

iNSiGHT

The Magazine of the Petroleum Institute of East Africa

4th Quarter, October - December 2020



LPG: A Reliable, Resilient and Essential Cooking Fuel

INSIDE

- Blue Skies Turning Grey: Changing The Narrative
- 2020 PIEA Virtual Gala Dinner Dance
- Modernizing Human Resource Legacy Systems: Lifenet
- GoK Extends Tullow Oil Exploration Licenses



PREVENTS
UP TO
93%*
OF DEPOSIT
BUILD-UP

Fight dirt in your engine

The fuel that cleans your engine km after km



TOTAL

Committed to Better Energy

*TOTAL EXCELLIUM prevents up to 93% of fouling in petrol engines and 89% in diesel engines and cleans up to 36% of existing build-up in diesel engines and 24% in petrol engines, in comparison to a non-specifically additivated fuel. Tests conducted by an independent body. More information on www.total.co.ke



Get The Value You
Pay for



Guaranteed VALUE!
DELGAS

Contacts

Galana Oil Kenya Ltd

2nd Floor, Delta Office Suites, Block B, Off Waiyaki Way & Manyani West Road,
Muthangari P.O. Box 11672 - 00100 Nairobi, Kenya

Tel: 254 20 4934000/3593774/3593775/0709497000 Fax: 254 20 4934401



زيوت محركات فائقة الأداء
PREMIUM MOTOR OILS



In this issue

Board of Directors

Chairman – OLA Energy
Vice Chairman – VIVO Energy
 Total Kenya PLC
 RUBIS Energy
 Gulf Energy Limited
 Galana Oil (K)
 Hashi Energy Limited
 National Oil Corporation
 Kenya Pipeline Company
 Kenya Petroleum Refineries
 Hass Petroleum
 Africa Gas & Oil
 Petrocity Energy
 Gapco Kenya Limited
 VTTI (K) Limited
 Tosha Petroleum
 East African Gas Oil
 Lexo Energy
 Riva Petroleum
 Stabex International
 Kurrent Technologies
 KIPEDA
 Tristar Kenya Limited
 Cooperative Bank of Kenya Ltd.
 Robert Paterson
 John Ng'ang'a

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
 0723 242 440, 0721 234 838
 Email: info@energyea.com

Editorial Board

Wanjiku Manyara and Jennifer Midumbi

Contributors

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

Petroleum Insight is published quarterly
 by the
 Petroleum Institute of East Africa.
 Views expressed in this publication do
 not necessarily reflect the position of
 PIEA. All rights reserved.

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.petrileum.co.ke



5



9



11



30

From the General Manager

4

Cover story

14

- By The Fireside
- Household Air Pollution Training for Community Health Workers
- OLA Energy: Ensuring African Born Prosperity
- Clean Cooking in Uncertain Times
- Investment in Essential LPG Infrastructure to Meet Growing Demand
- How Cooking Gas will Change East Africa
- LPG - One of The Products of Our Generation
- There Can Be Fire Without Smoke!
- Tapping into Kenya's LPG Potential
- Tosha Petroleum's LPG Storage and Filling Plant Underway
- Auto-gas Revolutionizing Transport Sector
- Kimball Chen: A Champion of Clean Cooking Fuel for the World's Poor

Regional News

32

Upstream

34

Statistics

37

HYBRID EVENT

PIEA - WLPGA

SUMMIT & TRAINING WORKSHOP

LPG: A Reliable, Resilient &
Essential Cooking Fuel

7th, 8th, and 9th
April 2021

Contact

David Tyler (dtyler@wlpga.org) or

Wanjiku Manyara
(cmanyara@petroleum.co.ke)

Key topics:

The Summit content will include discussions addressing, amongst other topics: regional LPG markets with a focus on Sub Saharan Africa, safety in the industry, the critical role of communications and diversity.

Service to Country

Excerpts of PIEA Chairman Remarks at PIEA AGM 2020

As we all know, this has been an unprecedented year like no other. What started as a global health crisis not only significantly disrupted economic activity but our way of doing business as well-literary-our AGM is virtual!

The Industry social and economic response cannot go unnoticed; the availability of alcohol based hand sanitizers for free distribution to the citizenry was made possible by Kenya Pipeline Company and Oil Marketing Companies(OMCs) that own local lubricant manufacturing plants. Consumers continued to be safely, efficiently and adequately supplied with their petroleum energy needs.

The aforementioned impact from the pandemic gave PIEA the impetus to further justify the urgency of revamping our local manufacturing of lubricants, using the Industry's proposed reforms strategy, specifically through fiscal incentives. We expect that the National Treasury will in the 2020/2021 National Budget feature our proposal as appropriate, given that as at now it has received endorsement by our parent Ministry (Ministry of Petroleum and Mining), Ministry of Trade and Industrialization as well as the Ministry of Energy.

PIEA aptly picked and interpreted the lessons from the pandemic and sought to address the gaps holistically through the available processes and facilitative instruments namely formulation and crafting of the Petroleum Policy, Kenya National Petroleum Master Plan (KNPMP) and Petroleum Act 2019 Regulations, all of which are at different stages of completion and further which PIEA has actively participated by making the necessary contributions.

We are tracking to ensure that our submissions have been included and we encourage you all to participate in the structured engagements, and also in the public stakeholder's forums for each, once you receive the invites accordingly.

We continue to uphold that there is great value of our extensive proactive participation during the formulation stage of regulatory instrument prior to them being subjected to the wider segment players and stakeholders. So please rally your teams to support the PIEA Secretariat by actively participating as and when required.

We have closely followed and continuously engaged the Kenya Ports Authority (KPA) on the construction of the new oil terminal at KOT which is expected

to enhance berthing and discharge efficiency at the Port and further provide the opportunity for willing traders to utilize their existing as well as planned storage capacity post commissioning of the new KOT. As at now, KPA has advised us that substantive completion of the project construction remains as October 2021.

The PIEA focus for the financial year 2019/2020 has been to advocate for the realization of envisioned investor incentive sector reforms driven by the full implementation of the Petroleum Act (PA)2019, enforcement of Regulations coming off this Statute as well as the enforcement of Regulations existing in other Laws that govern the Petroleum Energy Sector including but not limited to Finance Act, Occupational Health and Safety Act and the Environment Management and Coordination Act.

Allow me to express my sincere appreciation to Members for their understanding on the approach that we have had to take, especially in nudging the Energy and Petroleum Regulatory Authority (EPRA) to fully enforce LN 100, and secondly in our advocacy in exempting the Industry from the 1% Minimum Tax. We have experienced tangible progress thus far, and we are hopeful that the efforts will yield sustainable and successful results as envisaged.

Noteworthy progress has been made in driving our sectors health, safety, security, environment and quality agenda;

- The Safe Waste Oil Disposal(SWOD) system which Industry has been piloting for the last three years in conjunction with Geocycle (Bamburi) continues to expand in terms of utilization and impact which has been made possible by sensitization through workshops-this year it was successfully held virtually and it had excellent participation of industry and regulators as well.
- Harmonization of standards across EAC has progressed well with a total of ten (10) EA region standards approved for petroleum products, equipment and facilities. Kenya's adoption process for each of these standards has commenced through the KEBS and the process closes this mid-December.
- PIEA Membership forums, which are now virtual, have this year provided a platform for discourse on advancing the unlimited opportunities on innovations, financing and integration of renewables with conventional fuel on account of the new and upcoming standards -this is commendable as industry does

not exist in isolation and we must be alive to the dynamism of the energy sector and the clamor for sustainable development.

On capacity building, it is commendable that the PIEA School aptly transitioned to offering its training programs online and though a loss was reported this financial year, it should be noted that all the scheduled programs, including the international training workshop, were conducted.

The virtual training has elicited evolution in the modules for the appropriate course delivery and hence the recovery from the reported loss will be slow as will the raking in of the revenue comparative to the previous contact training model.

This means that there is still a lot of work ahead of us in fully reforming the training programs and I encourage the School Management Committee to formulate the necessary strategic proposals for the appropriate decision making on keeping this much needed capacity building undertaking afloat.

It is worthwhile to mention that preliminary results show that there is improved demand on petroleum and petroleum products globally in the third quarter 2020 compared to the second quarter 2020-specifically a 28% increase-though it's important to note that compared to the same quarter in 2019 there is a 9% slump. If we compare January to September 2019 to the same period this year, there is a 15% reduction in consumption which as anticipated, wholly relates to the condensed demand in petroleum energy on account of restrictions on mobility, social and economic activity due to COVID-19. We will issue a public data report on this in the first week of December 2020, with the market share trends across board. For specific market share data, we encourage stakeholders to acquire this from the PIEA data and information Centre.

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.

Thank you very much.

Millicent Onyonyi
Chairman, PIEA

Be Energy Opens new Service Stations



Newly opened Be Energy service station located at Ruiru.



Newly opened Be Energy service station located at Racecourse, Ngong Road.

Be Energy Limited has added two new stations in Racecourse, along Ngong Road and another one Ruiru town along Githunguri Road. This is in addition to a vibrant growing retail network within the East Africa region

Our new stations have been designed to accommodate modern facilities to provide a one-stop experience to meet the ever changing customer needs. Our Staff are well trained and experienced to offer seamless service to all our customers. According to James Nginya, the Company's General Manager – Sales & Marketing.

BE Energy which is a major player in the Aviation fuels business in the region, plans to expand its network throughout the Country and the region in the coming years.



E-GAS
The Power to
a Cleaner Energy



For more information Contact on: 0207-655 444, 0716 -555-444
Email: info@egaskenya.co.ke

Blue Skies Turning Grey: Changing The Narrative



The biggest challenge electric vehicles and motorcycles have is lack of public charging infrastructure needed to recharge the batteries. A cooperation between service stations and electric vehicle solution providers such as ourselves is important to gradually unlock the enormous opportunities

The world is slowly but steadily moving to cleaner non fossil fuels. Though the displacement of fossil fuels may take a number of years, the change is inevitable as Countries reduce emission levels and International Financiers opt to fund cleaner, environmental friendly and sustainable energy projects and initiatives.

The East Africa Community has made tremendous steps in reducing air pollutants from fossil fuels. In 2019, E.A countries adopted the harmonization of East Africa Petroleum Standards which saw the region reduce sulphur content significantly from 500ppm to 50ppm.

During a virtual Membership Forum meeting hosted by PIEA, it was noted that the region now imports cleaner fuels with reduced Sulphur content in PMS from 150ppm in the 2015 standard cycle to the current 50ppm. The industry also reported to importing diesel with less than 10ppm sulphur content and a reduction of benzene from 3ppm to 1ppm.

While addressing the more than 30 participants drawn from the industry and other sectors, PIEA General Manager Wanjiku Manyara noted that the petroleum industry “is making every effort to ensure our fuels, at the very least are clean as much as possible.”

“The other role we have played is to ensure that petroleum products are cleaner especially those that do not pollute indoor environment - that is LPG. PIEA steered and championed for the new regulatory framework – Legal Notice 100. International Financiers are looking into funding green projects and the industry needs to take note of this and gradually align itself with the change. Perhaps we can ask ourselves, is it time for the sector to migrate from being fuel centers to energy centers?” she posed.

Electric charging stations is one such energy centers that service stations in Europe have adopted as electric cars become more popular as they are less pollutant.

Speaking during the Membership Forum, Opibus, a company that converts fuel driven vehicles and motorcycles

to electric, said that oil marketing companies need to consider investing in electric charging stations alongside the conventional fuel stations to cater for the growing electric vehicle clientele.

Opibus Co-founder and CSO Mikael Gange noted that Kenya and the East Africa region in general is open to electrified vehicles and motorcycles but charging infrastructure remains a challenge.

“Our business area is creating an end-to-end system for electric mobility in Africa. We convert both diesel and petrol driven vehicles and motorcycle to electric. The motorcycle use rechargeable batteries and we have come up with electric motorcycle swapping stations where motorcyclist can swap batteries for fully charged one” explained Gange.

“The biggest challenge electric vehicles and motorcycles have is lack of public charging infrastructure needed to recharge the batteries. A cooperation between service stations and electric vehicle solution providers such as ourselves is important to gradually unlock the enormous opportunities.”

Modernizing Human Resource Legacy Systems: Lifenet

Creating Efficiencies Through Digital Transformation

As the world transitions to working remotely, so does the digital space to accommodate new demands. Companies are in search of technology that optimizes internal operations and efficient service delivery to its clients.

In an era limiting human contact, digital space is becoming critical to effectively run an organization, especially the human resource department – a crucial department that caters for employees' well-being, that includes medical health.

Lifenet from Life Care is a digital platform that streamlines the administration of medical policy. The system reduces the burden on human resource team for upload of documents, requests for replacement of medical cards, travel and medical certificates.

Speaking during PIEA quarter 4 2020 Membership Forum, Life Care Director at the CEO's office Karim Ladha said the system enables human resource managers to easily manage employee's health insurance plan from their remote working environment.

"At Life Care International, we are looking at empowering the Human Resource when it comes to medical plan. Our state-of-

the-art digital platform is able to streamline policy administration of medical plan. Workflow reports can be generated to show premiums for mid-term adjustments and hence impact to the bottom line. Financial impact when members join medical policy midway and positive impact when members leave policy midway" said Karim.

"Lifenet features and functions enable HR teams to view, track and action endorsements such as Additions, Deletions, Transfers and Modifications. It also has an option to extend direct log-in to staff who can then view and receive information regarding their health insurance policy, plan details, providers networks and access to helplines. Lifenet communication platform makes it easier for HR Teams to disseminate real time information to staff."

PIEA membership forum is a free of charge virtual quarterly engagement for members and non-members at the end of every quarter.

Mr. Karim Ladha Director-CEO's office Life Care international.
<https://lifecareinternational.com>



Workflow reports can be generated to show premiums for mid-term adjustments and hence impact to the bottom line

Office Working Space



PIEA would like to bring to your attention the availability of office working space at our current office premises located at the Central Business District at the 4th Floor South Wing of Bruce House (along Standard Street).

The subleased office space is within PIEA offices and is well equipped with comfortable office furniture, stable internet connection and a backup power generator.

