promise to involve local enterprises as a way to acquire a social operating license.

Furthermore, in cases when two bids are very close, the winning bid is reserved for the company with the highest score on Local Content.

Notable insights provided by the report, also include the unbundling of other support infrastructure projects namely the planned Kabaale Industrial Park, the proposed refinery, and the EACOP.

Under the EACOP construction phase, the report looks at the route, design, and planned facilities while analyzing the cost-benefit ratio of the refinery.

Lastly, the report highlights the technical attributes of the EACOP and Tilenga feeder along with the five spreads before concluding with the pipeline characteristics.

Access to reliable information has been frequently cited to be among the five biggest challenges affecting local investors in East Africa wishing to participate in the nascent oil and gas sector.



Kenya Contracts US Firm To Generate Natural Gas

Kenya has revived its ambitious natural gas generation project after it gave greenlight to a US firm to conduct a feasibility study for gas power generation in Mombasa.

This comes as Nairobi seeks to cut its reliance on Dar es Salaam for liquefied petroleum gas (LPG), which has seen the Tanga plant in Mtwara service nearly half of the Kenyan market, trucked via Namanga and Holili border posts.

Despite Kenya and Tanzania signing an agreement to start working on a gas pipeline from Dar es Salaam to Mombasa, as part of a long-term project to share energy resources, Kenya remains open to other options including importing the commodity.

This means, that the agreement between Kenya and Tanzania might be nullified if the company recommends cheaper means to get natural gas to generate power.

US-based K&M advisors said that Kenya will go for the cheapest option as it seeks to develop a liquefied natural gas (LNG) import terminal in Mombasa.

"K&M Advisors has been engaged by the Kenya Electricity Generating Company PLC (KenGen) on behalf of the Kenyan government and the country's energy sector to conduct a feasibility study for natural gas power generation in Kenya. The feasibility study will examine the technical, economic, financial and environmental and social feasibility of project," read the statement by K&M Advisers.

Diversify Energy Mix

While Kenya does not have its own natural gas resources, the study will examine the potential to create a domestic natural gas market for power generation and industrial use via importation with the aim to help diversify the country's energy mix, improve energy security, reduce the cost of electricity and reduce greenhouse gas emissions.

The study, organised into 17 tasks that will be implemented over 12 months, will examine the technical, economic, financial and environmental and social feasibility of the project.

"We are extremely pleased to start another engagement with KenGen and use our team's extensive experience on LNG to power projects to assist Kenya in finding a viable solution for introducing natural gas to Kenya's generation matrix," said K&M President Alfomso Guzman. Power plant conversion

The study will cover the development and operations of a LNG import terminal in Mombasa, conversion of Kenya's 10 existing heavy fuel oil (HFO) and kerosene power plants to natural gas.

K&M will start with assessing the LNG demand from converting existing power plants to natural gas, building a new power plant, and displacing HFO or diesel used industries and it will then identify and cost viable LNG sourcing, shipping, import terminal logistics and transportation options.

Various LNG import terminal sites in Mombasa — floating and onshore configurations — will also be analysed.

K&M will assess whether natural gas sourced from an LNG import terminal in Mombasa could produce electricity at a lower cost than HFO or kerosene. LNG transportation using trailers or rail will also be considered.

The study will review contractual arrangements for the implementing the project, including contracts for LNG or gas offtake from power plants. LNG or gas transport, LNG import terminal development and operations, and LNG supply ex-ship.

The US team will also analyse how to procure the various components of the LNG supply chain competitively. In parallel, K&M Advisors will evaluate the feasibility of converting the existing HFO and kerosene plants to natural gas as well as construction of a Greenfield natural gas plant.

Tanzanian liquefied petroleum gas (LPG) firms export about 40 percent of their annual volumes to Kenya. Dar imports 100,000 tonnes of LPG from the Middle East.

The LPG cost in Mombasa is much higher than in Dar es Salaam with experts saying the main reason why LPG from Dar es

Salaam or Tanga is cheaper is because the offloading and storage infrastructure at these two ports is more efficient.

Efficiency in Cost Factor

Firms in Kenya have higher storage unit costs due to facilities like floating storage, which need fuel to run, and higher maintenance cost compared with fixed storage facilities.

