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1st Quarter, January - March 2021

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INSIDE

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Insight from the GM

Wanjiku Manyara
General Manager

We are living at a time when our environment is revolting from degradation that is resultant from destructive human activities and unsustainable development.

Unsustainable infrastructure development has adversely affected sodium carbonate mining in Lake Magadi, where silt has occupied approximately 30% of the said lake and further Kisamis River which is a mouth to Lake Magadi, has also dried up. Charcoal burning and over grazing have also significantly contributed to erosion into this lake.

Due to the degradation of the environment around Lake Magadi on account of human activities inclusive of deficient use of environment preservation technology in infrastructure development, the quality of trona has been downgraded thereby compromising Kenya's competitiveness in the international market hence adversely affecting solid sodium carbonate mining contribution to Kenya's economy.

Simply put at risk is the livelihoods of 50,000 community members, 600 employees and approximately Kenya Shillings 9 billion annual company contribution to Kenya's economy. At risk of extinction are unique fish and bird species including flamingos which are an attraction for Kenya tourism sector.

While Lake Magadi has been drying up and though overshadowed by the current global pandemic, Kenya has since last year's second quarter experienced flooding of at least 16 lakes which scientists and geologists have attributed partially to tectonic activities deep in the earths crusts and to human activities that have led to massive siltation of these lakes.

Intensified and irresponsible use of land has resulted environmental degradation and thus higher rain water run-off from land specially due to deforestation and less percolation of it to the underground water systems, leading to higher volumes of water flowing directly and rapidly from the land surface into the lakes.

Thousands of families have been displaced, business disrupted and tourism parks and conservancies submerged and infrastructure destroyed. The latter has high potential to disrupt efficient supply of petroleum and petroleum products and indeed increase supply chain costs, considering that the areas around Lake Naivasha, one of the lakes affected by the flooding, has twenty (20) kilometers of road submerged in water.

Our industry has for centuries paid attention to the environment and the care for it, that has intentionally evolved from Corporate Social Responsibility to Environment Social and Governance.

In this issue we have departed from the focus on demand, supply and market outlook and instead focused on the priceless space in which our industry operates from and whose habitants are consumers- our planet-which we all have borrowed from our children and hence must preserve.

PRESSER

On **7th April 2021** the **East Africa Women in Liquefied Petroleum Gas (WINLPG) –Kenya Chapter** was officially launched during the Petroleum Institute of East Africa (PIEA) and World Liquefied Petroleum Gas Association (WLPGA) Annual Summit.

Wanjiku Manyara will act as National Chapter Coordinator for the moment.

This brings the total number of WINLPG National Chapters (NC) to seven (Colombia, US, South Africa, Nigeria, India and Myanmar). It is expected that Brazil and the United Kingdom will launch their NC this year.

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.

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Circle Gas – University of Liverpool Sign Agreement to Advance Health and Climate Impact Research

Circle Gas has signed an agreement with the University of Liverpool to carry out research into the transition to clean, modern energy in Sub-Saharan Africa using their smart meter pay-as-you-go technology.

Circle Gas subsidiary M-Gas is the largest PAYG LPG distributor in Kenya, and provides the technology for KopaGas, the leading PAYG LPG distributor in Tanzania.

The projects will be run by the National Institute of Health Research (NIHR) CLEAN-Air(Africa) Global Health Research Group at the University of Liverpool led by Prof. Daniel Pope and Dr. Puzzolo in collaboration with Amref International University (Kenya) and the University of Dar es Salaam.

According to Circle Gas Chief Executive Officer Volker Schultz, the collaboration between Circle Gas and CLEAN-Air (Africa) will contribute to research evaluating the positive social impact on Circle Gas consumers and on the environment of transitioning to LPG for cooking.

"We look forward to working with CLEAN-Air(Africa) on our shared vision to improve global health and living standards and reduce carbon emissions" he said.

CLEAN-Air(Africa) Global Health Research Group director Professor Daniel Pope added that the partnership will enable the research group understand the potential economic, health and social impacts for resource poor households that adopt clean cooking through smart meter LPG.