Essentially, this space is ideal for individuals who are seeking a serene study environment or working remotely with minimal distractions.

The subleasing of this space will be available only to PIEA members at rate of KShs. 2,000 per person per booking

session and this includes access to all office features such as a Board Room for meetings and fully equipped office with furniture, internet and power supply.

An individual may book a session for at least 8 working hours and the office will be open from 8.30 a.m.- 4.30 pm.

Discounts will be provided for clients with long term working plans.

In line with the COVID-19 health measures each individual needs to come with their own masks and we will only accept a maximum of 2 individuals to be present at one time in the office space per booking.

Bookings can be made by dropping an email to accounts@petroleum.co.ke and payments will be done via Mpesa.

Mpesa payment details Paybill

Business Number; **303030**
Account number; **094-8236273**

All Covid-19 measures are in place including hand sanitizing, social distancing and wearing of masks.

Construction of New Kipevu Oil Terminal to be Completed in 2021

Construction of the new ultra modern Kipevu Oil Terminal by Kenya Ports Authority to replace the existing one is currently at 69.12% complete.

The New Island KOT is located off-shore opposite the existing Kipevu Oil Terminal which is located in an area between Berth 19 and the newly constructed Berth 20.

The objective of this Project is to develop, design and construct a new oil terminal facility consisting of an island oil terminal with four berths capable of importing and exporting six different hydrocarbon products; LPG, crude oil and heavy fuel oil, three types of white oil products (DPK – aviation fuel, AGO – diesel and PMS – petrol).

KPA is cognizant of the fact that the region is set to join the global oil producing and exporting countries. This is demonstrated by the oil exploration activities currently in Uganda and Kenya where millions of barrels are expected to be produced for the export market. The



Once complete, the terminal will have a capacity to handle four ships at a time compared to the current terminal which handles only one ship at a time. This will reduce cost of handling as efficiency improves cutting on ship waiting time.

South Sudan is also gearing to use the facility in Mombasa until when the Lamu Port project is completed.

The KOT project consists of one offshore island terminal with four berths of a total length of 770m, one work boat wharf at Westmont area for landing facilities. The facility is connected by five sub-sea pipelines and risers each dedicated to a separate oil product, 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.

Other facilities include the electrical power distribution system and utilities,

water supply and drainage system, firefighting and detection facilities, telecommunications SCADA and control monitoring systems, navigation aids for the Island KOT.

The project is being constructed by China Communications Construction Company Limited who commenced in February 2019 and is expected to run for a Contract Period of 34.5 months, to be completed in December 2021.

Once complete, the terminal will have a capacity to handle four ships at a time compared to the current terminal which handles only one ship at a time. This will reduce cost of handling as efficiency improves cutting on ship waiting time.



RUBiS Energy Kenya Officially Launched

RUBiS Energy Kenya was officially launched into the market following the successful acquisitions of KenolKobil Plc and Gulf Energy Holdings Ltd in 2019.

These acquisitions saw RUBiS Energy Kenya become a leader in the Kenyan oil industry with a market share of over 9.9% and a network of more than 230 service stations.

According to Jean-Christian Bergeron, RUBiS Energy Kenya Group Managing Director, RUBiS decided to enter the Kenyan market based on the region's high growth potential and the conviction that the proven expertise of RUBiS would bring extra value to all Kenyan customers.

During the launch, Bergeron noted the company's investment priority is modernization of its existing retail outlets into state-of-the-art service stations with convenience stores.

"In addition to the acquisition of KenolKobil Plc and Gulf Energy Holdings Ltd, we will continue to invest heavily in the market through modernization of our existing retail outlets into state-of-the-art service stations. Our network of over 230 service stations is strategically and widely located across the country, thus playing a key role in delivering quality products and services to all Kenyan customers in a safe environment. We are launching an unparalleled shopping experience through our convenience store brand, RUBiS Express, by providing world-class convenience to motorists on the go, saving them time and money. We also provide a fuel card system that gives motorists total control of their fuel-related expenses through our RUBiS Card, offering convenience and efficiency when making payments at our retail outlets" said Bergeron.

"Furthermore, we are significantly investing in the development and promotion of LPG, which is a clean and affordable energy source that will support the Government's ambition for an improved quality of life for all Kenyans. We also market an extensive range of high-quality lubricants under the K-Lube and Castrol brands and our products, imported or locally blended, meet the highest specifications demanded by most automotive and equipment manufacturers"

RUBiS Energy Kenya is the largest supplier of aviation into-plane refueling services for regional and international commercial and cargo carriers. The company is committed to delivering quality products and services to other business sectors in areas such as industry, agriculture, aviation and road infrastructure development.

The global energy player, occupying a strong position in more than 40 countries across three continents: Europe, Africa and the Caribbean, is also looking at leveraging its integrated distribution chain to increase market share in the region.

RUBiS Energy Kenya has subsidiaries in Burundi, Ethiopia, Rwanda, Uganda and Zambia with business units that include Retail, Lubricants, LPG, Trading, Supply, Aviation, Commercial & Industrial and Exports to various East African countries.

RUBiS Energy Kenya plays an active role in corporate social responsibility activities themed around education, health, safety and environment. The oil marketer has most recently supported



From L - R: Jean-Christian Bergeron Group Managing Director of RUBiS Energy Kenya, Andrew Kamau, Principal Secretary – State Department of Petroleum, Ministry of Petroleum and Mining and Martin Kimani, General Manager – Kenya during the official launch of RUBiS Energy Kenya brand in the country.

initiatives in response to the COVID-19 pandemic by installing sanitation facilities in various locations around Nairobi and providing fuel for ambulances and generators at Mbagathi Hospital.



we are significantly investing in the development and promotion of LPG, which is a clean and affordable energy source that will support the Government's ambition for an improved quality of life for all Kenyans. We also market an extensive range of high-quality lubricants under the K-Lube and Castrol brands and our products, imported or locally blended, meet the highest specifications demanded by most automotive and equipment manufacturers

2020 PIEA Virtual Gala Dinner Dance

The Membership Committee(MC) had underestimated the vibrant response from Members on the virtual alternative to the traditional annual gala dinner dance. It was delightful to receive abundant optimistic reaction from Members on the virtual dance participation.

Publicizing of the virtual dance, Jerusalem challenge, was issued via email and PIEA website. The publicity

information indicated that the virtual dance videos would be uploaded on YouTube, Facebook and Twitter, which was intended to give an equal chance to all participating Members in garnering of votes. The votes were to be drawn from likes and viewership (the latter being mainly to trigger motivation to submit the videos).

The MC was ecstatic about the meticulousness that Members undertook

in putting together excellent recordings of their teams taking up the virtual dance challenge.

Special shout out to the courageous Directors who took on the challenge seamlessly bringing out the Corporate authenticity and culture!-Christian Calledo (Oryx Energies) and Leparan Morintat (National Oil), kudos!

The MC hereby announces the outcome of the final poll results as follows;

Overall winner	1 st Runner Up	2 nd Runner Up
Galana Oil Ltd	Oryx Energies	National Oil
		
		ENERGIZING KENYA

Congratulations to the top three and to all the participating teams

To view the virtual dance videos kindly visit the Petroleum Institute of East Africa YouTube channel.
<https://www.youtube.com/watch?v=YiXduXLIOOQ>

Total Kenya Launches Its 100TH Solarized Service Station at Burnt Forest

Total Kenya PLC launched its 100th Solarized service station at Burnt Forest. The company is steadily shifting all service stations to green energy, greatly reducing its electricity consumption.

Total Kenya also opened a new ultra modern service station in Nyali area, Mombasa, and officially commissioned revamped Lube Oil Blending Plant in Shimanzi, Mombasa and Nairobi Lubes Warehouse.

Jean-Philippe TORRES Total Marketing & services Executive Vice President East & Central Africa and Chairman of the Board of Total Kenya officially commissions the recently revamped Lube Oil Blending Plant (LOBP) located in Shimanzi, Mombasa County. Looking on is Olagoke Aluko, Total Kenya Managing Director (2nd L), Gérard OBERTI (L)- Operations Manager and Japhet Mwatsama (R) the Plant Manager.



Jean-Philippe TORRES (R), Total Marketing & services Executive Vice President East & Central Africa and Chairman of the Board of Total Kenya officially, Olagoke Aluko (L), Total Kenya Managing Director and Kennedy Chabani, Service Station Dealer during the inauguration the 100th solarized service station in Kenya.



Jean-Phillippe TORRES (2nd R), Total Marketing & Services Executive Vice-President East & Central Africa & Total Kenya's Chairman and Honorable Mohamed Faki Mwinyihaji (3rd R), Senator Mombasa County officially opens TOTAL Links Road located in Nyali area in Mombasa. Looking on are Aharub Ebrahim (3rd L), -Speaker- Mombasa County, Olagoke Aluko (R), Total Kenya Managing Director, Francois-Xavier Ruenes (L), Commercial Manager Retail & Lubricants, James Kamau, HSE Manager and Ayman Bayuauf (2nd L), Service station dealer.

Jean-Philippe TORRES (3rd L), Total Marketing & services Executive Vice President East & Central Africa and Chairman of the Board of Total Kenya officially commissions the recently revamped Nairobi Lubes Warehouse. He was accompanied by Olagoke Aluko (2nd R), Total Kenya Managing Director, Gérard OBERTI (2nd L)- Operations Manager, James Kamau (L)- HSE manager and Cyprian Mungume (3rd R), Logistic Manager Specialties Manager and John Kabage (R), the Warehouse Manager.



(From Left) Jean-Phillippe TORRES, Total Marketing & Services Executive Vice-President East & Central Africa & Total Kenya's Chairman, Olagoke Aluko, Total Kenya Managing Director, Francois-Xavier Ruenes, Commercial Manager Retail & Lubricants and Ayman Bayuauf, Service station take a group photo with TOTAL Links RD staff after the official launch of the station.

Jean-Philippe TORRES (3rd R), Total Marketing & services Executive Vice President East & Central Africa and Chairman of the Board of Total Kenya officially commissions the recently revamped Lube Oil Blending Plant (LOBP) located in Shimanzi, Mombasa County. He was accompanied by Olagoke Aluko (2nd L), Total Kenya Managing Director, Francois-Xavier RUENES (R), Commercial Manager Retail & Lubricants, Gérard OBERTI- Operations Manager (L), James Kamau (3rd L)- HSE manager and Japhet Mwatsama the Plant Manager.



Jean-Philippe TORRES (R), Total Marketing & services Executive Vice President East & Central Africa and Chairman of the Board of Total Kenya plants a tree during the officially commissioning the recently revamped Kisumu Lubes Warehouse. Looking on is Olagoke Aluko, Total Kenya Managing Director.



Aggreko's Canopy Generator to Reduce Particulates by 98%

Aggreko launched the Tier 4 Final / Stage V 600 kVA canopy generator which uses a variety of advanced exhaust treatment processes to remove the most harmful pollutants. Aggreko has specifically designed the generator, which delivers a 98% reduction in the volume of particulates and expels 96% of NOx gases, to comply with tightened emissions regulations in both the US and Europe.

While helping customers to limit the environmental impact of their operations, the innovative solution will ensure no compromise is needed in terms of the reliability of power supply. As well as more traditional thermal fuel sources, such as diesel, the Tier 4 Final / Stage V generator can also run on biofuels derived from plant material.

The new generator prioritises efficiency, delivering the lowest fuel consumption compared to the industry standard. Combined with the integration of Aggreko's Remote Monitoring services, this will reduce service costs and

interruptions to operations associated with in-person service checks.

The new power solution will be available to rent on flexible contract duration terms to meet the needs of individual

customers. Renting provides greater flexibility to help businesses maintain their balance sheets, by avoiding CAPEX outlays on equipment which, due to the rapidly accelerating energy transition, may be surpassed by improved technologies in a relatively short number of years. It also means that operations and maintenance costs are included in a flat fee allowing for a clearer view of total costs.

"The launch of our new lower-emission Tier 4 Final / Stage V genset couldn't come at a more important time for our customers. With businesses in all sectors looking to reduce the environmental impact of their operations, our latest innovative power package provides a solution to help them remove some of the most damaging emissions – particulate matter and NOx gases – that are typically produced by on-site power generation. Our engineers have also prioritised making our products as efficient and self-reliant as possible, which help reduce O&M downtime and costs for our customers" said Bill Carrick at Aggreko

“

The launch of our new lower-emission Tier 4 Final / Stage V genset couldn't come at a more important time for our customers. With businesses in all sectors looking to reduce the environmental impact of their operations, our latest innovative power package provides a solution to help them remove some of the most damaging emissions – particulate matter and NOx gases