The Tanga terminal can store up to 1,000 tonnes of LPG where gas is re-exported from there to other markets like Kenya, Zambia, the Democratic Republic of Congo, Rwanda, Uganda and Burundi.

The county also boasts of the \$1.2 billion Songo Songo plant in Mtwara financed by the Exim Bank of China.

Tanzania has so far discovered more than 56 Tcf of natural gas and is currently engaging oil companies individually on the terms of developing a \$30-billion LNG project.

Equinor, Royal Dutch Shell Plc and Ophir Energy Plc own natural-gas blocks in the country.

In June, Mombasa Gas Terminal, received a \$23 million World Bank-IFC financing facility for construction of the first phase of an LPG import and storage terminal.

"We confirm that we have received a facility from the World Bank for Phase One of our bulk LPG import and storage terminal. The second phase will complete the storage capacity to 22,000 metric tons or more with an annual throughput capacity of 400,000 metric tons. We are aiming to complete construction of Phase One and begin operations within six months," said Mombasa Gas Terminal Managing Director Eng. Julius Riungu.

The new terminal will include a direct mooring access for very large-sized LPG carriers, storage and associated infrastructure that will have multiple loading points for transfer of LPG to road and rail transport. Several global LPG market players are angling for a long-term partnership with the project.

Kenya has also completed the \$385 million new Kipevu Oil Terminal in Mombasa that can handle vessels with a dead weight



tonnage of 200,000 and has a liquefied petroleum gas line to stabilise gas supply in Kenya. Nairobi says faster loading is expected to translate to lower prices for LPG.

According to Kenya Pipeline Company (KPC) the new facility will reduce cost of gas by 30 percent once operational.

KPC is in talks with Kenya's Ministry of Energy to put up a dedicated LPG storage

facility with an initial capacity of 25,000 tones. Kenya Ports Authority, who will run the terminal, have scheduled a dry run test in December.

KPC is also angling to handle LPG with investment in bulk storage and supply. The state agency last week said it was seeking to take over operations at the new Kipevu Oil Terminal and the acquisition of the Kenya Petroleum Refineries Ltd Changamwe facility.

The state corporation is currently in talks with the Energy ministry and industry players on the process as plans to become the major gas handler for Kenya. The tender for construction of the facility should be ready by March next year, with the facility expected to be up and running within the next three years.

KPC will then use the Open Tender System, similar to that currently used to import petroleum products, to push down the cost of LPG in the country.

Tanzania Kicks Off Negotiations with Investors on Gas Production

Negotiations between Tanzania and international oil companies on the stalled liquefied natural gas (LNG) project are set to start after teams from both sides met in Arusha.

This follows President Samia Suluhu's push for the project and finalised review of the Production Sharing Agreement (PSA) arrangements.

"The LNG investors have been notified of the meeting on November 8 by the government," said Ola Morten Aanestad, spokesperson of International Upstream.

Tanzania Petroleum Development Corporation (TPDC) Project Manager Fedister Agrey confirmed the meeting saying the government had done the relevant preparations and planned to hold discussions with the investors in the course of the month.

"Tanzania will invest in the project according to participation percentage that is described within the PSAs," she said

It has been six years since Tanzania started negotiations with these companies. The talks were often characterised by delays and postponements.

"LNG projects involve a lot of money and as a country we have our demands to investors. The prolonged talks were to ensure the country gets its fair share," said officials from the Energy Ministry.

Oil and gas companies say there is hope to hold and finalise talks over the \$30 billion LNG project.

"We see a window of opportunity for the Tanzania LNG project, and the ability to move efficiently to complete the discussions will create value for all partners involved and Tanzania as a country," said Aanestad.

The Norwegian company in partnership with ExxonMobil, operates Block 2, which is estimated to hold more than 20 trillion cubic feet (0.6 trillion cubic metres) of gas. While Shell, operates Block 1 and Block 4, which are estimated to hold some 16 trillion cubic feet of recoverable gas, according to the company's website.

The discussions on Host Government Agreement (HGA) with a focus on fiscal, legal and regulatory frameworks of the project will have Tanzania obtain 10 percent of the liquefied natural gas while the rest (90 percent) goes for export.