"We are delighted to have partnered with Circle Gas to understand the potential economic, health and social impacts for resource poor households that adopt clean cooking through smart meter LPG. Their aspirations for ambitious scale coincide perfectly with the priority time horizon for CLEAN-Air(Africa)'s research focus: to provide evidence in meeting Sustainable Development Goal 7 'clean modern energy for all" said Prof. Pope.

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Advocacy Key to Boost LPG Uptake

Liquefied Petroleum Gas (LPG) continues to play a critical role in providing clean, safe and affordable cooking fuel. According to the Energy and Petroleum Regulatory Authority latest data, LPG consumption has grown from 2.3 kgs in 2012 to 6.7 kgs in 2020 per capita.

The petroleum industry has continued to champion for the uptake of LPG to combat non communicable diseases, environmental degradation, and economic challenges associated with bio-fuels such as wood and charcoal.

During the Petroleum Institute of East Africa (PIEA) and World Liquefied Petroleum Gas Association(WLPGA) LPG virtual Summit, PIEA Chairman Millicent Onyonyi said that the industry is working towards transitioning non-LPG users to LPG by 2028.

"We in Kenya now have data that proves beyond doubt that LPG is cheaper than charcoal, firewood and kerosene and hence we have a good case to transition non-LPG users to LPG by the 2028 target of Kenya's public-private LPG penetration action plan" said Millicent Onyonyi in a statement read on her behalf by PIEA General Manager Wanjiku Manyara.

"It is gratifying that, with collaboration of the World Liquefied Petroleum Gas Association(WLPGA), we have yet again hosted this annual international LPG forum whose focus is on upscaling the use of LPG in Africa."

The virtual summit, with the theme LPG: A Reliable, Resilient and Essential Cooking Fuel, brought together highly qualified and experienced speakers, and more than 100 participants around the world "to share knowledge, experiences and technology that will enable each Country to fast track consumption of LPG by putting in place the requisite policies, legislative framework and investments" said Onyonyi.

The industry, through PIEA, continues to advocate for zero rating of LPG to promote affordability and accessibility to the rural and lower income bracket in the urban centers.

"For us in East Africa and specifically for us in Kenya, today is certainly a defining moment of our Industry's era because we will launch the EA Women in LPG-Kenya Chapter following the sustained scientific and economic proof that indeed is the most reachable antidote to;

1. eliminating preventable disease and death of 21,650 women and children of five years and below
2. achieving 10% forest cover by 2030 and re-claiming of our five water towers
3. climate change mitigation and increase in our agricultural produce
4. gender equality and dignified quality of life for all"

While officially launching Women in LPG Kenya Chapter, WLPGA Communications Director Alison Abbott said WINLPG national chapters is about "bringing LPG to women or women to LPG by helping women get access to clean energy as they form the majority consumers and users of LPG. WLPGA also noted that very few women are in executive positions, hence the launch of Global Network to encourage more women around the world to get involved in the decision making when it comes to LPG. At the moment we have 6 National Chapters that is Colombia, India, Nigeria, United States of America, South Africa and Myanmar. We are very proud to launch the 7th one, Kenya Chapter and we would like to share experiences with women in LPG in Kenya"

"These are exciting times for women as we launch Women in LPG – Kenya Chapter. We look forward to seeing more women take up opportunities in the LPG sector as either entrepreneurs and in the distribution value chain." said Wanjiku Manyara, WINLPG Kenya Chapter Coordinator.

"WEKA COLLABO" Is Back, with Bigger Rewards

Weka Collabo, Shinda Fuso F1!

Vivo Energy Kenya, the company that distributes and markets Shell-branded fuels and lubricants in the country, rolled out the second edition of the national consumer promotion dubbed Weka Collabo.

"Weka Collabo" seek to thank and reward all customers for every purchase of Shell FuelSave Unleaded, Shell FuelSave Diesel, all Shell lubricants, Shell coolant, Afrigas, and for shopping at Shell or welcome shops at Shell service stations nationwide. The 12-week promotion will close in May 2021.