SCHOOL OF PETROLEUM STUDIES - TRAINING CALENDAR FOR YEAR 2021

CODE	COURSE TITLE	DURATION			DATE
(H)LUBRICANTS					
S PS003H	Introduction to Lubricants	2 hours	Module 1: Fundamentals of lubricants & lubrication	27/1/2021 10.30 a.m-12.30 p.m	
			Module 2: Classification of lubricants & specifications	28/1/2021 10.30 a.m-12.30 p.m	
			Module 3: Policy, legal and regulatory framework	29/1/2021 10.30 a.m-12.30 p.m	
(B) OIL AND GAS RETAIL AND MARKETING COURSES					
SPS 003B	Service station management course	3 hours	Module 1:Introduction to the oil & gas sector	3/02/2021 12.30 p.m-3.30 p.m	
			Module 2: Customer service management	4/02/2021 12.30 p.m-3.30 p.m	
			Module 3: Understanding Service station lay out	5/02/2021 12.30 p.m-3.30 p.m	
			Module 4:HSSE & site maintenance	8/02/2021 12.30 p.m-3.30 p.m	
(D) AVIATION FUEL MANAGEMENT COURSE					
SPS 004D	Introduction to aviation operations	2 hours	Module 1: Product Knowledge	11/2/2021 10.30 a.m-12.30 p.m	
			Module 2: Policy, legal and regulatory framework	12/2/2021 10.30 a.m-12.30 p.m	
			Module 3: Aviation fuel supply chain	15/2/2021 10.30 a.m-12.30 p.m	
(C) HEALTH SAFETY SECURITY AND ENVIRONMENT COURSES					
SPS001C	Petroleum sector occupational health, safety & security (HSSE) management course	2 hours	Module 1: Occupational health and Safety legal & regulatory framework	25/2/2021 10.30 a.m-12.30 p.m	
			Module 2: HSSE compliance mechanisms	26/2/2021 10.30 a.m-12.30 p.m	
			Module 3: Emergency response planning & preparedness	1/3/2021 10.30 a.m-12.30 p.m	
SPS006M	Incident Command System Introduction Course Level 1: Joint training of PIEA SPS in collaboration with KPC-MIOG	3 days	Level 1	23-25/2/2021	
(E) LPG OPERATIONS SALES & MARKETING COURSES					
SPS003E	LPG sales, operations and marketing management	2 hours	Module 1: LPG value chain	12/3/2021 10.30 a.m-12.30 p.m	
			Module 2: Quality control and assurance	15/3/2021 10.30 a.m-12.30 p.m	
			Module 3: Product loss and investigation	16/3/2021 10.30 a.m-12.30 p.m	
			Module 4: Emergency response and preparedness plan	17/3/2021 10.30 a.m-12.30 p.m	
SPS 004E	Introduction to the LPG sector	2 hours	Module 1:Product knowledge & legal regulatory framework	17/5/2021 12.30 pm-1.30 pm	
			Module 2:LPG infrastructure and business models	18/5/2021 10.30 a.m-12.30 p.m	
			Module 3: LPG innovations & emerging opportunities	19/5/2021 10.30 a.m-12.30 p.m	
SPS004G	Introduction to the Oil & Gas Sector	2 hours	Module 1: Product Knowledge	15/4/2021 10.30 a.m-12.30 p.m	
			Module 2: Legal and regulatory framework	16/4/2021 10.30 a.m-12.30 p.m	
			Module 3: Market supply chain and fiscal regime	19/4/2021 10.30 a.m-12.30 p.m	



Certified trainees from African Gas Oil (AGOL) Mombasa after attending SPS online training on PETROLEUM SECTOR REGULATORY TRAINING REQUIREMENTS: LPG BULK STORAGE FACILITIES

**All Courses will be done
Online via Microsoft teams/Skype**

Additional information:

Online course charges:

Scheduled calendar training sessions:

Cost per person per module: US \$ 57 / Kshs. 5,700 only

Alternative for scheduled calendar training sessions:

Executive Private/Group Sessions:

Cost per person per module: (US \$ 114) / Kshs. 11,400 only
(Under the Executive Private/Group Sessions we offer individual or group sessions which are designed to fit your time and date schedule.)

Contact us for customized In-house and Open-course trainings.

For enquiries kindly contact school@petroleum.co.ke or call 0722 221 120

N/B - Scheduled calendar training sessions- The training take place as scheduled in the calendar dates/time as listed above.
Executive Private/Group sessions- The training is delivered as per trainee's request depending on their availability.

By The Fireside

LPG is a resilient, reliable and versatile fuel that saves lives in crisis

By Elizabeth Muchiri



Elizabeth Muchiri
Global LPG Partnership

Irrespective of the node in the LPG supply chain, few players take a moment or even care to consider the uniqueness of LPG when compared to other household fuels. Yet, LPG is a resilient, reliable and versatile fuel, that demonstrates its unique attributes especially in times of crisis.

For instance, during the early stages of the on-going worldwide pandemic, many people dashed to buy stocks of the goods they needed, and were particularly concerned either about perishability of the consumables, or adequate storage for the same. For LPG, this was not the case, and that concern is not necessary. LPG in the cylinder does not deteriorate, and while there would be safety concerns about how much one should ideally store in the household, the question of the gas in the cylinder expiring does not arise. Secondly, the compact nature of the fuel means that one can store a relatively large stock to last several weeks, in a small cylinder such as the ones that are used at home. Undeniably, there is no other household fuel that is stored in small handleable containers as small and compact as LPG.

Thus, as families complied with 'stay home', one of the things they did not have to worry about was cooking fuel, if they did have LPG in their cylinders. And when the cylinder did get used up, the households were still assured

that the new refill will last a 'while' with the actual 'while' being dependent on how much cooking was taking place. Undocumented reports indicate families were cooking more since they were at home, Undocumented reports indicate that families are now cooking more since they are spending more time at home than pre-Covid 19 pandemic.

In this uncertainty, LPG has proven itself once again as the most resilient, reliable and versatile household fuel, which withstands natural disasters and keeps humanity alive – literary. Casual discussions with those living in high-density areas indicate that some intermittent users of LPG, now afraid of coughing when using 'cheaper' and dirty fuels, decided LPG was a cleaner and healthier option.

While the current crisis pre-occupies our minds, there are other more localised and devastating (if not contagious) crises, whose effects were dramatically reduced by LPG. These include the earthquake and subsequent Tsunami in Japan in 2011, and the on-going humanitarian refugee crisis in Bangladesh.

In March 2011, a major earthquake measuring 9.0 on the Richter scale, was experienced in the Pacific Ocean near Tohoku region, in Japan. This caused massive destruction of buildings, roads and infrastructure. It was soon followed by a devastating tsunami, flooding the region within minutes. Reports indicate about 20,000 people died.

Those who survived had no homes and nowhere to hide. The damage caused to infrastructure had not spared the LPG infrastructure, but fact that LPG is off-grid, scalable and distributable, made it bounce back faster than any other fuel, and save lives. The disjointed facilities were quickly made operational, and as makeshift and temporary centres were assembled, LPG was soon made available to cook meals and keep people warm. Thus, it saved many people who would have died from hunger or cold or both, as the world community was organising resources to handle the unique emergency.

Since then, the Japan government, which deals with numerous earthquakes every year, has reportedly encouraged households to have some strategic stocks of LPG, while designated rescue centres also stock LPG to cook and to power generators in case of similar emergency.

Another outstanding case where LPG has been used to avert a crisis was in Bangladesh, meeting the cooking needs of the refugees and the neighbouring host communities. The refugees in Bangladesh started arriving in the 90s, but the crisis became evident in August 2017, with a sudden influx of 742,000 refugees. The emerging settlements resulted in rapid environmental damage as the newcomers cut trees to build shelters and to cook. The UNHCR realised quickly that allowing the environmental degradation to continue would result not only to lack of fuel, but possible conflict with host communities.

Thus, by working with other bodies concerned with environment and academicians, a decision was made to supply the refugees with LPG. Currently, all the nearly one million refugees, as well as over 10,000 members of the host communities, are receiving LPG and using it for cooking.

While the original aim was to protect the environment and provide clean cooking, it has also emerged that LPG has an additional benefit. The refugees, cooking the same foodstuffs they were cooking before, have now been found to have better nutrition, with the only variable being use of LPG. This surprising result is yet another reason why use of LPG should be encouraged, as healthy people are more productive and are also able to ward off other ailments as we have recently learnt in management of COVID-19.

The two success stories are support to the known but little emphasised characteristics of LPG:

- Off-grid: No interconnections are necessary or mandatory to supply LPG. While pipelines can be provided in advanced cases, emergency and start up supply for LPG can easily be done in single distributable cylinders
- Scalability: Since cylinders are fairly accessible, they can be made available to large populations in short time spans, where there is a will.
- Divisibility: LPG can be packaged in various sizes and easily moved around
- Easy to use: simple equipment that are easily assembled, and users can be quickly

taught how to use, even if they have not used it before

- Convenience: lending it to multiple uses and users, resulting in gender balance, better nutrition, more time and therefore more economic activity
- Clean cooking: leading to improved air quality and health,

as well as a better environment.

- Consistency: Every consignment will behave exactly as expected, and most families soon establish how long their cylinder lasts

For regional marketers in LPG, these two cases and the results call upon marketers to be more proactive in seeing how LPG can household problems, and take up the challenge, including seeking partners when necessary.

The author is The Global LPG Partnership Director, East Africa.

Household Air Pollution Training for Community Health Workers

Household air pollution from reliance on wood, charcoal and kerosene for household energy was estimated to be responsible for 22,109 deaths and more than a million years lived with disability in Kenya in 2019.

Its for this reason, a team from the University of Liverpool, Amref International University and the Ministry of Health has been working to develop a new module to empower Kenya's community health workforce (CHW) to tackle the problem.

The new technical module aims to raise awareness of the health impacts from household air pollution and how to minimise these through prevention strategies, such as clean cooking, that can be implemented by households.

With support from the World Health Organisation, the module was piloted by the University of Liverpool for 100 CHWs in Uasin Gishu County in November 2019 and was due to be ratified by the Ministry of Health in March 2020, when the first case of COVID-19 paused the process. Finalisation of the module is now under way with training Ministry of Health community health worker trainers in December 2020, to be delivered by experts from the University of Liverpool. This is the final step before the module will be rolled out to CHWs across the counties of Kenya

under Universal Health Coverage benefitting 70% of Kenya's population who currently rely on polluting household fuels.



The new technical module aims to raise awareness of the health impacts from household air pollution and how to minimise these through prevention strategies, such as clean cooking, that can be implemented by households.

Training of Community Health Workers in the new MoH module on HAP, health and prevention. Piloting in Uasin Gishu county led by the University of Liverpool in November 2019.



OLA Energy: Ensuring African Born Prosperity

At OLA Energy, We Keep You Going as we ensure African born prosperity

OLA Energy Kenya Ltd has increased its LPG distribution network by partnering with Joyful Women Organization (JOYWO), together with Mitanna Gases Ltd, OLA Energy's largest LPG distributor, to ensure availability and accessibility of clean energy in the Rural and Urban homes.

OLA Energy Kenya General Manager, Millicent Onyonyi notes that through the partnerships, the company will be able to reach and convert the over 200,000 JOYWO members spread across the country to using clean and safe energy for cooking and lighting.

"We've had a wonderful LPG distribution success story with Mitanna Gases Ltd. Our new partnership with Joyful Women Organization (JOYWO) will ensure that we deliver LPG, a clean and safe source of energy for cooking and lighting, to our women and children who are mostly affected by biofuels. Our LPG brand – MPISHI, is available in 6kg, 13kg and 40kg packs across the country. We also market and sell bulk LPG to commercial users and resellers" said the G.M

JOYWO is a registered Non-Governmental Organization (NGO) with a membership of over 200,000, spread across all the 47 counties. The NGO was founded to empower Kenyan women economically and enhance household food security through financial support of their involvement in sustainable livelihood projects using table banking scheme. This continues to be one of its core strategic interventions as it also strengthens their responses to other key issues such as:

- Supporting access to markets for products from the members' livelihood projects
- Enhancing growth of women's small-scale businesses to large-scale investments
- Strengthening identification and incubation of diverse livelihood projects

"This partnership is in line with the Sustainable Development Goal 7 - Access to affordable, reliable, sustainable and modern energy for all, through conversion from use of biofuels such as firewood and charcoal fuel in both rural and urban areas to LPG, a safe and clean fuel. MPISHI gas will be affordably provided to JOYWO members" Onyonyi noted.

OLA Energy will undertake regular training on LPG handling hence bringing to life its commitment to ensure distribution of gas that is clean and safe for all Kenyan households.

Mitanna Gases Ltd is OLA Energy's largest LPG distributor for the last five years, with great focus on developing strong channel partners (resellers) hence offering widespread inter-county reach to ensure last mile delivery to end-consumers.

"We want to contribute to longevity of life for little children by minimizing the risk of lower respiratory infections caused by inhaling of indoor smoke from burning of solid fuels. If we can do something to improve on this situation, we get right into it. This partnership has come at an opportune time to ensure clean energy for all" she stated.

The World Health Organization (WHO) has found substantial evidence linking lower respiratory infections of children under the age of 5 to household air pollution arising from burning solid fuels. In Kenya, women and children are particularly exposed to indoor air pollution, linked to more than 15,000 premature deaths each year. Even though 8% of children under the age of 5 show symptoms of acute lower respiratory infections at any given time, sadly only 46% of children with such symptoms are taken to a health facility.



L-R: Timothy Ndegwa - CEO Mitanna Gases Ltd, Lucy Kimanzi - Assistant to JOYWO CEO, Saroya Milimoh - LPG Territory Manager OEKE, Mama Rachel Ruto - JOYWO Patron, Millicent Onyonyi - OEKE General Manager, Librata Mhati - CEO JOYWO, Waeni Kwinga - I&W Manager OEKE and Edward Ngaira - JOYWO Director of Projects.



Lucy Kimanzi, looks on as Mama Rachel Ruto and Millicent Onyonyi prepare a meal using Mpishi Mpishi gas, OLA Energy's LPG brand.

Clean Cooking in Uncertain Times

A report by the University of Liverpool, UK and Amref International University for CLEAN-Air(Africa)

To consider the use of consumer finance mechanisms that promote clean cooking, our UK NIHR funded CLEAN-Air(Africa) Global Health Research Group is leading the first study on long-term cooking and spending patterns using pay-as-you-go (PAYG) liquefied petroleum gas (LPG) smart meter data. The work is a partnership between the University of Liverpool, UK and Nairobi's Amref International University. The study was conducted in the unique context of economic

instability introduced by COVID-19 control measures. As clean cooking with LPG is particularly sensitive to economic pressures, PAYG LPG smart meter technology offers payment flexibility that is robust to consumers' financial hardships, which can help resource poor households adopt and use LPG for clean cooking.

PAYG LPG cooking/spending patterns during January 2018-June 2020 were analysed from 437 customers of one of the first commercial companies to offer this technology (PayGo Energy) in an informal settlement in Nairobi, Kenya. The consumer data revealed that PayGo Energy customers purchased roughly one-quarter of the amount of LPG in a typical cylinder in Kenya (6 kg), suggesting that paying for a full cylinder of LPG is not preferred. During COVID-19 lockdown, there were documented changes in the frequency of LPG payments (increased by 20%), with an equivalent 20% decrease in the amount paid per payment. The change

in payment scheme enabled nearly all (95%) households to continue using PAYG LPG during a three-month period after COVID-19 lockdown, despite 95% of households reporting severe decreases in household income during this period. A previous longitudinal survey conducted by the CLEAN-Air(Africa) in the same study community revealed that 27% of households purchasing full cylinders of LPG before the lockdown reverted to polluting kerosene or wood

during lockdown. Therefore, these findings reveal the effectiveness of permitting customers to alter the amount they pay for LPG in allowing households to maintain use of clean cooking fuels despite financial instability.