Huge Financial Costs Hinder Geothermal Exploitation in East Africa

The deep geothermal potential in East Africa is a huge, under-exploited resource that has so far failed to attract investors from the oil and gas world.

The East Africa Rift System (EARS), with its western and eastern branches, could generate 20 gigawatts of geothermal power, according to Darren Jones, petroleum geologist at the British Geological Survey.

This is equivalent to 10 Hoover Dams in the US supplying 10 million people, he said, stressing that full exploitation of the rift system's geothermal resource could provide power to perhaps 40 million people, given East Africa's much lower per-capita demand for power.

To date, only 10% of electricity generated in the region comes from geothermal, but this is likely to increase because the EARS has high heat flows and temperatures of up to 400 degrees Celsius, conditions ideal for viable geothermal reservoirs.

Hive of Activity

Kenya is in the vanguard, with geothermal supplying 40% of domestic electricity demand — about 880 megawatts. Ethiopia also hosts significant projects.

Production is growing at 17% per year, Jones told listeners at an Africa E&P event organised by PESGB-HGS.

The region's first geothermal project was a plant in the Democratic Republic of the Congo that ran for 18 years from 1952 as part of a mining operation.

Kenya kicked off its Olkaria project in 1981. The multi-field complex west of Nairobi now generates 600MW of power.

A Zambia pilot plant ran in the mid-1980s, with Ethiopia joining the party in the late 1990s and new plants built in Kenya in the early 2000s.

Studies and small pilot projects are under way in all these countries, plus Djibouti, Uganda, Rwanda and Tanzania.

Jones suggested to Upstream that the lack of oil and gas company interest in East Africa's geothermal sector is due to financial and policy issues.

He said many East African projects rely on public funds, at least in their costly early stages.

"We really need more private investors to really get the exploration going, because it is the initial capital cost that turns people away."

Jones suggested "risk-mitigation schemes or insurance schemes may attract private investors" who would help accelerate exploration and project development.

Despite these obstacles, upstream companies have been eyeing direct or indirect investments in East Africa's geothermal potential.

For example, Tullow Oil may power its planned Lokichar oil project in northern Kenya through geothermal power, while BP has been assessing Africa's geothermal potential.

On the policy front, Jones said there are "no structured

licensing procedures" as in the oil and gas sector, which is a barrier to upstream players.

Geothermal energy is seen as an attractive resource in the region, he said, because it has a low levelised cost for producing electricity of \$0.07 to \$0.10 per kilowatt hour.

Its other advantage is that it runs 24/7, while field life ranges from 30 to 50 years.

However, Jones acknowledged that it is not plain sailing. As with oil and gas projects, geology will always throw up challenges.

Some Ethiopian fields have problems with salinity and gases such as carbon dioxide, which is why "a lot of these systems are being looked at in terms of their CO₂ storage potential".

Well integrity can also be a problem. Key issues include degeneration of cement and corrosion of equipment associated with hydrogen sulphide as well as CO₂.

The geothermal potential differs between the EARS eastern branch, running through Eritrea, Djibouti, Ethiopia, Kenya and northern Tanzania, and the western branch that traverses Uganda, the Democratic Republic of the Congo, Rwanda, Burundi, Tanzania, Zambia and Malawi to Mozambique.

Jones said the eastern branch is better understood and exploited. It hosts volcanic reservoirs expressing themselves as calderas or hot springs, with temperatures greater than 100 degrees Celsius, two-phase flow (water and water vapour)

and often associated with a focused heat source. Temperatures higher than 150 degrees Celsius are generally needed to produce power.

An advantage of reservoirs in the eastern branch is their lack of permeability, which acts as a caprock to prevent hot water rising and as an insulator to prevent heat escaping.

The best flow rates are along reworked or fractured volcanic zones close to caldera walls.

These eastern branch resources are more suited to generate electricity — according to Jones, who previously worked for Africa-focused junior Surestream Petroleum — compared with the less-understood western branch, a much younger system characterised by narrow, deep lakes such as Albert, Tanganyika and Malawi.

Here, the geothermal play generates temperatures of less than 100 degrees Celsius, with water flowing through fractures, making it more suitable for direct heating and cooling uses. The heat is generated mainly by deep-seated magma features rather than large volcanoes.