Entry to the promotion will be through purchase of any shell products. Consumers will be issued with a voucher upon which they will enter code to USSD *494*100# and receive confirmation SMS for their entry to the promotion. In order to attain a collabo, Shell customer will need to purchase fuel and another product from a Shell service station together or on separate dates within the promotion period.

There will be daily, weekly and monthly draws, culminating in the grand draw in May 2021.

During the 1st edition of Weka Collabo held in 2019, Laban Irungu, a matatu driver, and Boniface Njuguna, his conductor of the Dandora -Nairobi(CBD) route, took home a brand new 32-seater matatu.

The grand prize for the 2nd edition of the Weka Collabo has been up-scaled to a Mitsubishi FUSO F1 truck from Simba Corp, the franchise holders of all Mitsubishi models in Kenya.

Other prizes include a Mitsubishi L200b double cabin pick up, 60 motorcycles which will be given out weekly to five winners, daily 10 fuel e-vouchers worth Kshs 5,000 and 400 winners of airtime worth Kshs 100 each day.

Speaking at the promotion launch, Vivo Energy Executive Vice President East and South regions, Hans Paulsen thanked customers for their support during the extraordinary year 2020 and appreciated their support in the new year 2021.

'Weka Collabo' affirms our commitment to our customers who are the key drivers of the transport industry. Besides propagating the benefits of our products and services, as a Company we are keen on enabling the entrepreneurial spirit amongst our customers through the prizes" said Paulsen.

"This promotion is an appreciation to our customers for walking with us through a very tough 2020 and for continuing the journey with us in 2021. We believe the prizes at stake will go a long way in boosting their economic livelihood."

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

Vivo Energy Kenya has rolled out the second edition of a national consumer promotion dubbed Weka Collabo. The promotion will seek to thank and reward all customers for every purchase of Shell products. This is a 12-week promotion that will end in May 2021. Pictured here enjoying the grand prize a Fuso F i truck are; L-R EVP Vivo Energy East & South regions, Hans Paulsen, MD Motors Simba Corporation, Naresh Leekha and MD Vivo Energy Kenya, Peter Murungi.

Vivo Energy Kenya has rolled out the second edition of a national consumer promotion dubbed Weka Collabo. The promotion will seek to thank and reward all customers for every purchase of Shell products. This is a 12-week promotion that will end on 12 May 2021. Pictured here flagging off the grand prize a Fuso F i truck are; L-R MD Motors Simba Corporation, Naresh Leekha, MD Vivo Energy Kenya, Peter Murungi, EVP Vivo Energy East & South regions, Hans Paulsen and Lubricants & LPG Sales Manager Stephen Gikonyo.

EPRA Engages Stakeholders on Draft Petroleum Regulations

Daniel Kiptoo Bargoria
EPRA acting Director General

The Energy and Petroleum Regulatory Authority (EPRA), in February 2021 carried out Stakeholder Engagement workshops across the country on the proposed mid and downstream Draft Petroleum Regulations under the Petroleum Act 2019.

EPRA sought views on the 11 draft petroleum regulations that will address inadequacies of the existing regulations and expand the legal framework to include - increased penalties for offenses, increased power for the Authority to demolish illegally constructed petroleum facilities, enforcement requirements for the Authority to approve contracts for common user facilities, and inclusion of institutional reviews.

Speaking during a stakeholders workshop held in Nairobi, EPRA acting Director General Daniel Kiptoo Bargoria noted that the regulations seek to streamline the importation of petroleum products, business licensing, construction of petroleum facilities, road transportation of petroleum products, construction of retail stations and pricing of petroleum products.

"Our mandate as EPRA is to regulate, supervise and develop the energy sector in Kenya with the aim of providing safe, affordable, sustainable, and reliable energy for all Kenyans. In our endeavour to realize this, it is important for us to continually seek feedback from our stakeholders because your opinion is essential for the effectiveness of EPRA's regulatory function" said Bargoria.