The CLEAN-Air(Africa) Global Health Research Group is working to help support the ambitious aspirations of several governments in Sub-Saharan Africa (e.g. Kenya, Ghana, Cameroon) for rapid market expansion of LPG for clean cooking to address impacts of solid fuel reliance on environment and deforestation. As PAYG LPG helped sustain clean cooking fuel use in an informal settlement in Nairobi during a period of financial hardship, it may be a scalable technology in communities where the population mainly works in the informal sector or experiences seasonal changes in income. Several PAYG LPG commercial companies have already emerged in the clean cooking fuel market in urban areas of East Africa.

As studies conducted in Europe and North America have linked ambient air pollution exposure to increased COVID-related mortality, it is likely that household air pollution exposure may also lead to more severe symptoms from COVID-19 infection. By averting potential exposure to household air pollution from increased use of polluting cooking fuels, PAYG LPG potentially offered direct health benefit during COVID-19 lockdown. A speedy transition to modern household energy is thus urgently needed to improve health, the environment and livelihoods. PAYG LPG is a innovative consumer finance mechanism that can help accelerate clean cooking access.



The pay-as-you-cook smart meter technology that allows households to pay for cooking in small amounts (similar to how wood, charcoal and kerosene is purchased).



The CLEAN-Air(Africa) field team collecting data in an informal settlement of Nairobi before the COVID-19 lockdown.

Investment in Essential LPG Infrastructure to Meet Growing Demand

By Ahmed Yunis



Ahmed Yunis
General Manager Specialties
Hass Petroleum Group

Transitioning at least 30 percent of the population to Liquefied Petroleum Gas (LPG) use by 2030 is one of the key Kenyan Government's development agenda. The Government has adopted several mechanics to support this including, restructuring industry regulations, improving the LPG value chain as well as supporting subsidy programs with varied partners to ensure top-bottom access for this clean energy. Further, the new LPG legislation cements vigorous LPG import and distribution regulation to manage pricing, minimize unlicensed LPG sales, promote traceability, and eventually equitable access.

This, matched with behavior change education could move us closer to the envisioned uptake while laying the ground for a clean energy-driven Kenya. The Kenyan consumer has evolved and is much more environmentally conscious and offers the right springboard for the industry as we move into the future.

Still, players in the sector must continuously invest and innovate to be able to take advantage of this new environment opportunities.

Today, lack of sufficient storage, refilling facilities for LPG and few distribution channels continue to hamper uptake in Kenyan homes. Most OMC's have invested in varied infrastructure in urban towns leaving rural areas without affordable access to this crucial energy source. In truth, the industry could benefit fully from, innovative technology and financial mechanisms to meet consumers' needs; effective marketing and awareness-raising; functional, efficient supply chains; and Govt-private initiatives.

In addressing this gap, Hass Petroleum has recently invested in two key LPG storage and refilling sites in Nairobi and Eldoret with an overall projected capacity of 200 metric tons. The facilities complemented by own and partner distributor and retail sites will secure reliable and efficient delivery across all our markets. The modern LPG plants will feature an automated, traceable cylinder delivery system.

Both facilities expected to be operational by the end of 2020 (Nairobi) and the beginning of 2021 (Eldoret) will serve as our in-house filling sites and will also be available to partner

LPG marketers under our competitive and profitable hospitality program. The investment will also address the high cost of supplying rural and peri-urban households in western and northern regions of Kenya previously discouraged by undeveloped infrastructure.

Over the years Hass Petroleum has grown steadily across East, Central and the Horn of Africa, fundamental to that growth has been our motivation to provide good quality, innovative and affordable energy to the communities we serve. Relatedly, Hass Gas our flagship Liquid Petroleum Gas (LPG) brand is increasingly becoming one of our key business growth catalysts closely following our white fuels segment.

Product innovation and extension have also significantly secured our customers' confidence. Two years ago, we introduced a composite cylinder to give the consumer a variety of options. The safe cylinder has become popular fast and will continue to contribute to our growth within the LPG segment regionally.

Without question, the link between energy and

economic growth aspirations of any country is pivotal, and there is a clear argument that LPG has an increasingly important role to play by providing a safe, affordable, convenient, and cleaner fuel. Relatedly, Kenyan Government has set plans to construct a shared LPG storage facility in Mombasa where all OMCs will store their products before moving it to their inland storage facilities. This will be followed by a shared import mechanic comparable to the fuel Open Tender System that will regulate both pricing and access across the industry. This will unlock the supply chain which is today almost a monopoly.

The Hass Petroleum response to these industry strides is one of renewed hope and strengthened drive. We are increasingly incentivized to invest to fully explore our potential. My thoughts, the outlook for LPG business is one of growth. Ideally once the entire supply chain is streamlined and the public is enabled to purchase and access the product then the market will thrive.

The author is the General Manager Specialties, Hass Petroleum Group



Hass Gas Composite Cylinder is now available across the Country.

How Cooking Gas will Change East Africa

It makes me sad, indeed, that a warm meal in 90% of Africa, equals a fallen tree

By Jack Chebett



Jack Chebett
Stabex International

If there was one lesson Africa can learn from the way humankind has reacted to COVID19, it is how fast we must change our behaviors to survive when our environment changes.

We need such change in how we cook. To cook in Africa, presently, a tree must fall. That need not be the case. This is why Stabex International has recently joined the push to increase usage of clean cooking energy in the two countries where our operations are most concentrated. We are going further to encourage the change. We are launching innovative Liquefied Petroleum Gas (LPG) affordability programs with the aim of supporting lower income groups to achieve the usually prohibitive initial cost of acquiring gas cylinders, regulators and other safe cooking accessories.

According to the recent United in Science report, humanity is already seriously threatened by ongoing systemic ecological changes. UNEP says the world is presently losing 10 million hectares of forest cover every year! Forests play an important role in the reduction of carbon dioxide from our environment, and without trees, we cannot win against climate change. Deforestation is therefore the single most potent threat to our world today.

Demand for heating and cooking energy continue to exacerbate human dependence on natural resources such as trees for charcoal and firewood. It makes me sad, indeed, that a warm meal in 90% of Africa equals a fallen tree. There are sets of

sustainable practices in use of wood fuels targeting a balance between care for environment and the necessary tapping of forest resources by man. Bodies such as FAO have recommended these.

Sustainable Development Goal number 7 (SDG7) proposes “access to affordable, reliable, sustainable and modern energy for all” from clean energy sources such as solar, electricity and LPG in a bid to make life better for man, improve quality of air in our planet and safeguard the climate. The UN and individual nations are keeping a watch on forest canopies. The greener a country is, the better for all of us. Thus, forest cover in Japan is at 67%, most of South American countries average 49%. Trees also cover 43% of Europe and 41% of North America. Africa is struggling largely because of how we cook. Severe deforestation in Kenya and Uganda, for instance, has reduced tree cover to a worrying 6% and 8% of landmass respectively. There is evidence that increasing use of cooking gas will relieve pressure on forests in these two countries. Combined with afforestation and forest protection laws, it can sustainably increase forest cover, according to some models.

In India this has been successful. Numerous programs including price subsidies, public awareness campaigns and improved delivery mechanisms implemented by government have transformed the country into the world's largest domestic LPG market today. 97.5% of its 1.35 billion people use LPG for cooking and heating. India is reaping environmental benefit from a regeneration of forests and greening has increased to an impressive 25%, according to their State of Forest Report, 2019. While an increase in industrial emissions has contributed to the call for urgent de-carbonization agenda, gains from re-greening attributed to LPG usage are a big win for the environment.

Similar strategies have been implemented successfully by Indonesia. Near home, Cameroon is gradually on course with a nationwide scale-up of LPG usage. State backed LPG master plans have the biggest potential to help increase African countries' contributions to the global fight-back against climate change.

For Kenya and Uganda, LPG use remains below 2.5Kg per person per year. Public private partnerships to improve this are encouraged by governments. Stabex Gas is partnering with district and county governments in the two nations to extend reach of our cooking gas affordability programs with target mainly being women, self-help organizations, boda boda riders and organized youth groups. Data sets from various economic and demographic studies in each region enable program managers determine the level of support and nature of facilitation that each region requires for success.

To further encourage nations to help change how Africa cooks, the UN on its part has created a global LPG (public-private) partnership to address the ecosystem of policy and investment requirements necessary to create a reliable and safe LPG supply chain in developing countries. Unfortunately, in the short to medium term, this UN initiative will only support a few countries in Sub-Saharan Africa.

The UN goal is to get one billion more people cooking cleanly with LPG energy by 2030. Petroleum and Gas industry is joining this cause to contribute to national efforts by ministries, regulatory bodies and other stakeholders in building momentum for realization of SDG7 goal in the region. In Kenya, through collaboration with Petroleum Institute of East Africa (PIEA), the industry has achieved an enhanced legal framework for better compliance and enforcement.

With Africa's population projected to reach 2.4 billion by 2050, setting up early systems to meet future demand for cooking energy and matching this with sustainable conservation practices will help change how Africa Cooks.

The author is Group Chairman of Stabex International Limited.

LPG - One of The Products of Our Generation

By Peter Onasis Ochieng'

COVER STORY



Peter Onasis Ochieng'
Hashi Energy Managing Director- Downstream

As humans, we often seek opportunities to make a difference OR ask God for miracles and interventions not knowing that some of the solutions, ideas or contributions to mankind have already been provided and are in our hands or control. All that is needed is for us to act. I call LPG as one of the “one bullet numerous targets” products of our generation. Liquefied Petroleum Gas is the product that can resolve some of our current social economic challenges and better still guarantee a much better future for our children and grandchildren. All the research has been done and is available, statistic shared and models documented. All that remains is execution and preaching the gospel to all.

For a moment, just imagine how much forest cover and by extension our environment we will save by having 50% of our East African population adopt LPG as a clean cooking solution. In Kenya for example the per capita consumption of LPG stands at 6.4 kg per capita. The effect of redeeming our forest cover courtesy of reduced consumption of Biomass (firewood and Charcoal) is the biggest motivation for all of us to ensure we aggressively ensure we increase LPG penetration and usage. It is a fact that LPG usage in the East Africa region and indeed the whole of Africa is still low and the biggest price we have paid is the effects on our environment amidst an increasing population and indeed increased demand for cheaper and reliable sources of energy.

As you may be aware, the other benefits include being a cleaner fuel therefore contributes to improved health and lastly the fact that it is one of the “future products” hence its increased usage will result in more

and bigger massive investments hence opening employment opportunities for our highly qualified youthful population. The above benefit among other can only materialize if we get it right “NOW” as we are running out of the “environmental clock”

Today I urge all of us to take a step back and soberly evaluate the full impact of all of us focusing on increased usage of LPG gas. Other than cooking, LPG is already being used to power motor vehicles (AUTOGAS). For us to reap maximum benefit, Governments, County governments, LPG suppliers, LPG traders, LPG marketing companies, transporters and logistic firms, the regulators, cylinder manufacturers, Retailers, Wholesalers, end user and all other stakeholders must have a common understanding and direction with a clear view of the common long-term goals. This should be the focus coupled with creating synergy as none of us can succeed alone.

The reality is that, once we have a thriving sector or an “in thing” product as LPG, it attracts both the genuine investors and dealers/traders just keen to make quick money and later exit. This therefore calls for a concerted effort for cleanup and ensure that we do not discourage the long-term investors or partners in the sector.

The dream is to have all cooking in the kitchen done with LPG in the region and that all end users/customers are safe as they enjoy their favorite brand of LPG gas refilled, distributed and delivered by the brand owners. Secondly, we should expand the use of Autogas in vehicles in the region.

Currently, we have many players in the region with a long-term view of the LPG Business, ready potential market to capture, an increasingly receptive and knowledgeable population who know how and are willing to start using LPG, fairly good distribution and logistics network,

and for the case of Kenya a good law/legislation (Legal Notice 100).

Legal Notice 100 is one of the best and most progressive legislation that can catapult Kenya to a fresh new horizon and can help us surpass our goal of 42% adoption of clean cooking fuel of which 35% being LPG by 2030.

It will be naïve not to mention some of the biggest impediment to LPG growth and usage in the region as;

- Lack of sufficient storage and investments in the sector resulting in limited infrastructure to handle and store LPG in the region especially Kenya. Increased infrastructure will result in bigger imports, leading to drop in prices to the end user. This will make it more affordable for new LPG users, this leads to more business/volume growth, again this will result in even more investments. More investments will result in more and better infrastructure and the cycle will continue...
- The cost of “entry” to using LPG. This mainly refers to the cost of cylinder for new user which now stands at between USD 14-20. This is beyond the reach of majority of the population in East Africa limiting the rate of conversion of new users.

The good news is that all the above two major challenges can be addressed with one “bullet” i.e. complete sanitization of the market to ensure a level playing field. Even though a lot of work has been and continues to be done, more work still awaits us. Once the sector is structured well, and the investment returns are within the allowable business margin of error, it will attract massive investments in the sector in form of cylinders, storage facilities, better distribution models etc. Let us all work together to enable the dream of affirming LPG as one of the dream products of the century.

Leadership mantra:

“In leadership do NOT try to calm the storm, but calm yourself instead”

The author is Hashi Energy Managing Director- Downstream

There Can Be Fire Without Smoke!

By Ally E. Awadh

COVER STORY



Ally E. Awadh,
Chief Executive Officer, Lake Group Limited

Food, clothing and shelter are the three traditional basic needs! This information has been passed on to us from generation to generation and has been elaborated from book to book. Well, well, if food is a basic necessity it goes without say that cooking is a basic necessity too! This is the simple reason why we went into creative dream mode, the result was a brand, a story and an experience that was elegantly simple.... a venture into the LPG business.