This play "is relatively new and has been underexplored", with reservoirs likely to be in basement rocks such as granite or associated with particular prospects in sedimentary basins.

Further field work is needed, but Jones said understanding heat flow and temperature variations would be vital to assessing geothermal potential and identifying optimum areas for hydrocarbon generation.

Petroleum Taxes

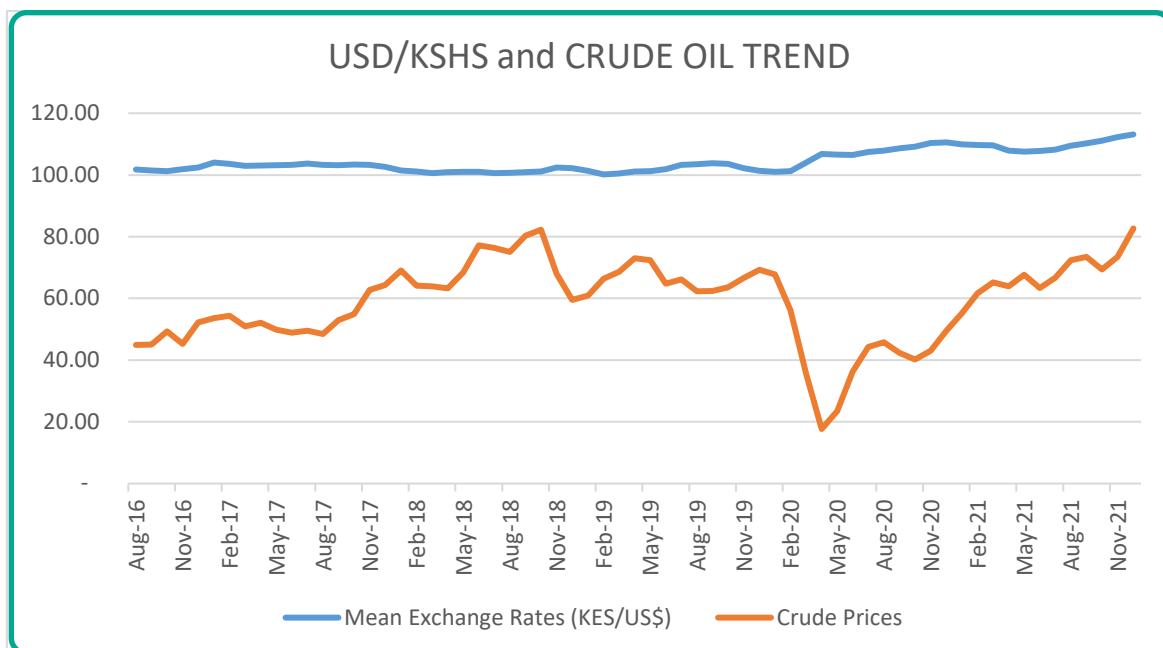
	Import Duty	" Former Rate of Excise Duty Kshs/Litre "	" Current Rate of Excise Duty Kshs/Litre "	VAT	Road Mainten. Levy	" Petroleum Devel. Levy Kshs/Litre "	Current Rate of Import Decl. Fee	Railway Development Levy	Remission Kshs/Litre	" Adulteration Levy Kshs/Litre "
Motor Spirit (Gasoline) Regular	-	20.5095	21.5227	8%	18.00	5.40	3.50%	2.00%	0.45	-
Motor Spirit (Gasoline) Premium	-	20.9196	21.9530	8%	18.00	5.40	3.50%	2.00%	0.45	-
Aviation Spirit	-	20.9196	21.9530	8%	-	0.40	3.50%	2.00%	0.45	-
Spirit Type Jet Fuel	-	20.9196	21.9530	8%	-	0.40	3.50%	2.00%	0.45	-
Special Boiling Point & White Spirit	-	8.9378	9.3793	8%	-	-	3.50%	2.00%	0.30	-
Other Light Oils and Preparations	-	8.9378	9.3793	8%	-	-	3.50%	2.00%	0.30	-
Partly refined (including topped crudes)	-	1.5247	1.6000	8%	-	-	3.50%	2.00%	0.30	-
Kerosene type Jet Fuel	-	6.0514	6.3503	8%	-	0.40	3.50%	2.00%	0.45	-
Illuminating Kerosene (IK)	-	10.8357	11.3710	8%	-	0.40	3.50%	2.00%	0.45	18.00
Other Medium oils and preparations	-	5.5730	5.8483	8%	-	0.40	3.50%	2.00%	0.30	-
Gas Oil (automotive, light, amber for high speed engines).	-	10.8357	11.3710	8%	18.00	5.40	3.50%	2.00%	0.30	-
Diesel Oil (ind heavy, black for low speed marine and stationery engines).	-	3.8906	4.0827	8%	-	0.40	3.50%	2.00%	0.30	-
Other Gas Oils	-	6.6245	6.9517	8%	-	0.40	3.50%	2.00%	0.30	-
Liquefied Petroleum Gas(LPG)				16%						
Residual Fuel oils 125 cst.	-	0.3155	0.3310	16%	-	0.40	3.50%	2.00%	0.30	-
Residual Fuel oils 180 cst.	-	0.6309	0.6621	16%	-	0.40	3.50%	2.00%	0.30	-
Residual Fuel oils 280 cst.	-	0.6309	0.6621	16%	-	0.40	3.50%	2.00%	0.30	-
Other residual fuels	-	0.6309	0.6621	16%	-	0.40	3.50%	2.00%	0.30	-
Lubricating oils	25%			16%	-	-				-
Lubricating greases	25%			16%	-	-				-
Batching oils	25%			16%	-	-				-
Butanes (Petroleum gases)	-			-	-	0.40				-
Petroleum Bitumen	10%			16%	-	0.40				-
Bituminous or oil shale and tar sands	10%			16%	-	0.40				-
Bituminous mixures	10%			16%	-	0.40				-

Excise duty rates remained unchanged after the High Court suspended the anticipated 4.97 percent increase on petroleum products - in line with average annual inflation. The increase was anticipated to be effective from October 1, 2021.

SOURCE: KRA

Crude Oil Price Trend

Crude Oil Analysis		
Year 2019 - 2021	Mean Exchange Rates (KES/US\$)	Crude Prices
Aug-19	103.44	62.30
Sep-19	103.79	62.44
Oct-19	103.55	63.6
Nov-19	102.2	66.6
Dec-19	101.32	69.25
Jan-20	100.97	67.8
Feb-20	101.27	56.1
Mar-20	104.05	35.58
Apr-20	106.83	17.64
May-20	106.65	23.52
Jun-20	106.48	36.34
Jul-20	107.46	44.28
Aug-20	107.93	45.74
Sep-20	108.6	42.35
Oct-20	109.14	40.16
Nov-20	110.36	43.04
Dec-20	110.52	49.57
Jan-21	109.89	55.27
Feb-21	109.67	61.61
Mar-21	109.63	65.16
Apr-21	107.84	63.94
May-21	107.61	67.71
Jun-21	107.82	63.35
Jul-21	108.26	66.7
Aug-21	109.46	72.34
Sep-21	110.21	73.5
Oct-21	111.1	69.37
Nov-21	112.33	73.41
Dec-21	113.14	82.73



Pump Prices

Maximum pump prices (15th January 2022 to 14th February 2022)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	127.46	129.72	129.24	130.13	130.12
Automotive Diesel	108.36	110.60	110.43	111.32	111.30
Kerosene	101.29	103.54	103.39	104.27	104.26

Maximum pump prices (15th December 2021 to 14th January 2022)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	127.46	129.72	129.24	130.13	130.12
Automotive Diesel	108.36	110.60	110.43	111.32	111.30
Kerosene	101.29	103.54	103.39	104.27	104.26

Maximum pump prices (15th November 2021 to 14th December 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	127.46	129.72	129.24	130.13	130.12
Automotive Diesel	108.36	110.60	110.43	111.32	111.30
Kerosene	101.29	103.54	103.39	104.27	104.26

Maximum pump prices (15th October 2021 to 14th November 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	127.46	129.72	129.24	130.13	130.12
Automotive Diesel	108.36	110.60	110.43	111.32	111.30
Kerosene	101.29	103.54	103.39	104.27	104.26