The festive season is here and very soon hordes of full tank laden vehicles will be enroute to various villages and towns all over countries in East Africa and Africa at large. Cooking will obviously be the basic activity during this period, the pandemic notwithstanding. This is one activity that has been affected by the pandemic in terms of venue commercially but not domestically. There is more cooking being done in homesteads than in hotels and restaurants. Its not a wonder that so many people including those who work with blue chip oil marketing companies will be in the entourage home. Its a time to pity the life of animals, especially goats and chicken whose fate seems determined from birth. In fact, no matter what the circumstances may be, a chicken always ends up on the table and finally on a plate! Now.....

Have you always wondered why people who live good, work good and eat good end up fighting with smoke in the village?

Soon, we shall be seeing truckloads of wood fuel and charcoal traversing our roads. The forest cover will also join the 'endangered animals' not only as result of the festive season but as is always the norm. Some green vegetables have serious roles to play at the dining table too. Any way lest we digress, the unanswered questions are: Why do we have to fight with smoke and wood fuel in the villages while we have clean alternative environment friendly sources of fuel such as LPG? Why do we have to continuously deplete our forest cover? Why do we have to put ourselves at risk of respiratory infections? Why do we want to cough incessantly? A kilogram of charcoal costs more than a kilogram of LPG, why do we want to pay more? Why do we have to be overwhelmed with smoke and tear as we cook as if we are in an abusive relationship with onions?

This, fellow readers, is the reason behind Lake Gas, a subsidiary of Lake Group Ltd. Providing sustainable fuel to all households within East Africa and the region beyond.

Remember, if food, is a basic necessity, automatically, cooking and eating become basic activities! Its always said that where there's smoke there's fire but at Lake Gas we say, there can be fire without smoke!

Let's cook with LPG and encourage our communities to do so. Gift them complete 6kg cylinders!

This time, let not the chickens and goats suffer alone, Let the Cylinders fly off the cages too!

The Blue cylinder that is.
Lake Gas Ltd.

The author is the Chief Executive Officer, Lake Group Limited



Tapping into Kenya's LPG Potential

By Peter Murungi



Peter Murungi

Managing Director, Vivo Energy Kenya

According to data published in the Statistical Review of Global LPG 2020 W LPG report, LPG's use in cooking continues to benefit millions of people worldwide every year, with the total demand in 2019 being 325 million tons. The United States of America is the top producer and the second major consumer after China. Estimates show that about 3 billion people still do not have access to clean cooking fuel. Closer home, Morocco has the highest Per capita consumption of over 65kg. With about 6kg per capita on LPG consumption, Kenya has a long way to go on LPG penetration.

COVID-19 has disrupted trade and economies around the world and changed lifestyles. Lower crude and gas output coupled with shorter refinery runs has affected LPG supply. On one hand, LPG refills have gone up in urban cities with several people working from home plus children being at home because of school closures. On the other hand,

with households adjusting to income shocks, firewood sales are on the rise in rural areas.

The government is racing towards having at least 10% of the country covered by forest by 2022. According to the Ministry of Forestry and Environment, Kenya's forest cover is currently at 7%. This creates a need for households to adopt the use of alternative sources of energy for cooking, LPG being the most ideal.

According to data from the 2019 Kenya Population Households census report, 55.1% of the households use firewood. Firewood is a big threat to our environment conservation as well as our forest cover. 23.9% of households use LPG, 11.6% use charcoal, 7.8% use paraffin, 0.9% use electricity and 0.2% use solar.

The largest potential for LPG penetration in the market is in rural Kenya; 84.1% of the households use firewood while 5.6% use LPG.

In urban Kenya, 52.9% of the households use LPG, 17.7% use paraffin, and 17.7% use charcoal. Despite the low consumption of LPG in Kenya, there are opportunities for increasing LPG penetration.

One of the biggest hindrances to LPG penetration is the initial cost of acquiring a cylinder. As oil marketers, there is a need to come up with sustainable innovative solutions that will allow most of the households to switch to LPG. This may range from strategic partnerships with financial institutions as well as organizations. It is worth noting; LPG innovations in the market that give alternative refill payment options and digital supply chains are making headway on LPG penetration.

COVID-19 has disrupted our customer trends, with a number of them spending more time at home, the demand for home delivery services is increasing. Strategic partnerships on home delivery services

are one of the ways for oil marketers to offer convenience to our customers. An example of such is Afrigas partnership with GO-Beba where customers get Afrigas delivered to their homes from the nearest Shell service station.

Besides adopting the home delivery services, there is a need for oil marketers to bring closer the LPG retail points to households. This will call for business partnerships with organizations and individuals. Digitizing distribution networks will unlock the efficiency of oil marketers and offer convenience to LPG customers. We have to be more creative to delight LPG users by resolving challenges on the last mile logistics for LPG.

Data is key when it comes to changing the LPG penetration narrative, oil marketers will have to dip dive into the insights of why 55.1% of the households in Kenya are still using firewood; This will help the Companies tailor marketing messages that resonate with the households. Besides marketing, there is a need to educate customers on the benefits and safety elements of using LPG compared to other types of cooking fuel; This will also complement the government efforts on environmental conservation especially illegal logging of trees.

LPG penetration is greatly dependent on LPG policies and their enforcement by the government. The benefits of the new LPG Regulations as contained in the Legal Notice No.100 of 2019 will be derived from enforcement. The regulation will come in handy in the elimination of illegal refilling of known brands by unscrupulous traders.

Enforcement of the new LPG Regulations will ensure a level playing field for brand owners and encourage investment, thus unlocking growth.

The Government's push for cleaner energy, plus raising the cost of alternative fuels and the banning of logging, will encourage growth in capita consumption of LPG. With proper implementation of government initiatives, the LPG penetration is a possible reality.

The author is the Managing Director, Vivo Energy Kenya

Tosha Petroleum's LPG Storage and Filling Plant Underway



Tosha Petroleum was established in 2003 and started off as a reseller of petroleum products and services to the local and regional market. The company was fully-fledged as Oil Marketing company in 2010 when it became licensed by the Energy and Petroleum Regulatory Authority (EPRA) to import petroleum products for both the local and exports market.

Tosha Petroleum operates a fully-fledged LPG brand through its extensive network across the region under the brand name Tosha Gas available in 6kg, 13kg, 19kg, 35kg & 50kg cylinders. Tosha commitment is to provide its customers with safe, clean and affordable cooking gas both for domestic and commercial installations is reflected through the continued investment we make in our people and the business. Our team is highly trained and technically sound, with a wealth of knowledge and experience of the LPG market. The close relationship we forge with our customers and clear understandings of their expectations are the bases of our development strategy. We have over 300 dealers nationwide within a short span.

Despite challenging local conditions, the LPG market in Kenya has grown significantly in recent years, and its expected to grow further upwards. Tosha Petroleum has positioned itself to incremental investment in the market and also creating market awareness of LPG as an alternative energy source.

Tosha Gas has become a household name in Kenya and a preferred supplier for major consumer in the domestic and hotel industry. Our new tamper proof seal provides our cylinders with a unique edge and helps curb counterfeit illegal refillers.

Relatively high LPG prices in Kenya reflect an under-developed market that constrains storage facilities across the value chain and keeps retail prices high for end users. In line with the new KOT common user facility coming up, Tosha Petroleum intends to build a state of art Storage & Filling plant within Nairobi County and we will implement a Terminal Management System, which will keep track of the quality of the product throughout the Terminal. This will seamlessly be integrated with our Enterprise Resource Planning (ERP) system to ensure that there is accurate tracking of each Clients' stock in the Terminal. Losses and gains are minimal and are accurately recorded and proportioned daily. Tosha Petroleum is calling upon the Government to hasten the LPG regulatory reforms such as enforcement of the LN100, so as to have more Kenyans use LPG and also ensure all retailers and distributors are licensed thus reducing illegal refilling.

As population growth, coupled with economic and social development, continues to increase Kenya's energy requirements and heightens the need for greater environmental protection, we are convinced that LPG is an ideal solution.



Tosha commitment is to provide its customers with safe, clean and affordable cooking gas both for domestic and commercial installations is reflected through the continued investment we make in our people and the business. Our team is highly trained and technically sound, with a wealth of knowledge and experience of the LPG market.

Auto-gas Revolutionizing Transport Sector

By Rufus Mbiyu

Liquefied Petroleum Gas-LPG has come a long way to not only promote safe cooking, but its also revolutionizing our transport sector as a low cost and efficient fuel to run.

Auto-gas, as its widely known, is a term used to describe conversion of a conventional petrol vehicle to use LPG. Diesel vehicles are converted through a different process. LPG is stored in a vehicle that is properly tuned to run on LPG as an alternative fuel. The system does not completely do away with petrol system, enabling a client to select the mode of system they wish to use.

Auto-gas technology is becoming an option for users since it's environmentally friendly with emissions and far cost effective than petrol and diesel. LPG offers a much cheaper cost per kilometer operation, especially for commercial vehicles, making a saving as compared to petrol. Due to emission controls, countries in Europe and Asia have opted to subsidize LPG to enable affordability and accessibility of auto-gas services across the country hence increasing uptake.

There are over 30 million vehicles running on auto-gas worldwide and locally we are seeing interest from the taxi fraternity especially those that earn per kilometers covered. In Nairobi, we have over 1,000 vehicles converted to auto-gas.

In 2006, I championed the first conversion in Kenya and in 2010 auto-gas standard was ratified. Since the ratification, auto-gas has steadily gained popularity and more people are seeing the cost benefit of this technology.

The government, through the LPG Regulation of 2019, has brought sanity to the LPG sector in Kenya which is a major boost to auto-gas. The zero rating of LPG is a plus for auto-gas users who also benefit from the affordability and availability of LPG.

LPG being an alternative fuel in the automotive sector, it will face it's challenges. There is need for streamlining the sector by policy to forestall myriad of issues such as untrained and uncertified fitters compromising safety and unlicensed LPG players offering auto-gas system to avert incidences on the road and other places. It's also important to have a proper framework that will create a level playing field for those interested in becoming an automotive LPG dispenser.

The future of auto-gas is bright. Businesses will always look for ways to bring down operation costs. Auto-gas boils down to the cost per kilometer. Clients are getting their money back in 6 months time after installation, and there after get to enjoy their profits.

With proper auto-gas framework in place, governments are able to attract oil marketing companies to invest in this sector since there is a ready market. Countries that have adopted auto-gas and have proper framework in place, are able attract oil marketing companies system installers and other key stakeholders to invest in this segment.



Auto-gas technology is becoming an option for users since its environmentally friendly with emissions and far cost effective than petrol and diesel. LPG offers a much cheaper cost per kilometer operation, especially for commercial vehicles, making a saving as compared to petrol. Due to emission controls, countries in Europe and Asia have opted to subsidize LPG to enable affordability and accessibility of auto-gas services across the country hence increasing uptake

Statistics in Kenya indicate that an average of 20,000 vehicles are imported month on month every year. These are vehicles coming from Europe and Asian countries where auto-gas already exists meaning a competitive edge for importers. The taxi industry is also growing at a fast rate with services expanding to other towns in the country as more people are opting for their services. As these taxi companies expand in other towns, its important for them to find this infrastructure there.

If government bodies charged with energy can champion the auto-gas initiative, the population would be aware of how LPG can transform their transportation experience.

PIEA can also champion the discussion of auto-gas with emphasis on safety that will help to forestall future malpractices in the industry.

The author is an Autogas Conversions Expert

Kimball Chen: A Champion of Clean Cooking Fuel for the World's Poor

By Nigel Bruce



Kimball Chen
Chairman, Global LPG Partnership

Cooking should not kill – but it does. It is a sobering fact that more than two million children and adults die prematurely every year from air pollution in their homes. This unhealthy air results from cooking with wood, charcoal, animal dung and kerosene.

Over the last 40 years, the number of people in developing countries reliant on these highly polluting household fuels and stoves has remained stubbornly at around 3 billion.

This is the story of how, and why, Chinese-American businessman Kimball Chen built an organisation focused on making liquefied petroleum gas (LPG)

available as a clean cooking fuel for millions of people in developing countries.

Concerned by the very slow pace of change and drawing on a lifetime's experience of the global gas industry, Kimball Chen decided in 2012 that it was time to act. He began using his own resources to launch the Global LPG Partnership, a not-for-profit that is committed to changing these stark global inequalities in clean energy access, and to reducing the toll on the health and lives of millions of people.

In terms of access to cooking fuels, we live in a world of haves and have-nots. This long-neglected aspect of poverty in low-income countries stands in marked contrast to conditions in the developed world. In wealthy countries, although energy poverty certainly exists, abundant, convenient and clean energy in the kitchen is taken for granted by the majority.

A Unique Approach

Over the last decade, a growing number of developing countries have set targets to increase access to liquefied petroleum gas (LPG) for cooking. Their aim is to raise use of this clean and efficient fuel from historically low levels to reach a majority of their populations. These moves have been driven by a mix of concerns for health, deforestation and economic development.

Many of these countries, however, lack the policy, regulatory and enforcement conditions that can attract the investment needed to establish a safe, efficient LPG sector at scale.

Kimball Chen could see the unwillingness of his own industry to take the first steps. So, in 2012 he launched the Global LPG Partnership under the aegis of the United Nations to fill this gap, with the goal of helping one billion people switch to LPG by 2030.

Although one of several international initiatives now working to improve access to modern household energy, including the UN Foundation's Clean Cooking Alliance and the World LPG Association's 'Cooking for Life' initiative, the Partnership's approach is somewhat unique.

Working with countries that are already committed to switching large proportions of their populations from traditional cooking fuels to LPG, the Partnership's aim is to encourage critical structural and regulatory reforms that are a prerequisite for more substantial investment in a well-functioning market.

Family and Other Influences

The story of the Global LPG Partnership is inextricably linked to the life of Kimball Chen. Born into a Chinese family with generations of involvement



A traditional 3-stone wood fire in Guatemala – conditions like these are found across developing countries, exposing family members to very high levels of air pollution



In high income countries, abundant clean and convenient cooking energy in the kitchen is more or less taken for granted



GlocalGaz LPG filling plant, Limbe, Cameroon – building sound infrastructure is critical for attracting investment to growing LPG markets

in government, education, business, banking, and shipping, he grew up with strong traditions of contributing to society. He mentions in passing that one of his uncles, Cai Yuanpei (a renowned, reformist President of Peking University), petitioned the Emperor to allow women to attend university in China.