Maximum pump prices (15th September 2021 to 14th October 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	132.46	134.72	134.24	135.13	135.13
Automotive Diesel	113.36	115.60	115.43	116.31	116.30
Kerosene	108.57	110.82	110.67	111.54	111.54

Maximum pump prices (15th August 2021 to 14th September 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	124.72	127.14	126.75	127.67	127.67
Automotive Diesel	105.27	107.66	107.55	108.46	108.46
Kerosene	95.46	97.85	97.76	98.68	98.68

Maximum pump prices (15th July 2021 to 14th August 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	124.72	127.14	126.75	127.67	127.67
Automotive Diesel	105.27	107.66	107.55	108.46	108.46
Kerosene	95.46	97.85	97.76	98.68	98.68

Maximum pump prices (15th June 2021 to 14th July 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	124.72	127.14	126.75	127.67	127.67
Automotive Diesel	105.27	107.66	107.55	108.46	108.46
Kerosene	95.46	97.85	97.76	98.68	98.68

Maximum pump prices (15th May 2021 to 14th June 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	123.95	126.37	125.98	126.90	126.90
Automotive Diesel	105.27	107.66	107.55	108.46	108.46
Kerosene	95.46	97.85	97.76	98.68	98.68

Maximum pump prices (15th April 2021 to 14th May 2021)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	120.41	122.81	122.44	123.36	123.36
Automotive Diesel	105.27	107.66	107.55	108.46	108.46
Kerosene	95.46	97.85	97.76	98.68	98.68

EPRA Petroleum Prices

Breakdown of the costs of Super Petrol (PMS), Diesel (AGO) and Kerosene (DPK) in Nairobi:
15th January 2022 to 14th February 2022

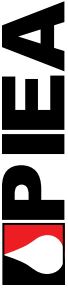
Cost Item	Cost Description	Super Petrol	Diesel	Kerosene
		Kshs/Litre	Kshs/Litre	Kshs/Litre
Landed Cost (a)	Weighted average cost for all imports	68.83	65.10	65.75
Pipeline Transport (Msa - Nrb)	Pipeline (100% PMS, AGO & IK)			
Road Transport (Msa-Nrb) - Bridging	Road (0% PMS, AGO & IK)			
Pipeline Losses	Pipeline (0.25%)			
Depot Losses	0.5% PMS, 0.3% For DPK & AGO)			
Delivery within 40kms of Nairobi	Delivery to petrol stations			
Storage and distribution (b)		3.30	3.01	2.99
Importers Margin	Wholesale			
Dealers Margin	Retail Investment Margin			
	Retail Operating Margin			
Supplier Margins (C)		0.00	0.00	0.00
Price Stabilization Deficit (d)		-1.26	-4.15	-6.37
Excise Duty	Tax	21.95	11.37	11.37
Road Maintenance Levy	Levy	18.00	18.00	0.00
Petroleum Development Levy	Levy	5.40	5.40	0.40
Petroleum Regulatory Levy	Levy	0.25	0.25	0.25
Railway Regulatory Levy	Levy	1.32	1.23	1.25
Anti-adulteration Levy	Levy	0.00	0.00	18.00
Merchant Shipping Levy	Levy	0.03	0.03	0.03
Import Declaration Fee	Levy	2.30	2.17	2.20
Value Added Tax (VAT)	Tax	9.60	8.19	7.67
Taxes and Levies (d)		58.85	46.64	41.17
Retail Prices in Nairobi (a) + (b) + (c) + (d)		129.72	110.60	103.54
Summary		Super Petrol	Diesel	Kerosene
		KShs/Litre	KShs/Litre	KShs/Litre
Product Costs (a)		68.83	65.10	65.75
Distribution and Storage Costs (b)		3.30	3.01	2.99
Margins (c)		0.00	0.00	0.00
Price Stabilization Deficit (d)		-1.26	-4.15	-6.37
Taxes and Levies (e)		58.85	46.64	41.17
Retail Prices in Nairobi		129.72	110.60	103.54

NOTE:

The applicable pump prices for this cycle have been maintained as the ones applicable in the previous cycle.
The Government will utilise the Petroleum Development Levy(PDL) to cushion consumers from the otherwise high prices.

SOURCE: EPRA

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