His father, whose business interests included the first major fleet of large-scale liquefied natural gas (LNG) transport ships, had moved to the US after the Second World War and gained American citizenship. Among his many influences on the young Kimball was encouragement, by example, to contribute as much as possible to the common good.

In reflecting on this culturally varied background, Kimball said "I have a family history of exposure to western liberalism, idealism, and notions of contributing to the development of society, not just to the self-interest of the family or the clan or the village. So, the idea of giving back, of scholarship, of research, of nations helping each other, all of these things – were part of growing up."

The Challenge of Developing LPG Markets

With a Harvard degree in Classics and English Literature behind him, Kimball's destiny was to be the family business. Recalling this stage of his life, he recounts how family tradition, particularly for the eldest son, was very strong. "My father said, 'I would like you to go to business school', and I, being very Chinese, said 'whatever you wish'." So, after a year of travel and 18 months working in a bank, he set off for Harvard Business School, obtaining his MBA in 1978.

That year, he joined the family company, the Energy Transportation Group (ETG). He took on the management of a varied portfolio of companies, some

with a pressing need for research-led development. He recalls that "We had some of the best scientists in the United States working with us, and they were sticklers for proper scientific evidence." Through this experience, another foundation stone for his future work with the Partnership was laid – being guided by high-quality scientific evidence.

When his father died in 1994, Kimball took on the mantle of CEO for the ETG, and in the late 1990s began developing LPG operations. At the request of the Chinese government and in partnership with the UGI Corporation, which was then one of the world's largest LPG distribution companies, ETG entered the Chinese market.

A crucial step was securing the first licence for nationwide LPG distribution granted by the Chinese Government to a foreign company. This had been awarded so ETG and its partners could demonstrate implementation of the policies and regulations required for a safe and effective LPG market.

It was this experience of trying to operate in a setting where regulations had not been adequately enforced, particularly in the more rural parts of China, that led him to the next challenge – building properly functioning LPG markets in other developing countries.



Properly regulated markets are vital for providing an adequate and safe supply of LPG

An Industry not Ready to Invest in Developing Country Markets

When in 2000 he became a director of the LPG industry body, the [World LPG Association](#) (WLPGA), Kimball sought to persuade his fellow board members that substantial industry opportunity lay in strengthening policies and their enforcement in developing country markets.

To his industry colleagues, he argued that, "If LPG is such a useful fuel for the large populations seeking to switch from traditional cooking fuels and technologies to



Investment in developing country LPG markets could help millions of households change from polluting solid cooking fuels to a modern clean fuel

cleaner and more efficient alternatives, surely it would be in the interests of the industry to help develop these markets. That would represent self-interest and public interest overlapping.”

Kimball found their response discouraging: “They said, no, we don’t invest in market development. We make investments in markets which are already developed and where we can buy a company in an orderly environment.”

“I tried for almost a decade to gain their interest and commitment”, he recalls. Regarding the perspective of global industry, he believes that they “viewed the process of encouraging governments to develop the necessary policies, regulations, and enforcement, even though that might lead to a substantive investment opportunity for business, as taking too long and carrying too much risk.”

Birth of the Global LPG Partnership

So, he began looking for another way. In 2011, the Sustainable Energy for All initiative was getting underway, led by UN Under-Secretary General Dr. Kandeh Yumkella, a Sierra Leonean former Trade Minister and Director General of UNIDO. He suggested to Kimball the idea of establishing a Public-Private Partnership and launching this at the United Nations Conference on Sustainable Development, Rio +20 in 2012.

“A Public-Private Partnership could be very effective”, he recalls thinking at the time, “but it would need the commitment of all stakeholders in a country, including government and business. The task would require securing the policies, regulation, and enforcement needed to attract investment and ensure safety, and to ensure stability over time”.

With this in mind, he set about creating the Global LPG Partnership. At this time, however, the ETG was still involved in LPG marketing in multiple countries. In order for his new initiative to be credible and unconflicted in work to expand energy access in developing countries with the backing of the UN, he needed to take further decisive action. “We therefore disposed of all our LPG investments, so we would have no economic interest in any particular company or LPG project.”

By Invitation Only

As the partnership got underway, Kimball was clear that it would only assist a country if formally invited to do so. “We didn’t want to be economic or intellectual

imperialists or colonialists. It was important that the countries themselves had identified the need for LPG and recognised that some outside assistance could be useful.”

Providing this assistance and meeting the goal of one billion people switching to LPG by 2030 needed financial resources. Initially, he drew on his own ETG funds, but over the next few years secured additional support from mainly public sector donors. These included the EU Infrastructure Fund for Africa, the African Development Bank, UNDP, KfW (the German Development Bank) and the OPEC fund for International Development.

An Optimistic Vision for Clean Cooking

Kimball is optimistic that his ambitious goal can be achieved, because in Africa alone, countries including Kenya, Ghana, Cameroon, Senegal, Nigeria, Tanzania, Uganda, Zambia and Rwanda have sought their help. “These countries represent hundreds of millions of people and have formally requested our assistance to increase the use of LPG from around 10-15% of the population to between 40% and 60% over 10 to 15 years. So, that amounts to roughly half the population of these countries moving to LPG over that period.”

It is one thing for a government to set a goal and seek expert assistance, but what makes him believe that policy and regulatory changes, and consequent investment, will happen in practice? “Well, we’ve seen it in other developing countries,” he replies, “each one doing things in its own way in different circumstances and achieving change at differing rates.”

“For instance, in Brazil the LPG industry developed following more effective enforcement of government policies and safety standards, allowing private businessmen, as well as some state companies, to systematically develop and grow the supply networks. So, we have seen Brazil move from a poorly regulated, very unsafe market to an orderly one with almost universal use of LPG for cooking.”

He refers also to the dramatic increases in LPG use in settings as varied as Morocco, India, China and Indonesia, to support his belief that such changes can and will take place in those countries now requesting the Partnership’s help.



The cylinder re-circulation model is the critical factor for a safe LPG market

What about Affordability and Safety?

Developing the supply side is critical, but if there is insufficient demand from new users – many of whom are poor – then investment and growth will not follow. A potentially major barrier to market growth, therefore, is affordability.

On addressing this issue, Kimball is also optimistic. He believes that “many poor people have enough money to pay for the fuel on a regular basis, but they can’t afford the upfront cost of the stove and the deposit on a cylinder.” He thinks that this need not be a barrier, adding that “if you help households through micro-finance or some other means of reducing the burden of initial acquisition, you’ll find that markets can develop very rapidly.”

Poor regulation and unsafe practices risk fires and explosions. These

feature prominently in the media when they do occur and lead to understandable public fear about using LPG and therefore slow growth in demand. To assure safety, the key is the ‘cylinder re-circulation model’, in which LPG marketers rather than consumers own the cylinders and are consequently responsible (and liable) for inspecting and maintaining equipment. Kimball insists that getting governments to understand, adopt and enforce this model of LPG market organisation is perhaps the most critical aspect of the Partnership’s mission.

A Difficult Time to Promote A fossil Fuel

Almost all LPG is produced in two ways, either as part of primary production of oil and natural gas, or from the refining of oil. This fossil fuel heritage has resulted in LPG being embroiled in conflicting views about its role in a climate-conscious world. Kimball is well aware of these arguments, recognising that “a lot of NGOs and development organisations say developing countries should not go through a stage of ‘bad habits’ that the developed countries are going through. They say, let’s take them straight to cleaner, renewable energy economies.”

Quoting findings from life-cycle climate studies of LPG and alternative fuels including renewables such as biomass, compiled in a recent peer-reviewed report published by the [German Development Bank \(KfW\)](#), he says that the climate impact of LPG adoption in developing countries will in any case be negligible. These studies show that LPG compares

favourably, especially where – as is frequently the case – much of the wood fuel used for cooking is not harvested sustainably.

In addition, LPG performs better than most alternatives with respect to the so-called shorter-acting climate-warming pollutants such as methane and black carbon. Switching from wood and charcoal to LPG also protects woodlands in countries where extensive use of wood fuel and charcoal is contributing significantly to deforestation. Concern about deforestation was the Cameroonian government’s primary motivation for developing their first national Clean-cooking Plan using LPG.

Furthermore, Kimball feels it is important to be pragmatic about the alternatives, noting that LPG is abundant and available now, and relative to most alternatives is quick and cheap to put in place. In contrast, he points out that “it takes decades to build electrical transmission systems and generation capacity, and in many cases solar PV is not yet a practical or economically feasible option due to the power required for cooking and the costs of batteries needed to store the energy.”

On this question of global trajectories for energy development, he contrasts the capacities of richer and poorer countries. “My view is that, although renewables can make a contribution they are hard to scale up, are often expensive and take time to put in place. Developing countries should be supported in prioritising a form of clean cooking energy which is relatively cheap, well-proven and can be implemented quickly – that would be LPG.

Developed countries have the technical capability and risk-taking capacity to test out renewable solutions and can afford to implement expensive renewable solutions. Developing countries should not be laboratories for early-stage solutions which have not yet been demonstrated as robust in the field. These countries’ capital is scarce and their need for proven solutions at speed is immense.”



Only about 30-40% of wood used for fuel is harvested sustainably



Wealthy countries have the resources to take the lead on the transition to renewable energy

A Victim of Success?

Reflecting on the achievements of the Partnership so far, he has mixed feelings. “My eager side,” he says, “is frustrated that we haven’t been able to progress faster,” but adds “on the other hand, my realistic side says – look at what we have achieved.”

In fact, the appeal of what the Global LPG Partnership can offer countries has exposed a new challenge. “We have many more countries on our waiting list who want our help, but we can’t serve them. This is because, in addition to the continuing need to raise funds, it takes two to three years for us to train somebody senior with the requisite knowledge and skills. They not only need operational knowledge of the industry but must also be able to understand the interplay and implications of the political, economic, and cultural issues specific to each country.”

One would have thought, in an industry as big as oil and gas, there would be plenty of expertise in developing LPG markets around the world, but this seems not to be the case. “Almost 20 years ago when I joined the industry board of directors, there was the head of Mobil LPG global activities, the head of BP’s global activities, the head of Shell’s global activities, along with their teams holding a wealth of multinational operational experience. Now, there is only one oil giant left in multinational LPG distribution, Total; everybody else has gone. The expertise has all been dispersed and retired.”

Based with his Italian-born wife, the writer Patrizia Chen, at their home in Umbria, Kimball will continue to devote himself to nurturing the Partnership, arguing the case for urgently-needed resources, and training people who can provide the advice and support that developing country governments are asking for.

Kenya's oil reserves estimated at 1 billion barrels

K

Under the current PSC model, cost recovery is capped at 60% of annual production. Profit gas splits between government and contractor are slightly higher in favor of the contractor due higher risk profile compared to oil

PETROLEUM

iNSIGHT

PETROLEUM

iNSIGHT

The Magazine of the Petroleum Institute of East Africa

FUELING
the Skies

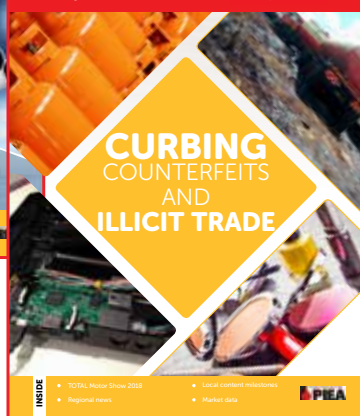


PETROLEUM

iNSIGHT

The Magazine of the Petroleum Institute of East Africa

CURBING
COUNTERFEITS
AND
ILLICIT TRADE



Petroleum Insight is the official journal of the Petroleum Institute of East Africa (PIEA). Since its inception fifteen years ago, it has become a consistent and reliable chronicler of developments between the oil and energy industry.

Advertising Rates (Kshs)

Back Cover :	180,000
Front Inside Cover:	165,000
Back Inside Cover:	160,000
Double Spread:	250,000
Full Page Inside (Pgs 1 – 17):	140,000
Other Pages:	120,000
Half Page :	90,000

To Advertise Contact:

ADG

Alison and Davis Group Ltd
6th Floor, Town House
Kaunda Street, Nairobi
Tel: +254 20 232 0083/ 0723 242 440
Mobile: +254 721 845 944
Alt Email: info@energyea.com
Website: www.adgafrica.com
www.afripetequipment.com

Notes:

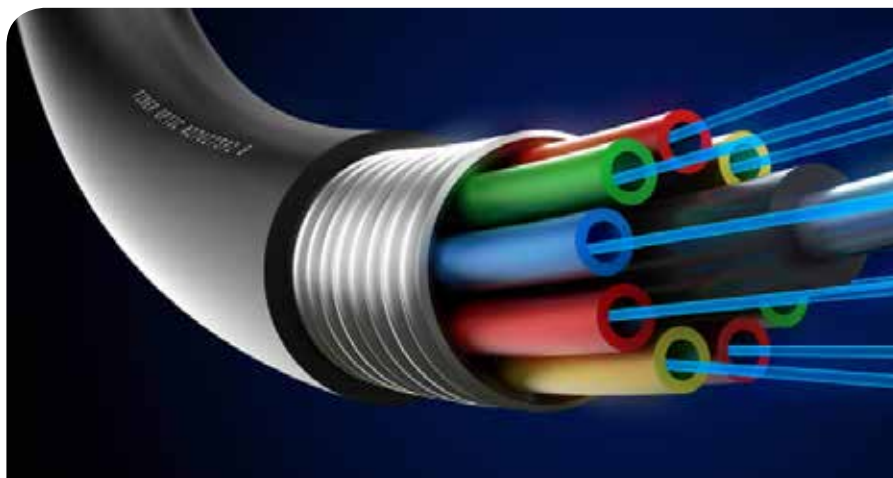
10% Discount for PIEA Members
5% off on annual bookings
15% Discount for PIEA members on annual contracts

The above rates are per issue, exclusive of VAT.

PETROLEUM INSTITUTE OF EAST AFRICA
PIEA

Bruce House, 4th Floor, Standard street
P.O. Box 8936, 00200 Nairobi
Tel: 249 081, 313 046/7
Fax: 313 048
Mobile: 0722-221120
Website: www.petroleum.co.ke
Email: admin@petroleum.co.ke

Kenya Pipeline's Fiber Optic Cable Boosting Country's Bandwidth



- Flexible design with add/drop points at every 2 KM (Mombasa to Nairobi) and 4 KM (Nairobi to Eldoret) along the cable plant
- Proven, tested and in use by the largest data carriers and telcos in the country
- Service restoration time within agreed international contractual standards

For more information on KPC's fiber-optic cable, please visit KPC's website to download the FOC brochure; <https://www.kpc.co.ke/fibreopticcable/>

Customer Service Week

Customer Service Week (CSW) is a platform to champion the value of Customer Experience (CX) in sustaining businesses in Kenya, and it is celebrated globally every first week of October. This year, Kenya Pipeline celebrated Customer Service Week between 5th and 9th October 2020 with the theme "Championing Customer Convenience."

The theme was in tandem with the growing global focus on the customer's journey being made seamless to sustain mutual revenue growth for the firms involved.

In addition to Oil Marketing Companies, KPC celebrated the CSW 2020 with its Fiber Optic Cable (FOC) customers: Safaricom PLC, Jamii Telecommunications Limited and Wananchi Telecom Limited.

The Kenya Pipeline Company (KPC) operates a ninety-six (96) core Fiber Optic Cable (FOC) running along the oil pipeline, primarily used to monitor and manage pipeline operations in addition to meeting the Company's internal communication needs.

The pipeline Company sought for, and was licensed by the Communications Authority of Kenya (CAK) in 2018 to offer the excess fiber capacity to telecommunications firms in the form of dark fiber leases and has thus far signed up some of the leading industry players in the market including Safaricom PLC, Wananchi Telecommunications and Jamii Telecommunications.

The network topology lends itself to signal interception for distribution at regular intervals along the pipeline, stretching from the port city of Mombasa through Nairobi and onto Eldoret and Kisumu, cutting across all towns along the central commercial corridor.

Demand for bandwidth expansion is constantly growing in the business environment such as telco, energy, government, finance, education and enterprise largely utilizing fiber in higher density. The industry and consumer expectation of bandwidth anytime and anywhere means any customer should enjoy access to their own multimedia application center at any place without any bandwidth bottlenecks.

To match these requirements driven by the fast-growing IT application demands, KPC installed the modern fiber cable standards of G.652.D and G.655.E

that accommodate Coarse and Dense Wavelength Division Multiplexing (C/DWDM), respectively, thereby making it possible to attain up to 400Gbps data rates per core.

Dark fiber cores are available for clients to lease and light using their own active equipment and thus transmit data without KPC having visibility of the said data and only billing based on leased fiber core kilometers.

Some of the great product attributes of KPC's fiber optic cabling are:

- Quality – Standard Single Mode Fiber (SMF)
- High capacity fiber cable compliant with the applicable ITU-T G.652/ G.655E standards
- Secure and heavily guarded from fiber cuts – (over 99% availability)

Pictorials from CSW 2020 activities:

CSW Visits to Oil Marketing Customers



KPC MD Dr. Macharia Irungu's courtesy call and trophy presentation to Vivo Energy's MD, Mr. Peter Murungi, for being the number 1 throughput in FY 2019/20



KPC honoured Rubis Energie for being the no.1 export market customer in the FY 2019/20 during the #CSW2020. The award was presented to Rubis Energie's CEO-EA, Jean-Christian Bergeron (C) & GM-Kenya Martin Kimani (R) by KPC's Marketing & Business Development Manager, Zilper Abong'o



The sculpted busts were presented as trophies to the highest throughput, Vivo Energy Kenya - 'the lion' - for its local market dominance, while Rubis Energie received the 'Maasai' for its warrior-like strides in capturing top performance in the export market



KPC appreciates Petrol Oil Kenya Supply Manager Mr. Haresh Plan with a gift hamper in celebration of the Customer Service Week



KPC MD's courtesy call and gift hampers presentation to Total Kenya (PLC)'s MD, Mr. Olagoke Aluko, and his Supply & Trading team

CSW Visits to KPC's Fiber Optic Cable Customers



1. KPC's Senior ICT Officer, Benbrose Ndivo, with Jamii Telcom Chairman Mr. Joshua Chepkwony when the KPC team paid a courtesy call during CSW
2. KPC team led by Zilper M. Abong'o paid a courtesy visit to Wananchi Telkom to understand their Fiber-optic cabling needs in-depth
3. KPC team led by Marketing & Business Development Manager, Zilper M. Abong'o, visiting our top FOC customer - Safaricom's Network Infrastructure Planning & Design technical team



Ugandan Government Consents to Oil Pipeline Despite Environmental Concerns



The Ugandan government approved Tilenga and Kingfisher oilfield project despite community uproar over environmental concerns.

The \$3.5 billion pipeline is expected to export crude oil from western fields to the Indian Ocean coast in Tanzania.

Kampala grants environmental approval for \$3.5 billion EACOP, crucial to Tilenga and Kingfisher oilfield projects

Lobby groups and the community at large mounted pressure against the project citing environmental concerns that pose unacceptable threat to wildlife.

The planned East Africa Crude Oil Pipeline (EACOP), from fields co-owned by France's Total and China's CNOOC International, would cross sensitive ecological systems including wildlife-rich areas, rivers and swampland that are catchments for Lake Victoria.

International and local environmental groups including Global Witness say it poses unacceptable risks.

In a statement, Uganda's state-run National Environment Management Authority (NEMA) said it had issued a certificate of approval for the environmental and social impact assessment report submitted by Total.

Dickens Kamugisha, head of the Kampala-based Africa Institute for Energy Governance, said there was insufficient public consultation and his advocacy group would challenge NEMA's ruling in court.



The planned East Africa Crude Oil Pipeline (EACOP), from fields co-owned by France's Total and China's CNOOC International, would cross sensitive ecological systems including wildlife-rich areas, rivers and swampland that are catchments for Lake Victoria

"This is a project that is going to cross dozens of swamps and other fragile ecological areas that are already being stressed by the impact of climate change," he said.

The 1445-kilometre (900-mile) pipeline, which will run to Tanga port in Tanzania, is key to landlocked Uganda's start of commercial oil production.

Uganda discovered oil in the Albertine rift basin in 2006 but production has been repeatedly snagged by disagreements with foreign oil companies over taxes and development strategy. State geologists estimate reserves at 6 billion barrels.

President Yoweri Museveni's government has indicated production will start at the earliest in 2022.

As Tanzania had already given its approval, the Ugandan stamp means the project now has environmental impact certification for its entire length.

NEMA's executive director Tom Okurut said the environmental authority would keenly monitor construction to ensure the health and safety of the communities, workers and environment.

Helium One Global to Raise £15BN in London for Rukwa Project - Tanzania

Helium One Global is set to list at the London's AIM to finance its drilling plans in Tanzania, where it believes it has a world-scale resource.

Tanzania-focused Helium One aims at landing on London's AIM on December 3 via a reverse takeover of cash shell Attis Oil and Gas.

Helium One's CEO David Minchin said the plan was to raise £5.0 million for the drilling, which is designed to take off in the first half of next year and production by 2023-2024.

"The listing now is to raise £5 million to mobilise the rotary lie detector," Mr Minchin said.

The company plans to drill by the second quarter of 2021.

"It's great in concept. We just need to make discoveries. We've done all we can now," Mr Minchin was quoted as saying.

The company expects to hold a resource of 138 billion cubic feet for a Rukwa project. At \$280 per mcf, that's \$36 billion.

"We're one of the only companies with this size of strategic resource in the world, and we'll be the only company on AIM in the exciting and expanding helium space," Helium One's CEO said.

The company received its Tanzania licences in 2015.

Since then, the company has collected and reprocessed 1,000 km of original seismic, flown a high gravity seismic survey and conducted a micro and macro analysis of seeps.

The company had planned to list on the Australian stock exchange, but then Covid-19 derailed this plan.

"In Australia, it's harder to secure investment in Africa. London is a natural place for our plans and it's a good place that understands investments in Africa," he said.

"Helium One will drill three wells to a maximum depth of 1,200 metres. Each well should take a month to complete and the company is in negotiations with contractors. The company can make savings as a result of the downturn."

Success in the first wells will see Helium One move to appraisal drilling and 3D seismic to understand trap geology fully.

"In 2022, we will be looking for equity for the construction and then it will take around a year to build. We can be producing in 2023-24," Mr Minchin said.

The company will construct a \$50 million production plant from modular

components. The company will export helium as a liquid in an ISO container, via Dar es Salaam.

Tanzania has thrown up some challenges for companies, but Mr Minchin was optimistic.

"We've seen Tanzania turn around in the last six months," he said as he noted Barrick Gold's award of more exploration licences in the country. "Tanzania is open for business and this is the time to be involved."

The state approved the renewal of Helium One's exploration licences in September.

Scirocco Energy voiced its support of Helium One's plans with Attis. Scirocco, formerly known as Solo Oil, has a 12 per cent stake at Helium One. The launch of AIM will cut Scirocco's stake to 4.6 per cent.

Tom Reynolds, CEO of Scirocco, said the deal with Attis was a positive development for Helium One and set it up to deliver material growth.

"Valuation reads across highlights challenging market conditions at this time, but in our view, it's far more important that we now have exposure to a very exciting story with a listing on a recognised exchange," he said.



East Africa's Quest as Shift Towards Green Energy Takes Shape

By Daniel Muasya

UPSTREAM



Daniel Muasya

Resident Country Representative and Upstream Manager
Shell International Exploration and Production – Kenya

The push to adopt to low carbon policies continues to gather momentum more than ever and for African continent, the implications will be far reaching for some of the economies that heavily rely on fossil fuels. Major Economies in Sub Saharan Africa are heavily reliant on revenues generated from the extraction and export of oil, gas and Coal. Nigeria and Angola are the largest oil producers in Africa while South Africa, Nigeria and Zimbabwe are leading coal producers in the world.

Global energy players have significantly cut down on capital exploration budgets in order to preserve cash and focus on high return renewable energy projects. During an investor update press conference in August 2020, the CEO for BP confirmed that the British oil giant is shifting towards becoming a Renewables Energy Powerhouse. He said that the company plans to cut its oil and gas output by 40% by 2030 and spend \$5 billion a year on low carbon projects which will push it towards the 50 gigawatts (GW) of renewables such as wind, solar and hydropower in its portfolio by 2030, up from just 2.5 GW now and more than the total renewable capacity in the United Kingdom at the moment.

Oil firms are also under pressure from activists, banks, investors and some governments to shift away from fossil

fuels and are trying to find business models that offer higher margins than the mere production of renewable energy would generate. In order to align its priorities and the ambitious climate action plan in place, World bank group stopped financing upstream activities in 2019 other than in exceptional circumstances. Consideration is only given to financing upstream gas in the poorest countries where there is a clear benefit in terms of energy access for the poor and only if the project fits within the country's climate change commitments. The organization instead shifted focus on green energy and as at end of 2019 had issued 172 green bonds with a total value of 10.4 billion dollars. The green bonds are geared towards supporting the expansion and improvement of clean energy access, both on and off-grid, through power generation, transmission and distribution, support to the private sector, through technical assistance and policy work.

In addition to its move towards clean energy and to tackle the effects of climate change, Global oil players have also adopted net zero carbon emission approach. For example, Royal Dutch Shell aims to be net-zero on emissions generated by all its operations, as well as on emissions associated with the energy, they need to power them. It has an ambition that any greenhouse gas emitted from making its products that cannot be avoided, through energy efficiency or using lower-carbon fuel, will be balanced with removal from the atmosphere using technology and nature. Shell's Quest Carbon Capture and storage facility in Alberta, Canada shows that technology can be used to capture large-scale carbon and is an effective measure to reduce carbon emissions from industrial sources. Since its opening in 2015, Quest has captured and stored over five million tons of carbon. A huge win for a company that is ambitiously working towards being carbon neutral. Shell is also making significant investments in projects that use nature to reduce carbon emissions, while bringing wider benefits to the society. The company is working with the Dutch National Forestry Department, to plant more than 5 million trees over the next 12 years. This growing number of projects is not only helping Shell meet its net Zero carbon emissions but also helping customers meet their sustainability commitments through buying of carbon credits.

East Africa mix

The shift to renewable energy in East Africa continues to build pressure on other sources of energy, especially when Kenya, Uganda and Tanzania continue to explore the appropriate ways to commercialize their recent oil and gas discoveries; Kenya's Lokichar oil Project, Uganda's lake Albert oil project which has picked momentum after the signing of Heads of Terms agreement with Tanzania in September 2020, and Tanzania's Likong'o-Mchinga Liquefied Natural Gas in Lindi. Due to the capital-intensive nature of these projects and the periods they take, their project economics will continue to face competition from renewable and green energy projects that are cheaper and quicker to bring to market.

The modular nature of solar and wind projects and the speed with which they can be built are also making them an attractive proposition in countries with fewer financial resources, as these renewables allow them to expand generation through more manageable projects. In 2019, Kenya commissioned the 310 MW Lake Turkana wind farm project and officially connected 365 turbines into the national grid. Even though there was delay in

connection to the main grid the project took an approximate one year to complete. In December 2019, Tanzania signed an agreement with China's Sany Heavy Industries to build a 600 MW wind farm and even though no details are available on the precise location where the wind farm will be installed, nor even on the cost of the project or its timetable. Its implementation would be an important boost to Tanzania in its quest to shift towards reliance on renewable energy sources.

Hydropower is also firmly in control and back as a major source of energy in Ethiopia and Uganda, offering a relatively cheap way to produce a lot of electricity, if the reservoirs and rivers are full. Whether the effects of global warming on rainfall patterns in the region will be kind to hydropower producers remains to be seen. Ethiopia has just completed building the contentious Renaissance dam which will be the largest hydroelectric power plant in Africa when producing at full capacity generating a massive 6,000 MW of electricity. Kenya has been leading in Geothermal power generation and other countries including Uganda and Ethiopia are keen to get involved.

Independent Power Producers (IPP's)

The shift to smaller and cheaper renewable energy projects has led to emergence of small to medium power producers who seek to provide off grid energy solutions as well as

connecting to the main grid by signing Power Purchase Agreements with governments. Around 30% of Kenya's installed capacity is owned and operated by Independent Power Producers and the remaining 70% capacity is owned and operated by KenGen, which is 70% government owned. The other East African Countries are also building momentum with the emergence of small off grid power projects in the region. There is also a drive to seek cheap sources of energy especially for the low users of energy like homes. The market for off-grid solar products is also growing quite fast in East Africa. According to Off Grid Solar Association (GOGLA) , 2.43m units of off-grid solar products, such as solar lanterns, and solar home systems were sold in the second half of 2019, an increase of 40% on the first half of the year.

Conclusion

Energy transition is underway, and this continues to be influenced by national, regional, and private industry players and their contexts and priorities. At national and regional levels, policy frameworks and international commitments play a major role while at private industry level quest for profits and social license play a huge role. Critical to the transition is a fine combination of the expansion of the renewable energy projects and commercialization of the oil and gas discoveries in the region and both parties need to collaborate as the region navigates through the transition.

The author is the Shell Country Manager for Kenya



GoK Extends Tullow Oil Exploration Licenses

Tullow Oil plc (“Tullow”) and its Joint Venture partners received extensions to their exploration licences for Blocks 10BB and 13T from the government of Kenya to the end of 2021.

The extension came to be following the approval of work programme and budget for next year by the Ministry of Mines and Petroleum.

Announcing during the Group's recent Capital Markets Day, Tullow Oil Plc Chief Executive Office Rahul Dhir noted that the license extension will allow the Joint Venture partners to re-assess Project Oil Kenya and design an economic project at low oil prices whilst preserving the phased development concept.

“I would like to thank the Government of Kenya for granting this extension which the Joint Venture partners will use to fully re-assess the development concept for this important project” said the CEO.

These extensions allow Tullow, and Total and Africa Oil, to reconsider plans for the development.

The executive note the importance of creating a project that would work at low oil prices while sticking with its phased development concept.

In the coming months, the Joint Venture partners will work closely with the Government on land and water agreements, gaining approval of the Environmental and Social Impact Assessments and finalising the commercial framework for the project.

Dhir noted that Tullow Oil and its Joint Ventures partners encountered development challenges that included low prices, land and water issues.

“Kenya held a substantial resource but that there were many development challenges and was particularly challenged by low prices. The challenge is the complexity of the development ... and there are land and water issues” he said.

Once ESIA work has been completed, the Joint Venture partners will be able to submit the Field Development Plans (FDPs) to the government.

Successful completion of this work will enable the submission of Field Development Plans to the Government.

Tullow Oil new focus has been on maximising returns from its West African assets, mainly Ghana, as part of a plan

to boost cash generation and secure the troubled energy group's future.

“The plan focuses our capital on a deep portfolio of short-cycle, high-return opportunities within our current producing asset base and will ensure that Tullow can meet its financial obligations,” Rahul Dhir, the new chief executive, said in a statement on Tullow's Capital Markets Day.

The company had in September warned it could default on its debt if it did not address a potential liquidity shortfall and told shareholders it expects to be able to generate \$7bn of operating cash flow over the next decade.

Of the generated amount, \$2.7bn is to be invested back into the company, predominantly on recovering as much as possible from the oilfields in Ghana that form the backbone of its business. The remaining \$4bn to go towards servicing its \$2.4bn of net debt and shareholder returns.

The company noted that there will also be a “rigorous” focus on costs as its cash flow forecasts will be based on oil prices of \$45 per barrel in 2021 and \$55 per barrel from 2022 onwards.



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 (lk)	-	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	-
Residual Fuel oils 125 cst.	-	0.3155	0.3310	14%	-	0.40	3.50%	2.00%	0.30	-
Residual Fuel oils 180 cst.	-	0.6309	0.6621	14%	-	0.40	3.50%	2.00%	0.30	-
Residual Fuel oils 280 cst.	-	0.6309	0.6621	14%	-	0.40	3.50%	2.00%	0.30	-
Other residual fuels	-	0.6309	0.6621	14%	-	0.40	3.50%	2.00%	0.30	-
Lubricating oils	25%			14%	-	-				-
Lubricating greases	25%			14%	-	-				-
Batching oils	25%			14%	-	-				-
Butanes (Petroleum gases)	-			-	-	0.40				-
Petroleum Bitumen	10%			14%	-	0.40				-
Bituminous or oil shale and tar sands	10%			14%	-	0.40				-
Bituminous mixtures	10%			14%	-	0.40				-

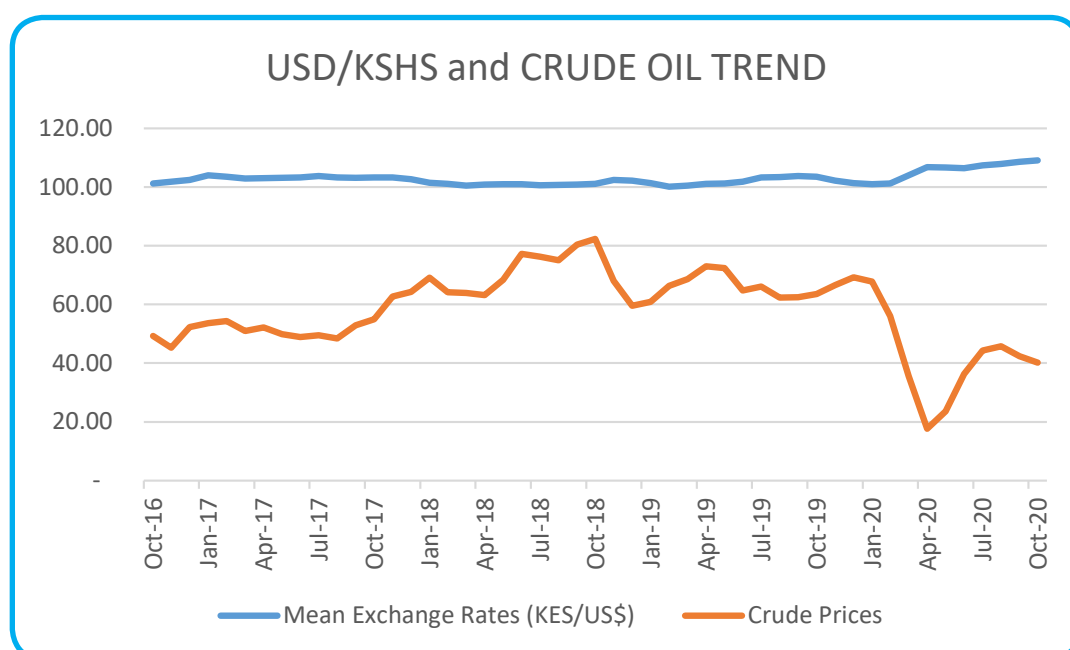
*The Commissioner General ("CG") of the Kenya Revenue Authority ("KRA") vide Legislative Supplement No. 107 Legal Notice No 194 of 2020 dated 1st October 2020 published new excise duty rates on certain excisable goods with specific rates.

The new rates have been adjusted for the average inflation rate for the 2019/2020 financial year of 4.94% in accordance with Section 10 of the Excise Duty Act effective on 1 October 2020.

SOURCE: KRA

Crude Oil Price Trend

Crude Oil Analysis		
Year 2018 - 2020	Mean Exchange Rates (KES/US\$)	Crude Prices
Jun-18	101.01	77.20
Jul-18	100.60	76.30
Aug-18	100.71	75.05
Sep-18	100.88	80.35
Oct-18	101.16	82.30
Nov-18	102.44	68.00
Dec-18	102.16	59.50
Jan-19	101.30	60.95
Feb-19	100.17	66.35
Mar-19	100.47	68.60
Apr-19	101.12	73.05
May-19	101.20	72.35
Jun-19	101.89	64.80
Jul-19	103.31	66.15
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



Pump Prices

Maximum pump prices (15th November 2020 to 14th December 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	103.45	105.85	105.56	106.48	106.48
Automotive Diesel	88.31	90.70	90.63	91.56	91.55
Kerosene	79.25	81.63	81.59	82.51	82.51

Maximum pump prices (15th October 2020 to 14th November 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	104.86	107.27	106.96	107.89	107.88
Automotive Diesel	90.53	92.91	92.85	93.77	93.77
Kerosene	81.37	83.73	83.69	84.61	84.60

Maximum pump prices (15th September 2020 to 14th October 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	104.18	106.55	106.26	107.18	107.18
Automotive Diesel	92.73	95.09	95.02	95.94	95.94
Kerosene	81.37	83.73	83.69	84.61	84.60

Maximum pump prices (15th August 2020 to 14th September 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	101.57	103.95	103.70	104.62	104.62
Automotive Diesel	92.26	94.63	94.57	95.49	95.49
Kerosene	81.29	83.65	83.62	84.54	84.54

Maximum pump prices (15th July 2020 to 14th August 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	98.11	100.48	100.26	101.18	101.17
Automotive Diesel	89.50	91.87	91.83	92.75	92.74
Kerosene	63.09	65.45	65.47	66.40	66.39

Maximum pump prices (15th June 2020 to 14th July 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	77.19	79.68	79.55	80.51	80.51
Automotive Diesel	62.66	65.15	65.19	66.16	66.15
Kerosene	50.56	53.04	53.12	54.08	54.08

Maximum pump prices (15th May 2020 to 14th June 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	71.42	73.90	73.81	74.77	74.77
Automotive Diesel	66.46	68.94	68.98	69.95	69.94
Kerosene	67.86	70.35	70.38	71.35	71.34

Maximum pump prices (15th April 2020 to 14th May 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	81.56	84.03	83.86	84.84	84.83
Automotive Diesel	86.25	88.71	88.69	89.66	89.65
Kerosene	65.97	68.43	68.47	69.44	69.42

Maximum pump prices (15th March 2020 to 14th April 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	108.41	110.87	110.63	111.60	111.60
Automotive Diesel	99.17	101.65	101.61	102.58	102.87
Kerosene	92.99	95.46	95.44	96.41	96.41

Maximum pump prices (15th February 2020 to 14th March 2020)

PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	110.40	112.87	112.61	113.59	113.58
Automotive Diesel	101.98	104.45	104.41	105.38	105.37
Kerosene	100.21	102.69	102.65	103.61	103.61

EPRA Petroleum Prices

Breakdown of the costs of Super Petrol (PMS), Diesel (AGO) and Kerosene (DPK) in Nairobi: 15th June 2020 to 14th July 2020

Cost Item	Cost Description	Super Petrol	Diesel	Kerosene
		Kshs/Litre	Kshs/Litre	Kshs/Litre
Landed Cost (a)	Weighted average cost for all imports	35.01	31.97	28.77
Pipeline Transport (Msa - Nrb)	Pipeline (100% PMS, AGO & IK)	2.16	2.16	2.16
Road Transport (Msa-Nrb) - Bridging	Road (0% PMS, AGO & IK)	0.00	0.00	0.00
Pipeline Losses	Pipeline (0.25%)	0.06	0.05	0.04
Depot Losses	0.5% PMS, 0.3% For DPK & AGO)	0.41	0.20	0.18
Delivery within 40kms of Nairobi	Delivery to petrol stations	0.54	0.54	0.54
Storage and distribution (b)		3.17	2.95	2.92
Importers Margin	Wholesale	4.20	4.17	4.17
Dealers Margin	Retail Investment Margin	4.05	4.05	4.05
	Retail Operating Margin	4.14	4.14	4.14
Oil Marketing Companies Margins (C)		12.39	12.36	12.36
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	0.66	0.60	0.54
Anti-adulteration Levy	Levy	0.00	0.00	18.00
Merchant Shipping Levy	Levy	0.03	0.03	0.03
Import Declaration Fee	Levy	1.15	1.05	0.94
Value Added Tax (VAT)	Tax	7.84	6.72	6.05
Taxes and Levies (d)		55.28	43.42	37.58
Retail Prices in Nairobi (a) + (b) + (c) + (d)		105.85	90.70	81.63
Summary		Super Petrol	Diesel	Kerosene
		KShs/Litre	KShs/Litre	KShs/Litre
Products Costs (a)		35.01	31.97	28.77
Distribution and Storage Costs (b)		3.17	2.95	2.92
OMC Margins (c)		12.39	12.36	12.36
Taxes and Levies (d)		55.28	43.42	37.58
Retail Prices in Nairobi		105.85	90.70	81.63

SOURCE: EPRA

NOTE: The computation of pump prices has taken into account the changes effected by the Tax Laws (Amendment) Act, 2020 which was assented to on 25th April 2020. All the changes in the Act became effective on that date, except the change in the basis of calculating VAT on petroleum products, which became effective on 15th May 2020. While the VAT was retained at 8%, the calculation of VAT now includes excise duty, fees and other charges in line with the East African Community Customs Management Act (EACCMA). Therefore, the basis of charging VAT at the point of entry includes the CIF value, the applicable customs duty and excise tax but excluding IDF fees and Railway Development Levy.

Petroleum and Petroleum Products Data, including but not limited to: Petroleum Industry Market Share, Studies, Reports, Position Papers and other Technical Publications, Press Releases and Communiques, are accessible from the PIEA Secretariat. For more information kindly send an email to: analyst@petroleum.co.ke or call Tel. 0722 221120 | 020 2249081 | 020 313046/7



SHELL PREMIUM ENGINE COOLANT.

YOUR CAR DESERVES THE BEST.

#PAMOJAMILELE



Welcome to RUBiS

A new journey has begun



Kenol, Gulf Energy and Kobil are now becoming RUBiS. With a new energy to fuel your needs and the largest network of service stations countrywide.

www.rubiskenya.com



MAKING YOUR LIFE'S JOURNEY BETTER