"Allow me to state that the main objective of the draft mid and downstream petroleum regulations is to restructure the petroleum sub-sector. This is with a view to accelerate universal access to sustainable energy and enable a robust business environment for the sub-sector."

The enactment of the Energy Act 2019 and the Petroleum Act 2019 introduced changes in the regulatory framework of the petroleum industry that included expansion of EPRA's mandate to include regulation and supervision of upstream petroleum operations in the country.

The acting D.G informed stakeholders that EPRA in collaboration with Kenya Petroleum Technical Assistance Project (KEPTAP) undertook to review the current mid and downstream petroleum regulations to identify gaps and recommend international best practices for closure.

"KEPTAP reviewed the Energy Act 2006 and regulations there under, The Energy Act 2019, The Petroleum Act 2019 and The Energy Policy 2018 in relation to the mid and downstream petroleum regulations. KEPTAP also conducted a Regulatory Impact Assessment (RIA) to ensure that the proposed regulations do not have significant adverse socio-economic impacts on the affected stakeholders and adverse impacts on taxpayers to fund additional administrative structures needed to implement the regulations" he said.

"I reaffirm our primary task of ensuring quality regulation that conforms to acceptable international standards and reiterate our commitment to unlocking incredible opportunities for the energy sector."

The draft petroleum regulations include:

- The Petroleum (Business Licensing and Facility Construction Permit) Regulations, 2020
- The Petroleum (Operation of Common User Petroleum Facilities) Regulations, 2020
- The Petroleum (Importation of Petroleum Products) Regulations, 2020
- The Petroleum (Information and Statistics) Regulations, 2020
- The Petroleum (Licensing of Petroleum Road Transportation Business, Road Tankers and Drivers)
- Regulations, 2020
- The Petroleum (Lubricants Facility Construction and Business Licensing) Regulations, 2020
- The Petroleum (Minimum Operational Stock) Regulations, 2020
- The Petroleum (Pricing) Regulations, 2020
- The Petroleum (Products Quality Management) Regulations, 2020
- The Petroleum (Retail Station Construction and Licensing) Regulations, 2020
- The Petroleum (Strategic Stocks) Regulations, 2020

NOCK Empowers Kajiado Women with LPG

The National Oil Corporation of Kenya, through a partnership with Kajiado County's First Lady, H. E. Edna Lenku, empowered over 120 women in Kajiado County thorough provision of Liquefied Petroleum Gas (LPG) for cooking.

Over 120 women received 6kg complete SupaGas in an event held early in the quarter at Namelok and Kimana in Kajiado County.
This was a complete all rounded move for the elated women, some of whom had never used LPG before. The move, a brainchild of the County's first Lady, is among several efforts by her office to continuously empower women while advocating for increased environmental conservation in the County.

Speaking during the event, H.E Edna Lenku expressed optimism at the various empowerment programs being undertaken in the county while at the same time applauding women efforts.

"The Governor and I are very happy and proud of you. In the last 3 years, we have continuously implemented several projects at the community level that have been successful largely because of your commitment" said the First Lady.

In the recent past, the First Lady has been promoting modern Manyattas made of interlocking blocks produced by women in the area and urged them to use LPG as their choice of fuel for cooking to counter respiratory health ailments caused by smoke from traditional biomass fuels.

"I hope that our women in the modern manyattas will each purpose to use LPG for their cooking. That way, we will reduce respiratory health ailments, eye problems caused by smoke and continue to live in a healthy lifestyle" she added.

During the event, National Oil conducted gas safety training and cooking demos, answered questions and myths around cooking with gas.

Speaking during the event, National Oil Communication's Manager Lawrence Njenga stated that empowerment is a key pillar in the Corporation's Corporate Social Investment plan, thus the project was important to the Corporation's goal of ensuring use of clean cooking energy.

"As a Corporation, we are committed to promoting behavior change in the society especially with a keen focus on transition of the use of biomass fuels like firewood, charcoal and kerosene to clean LPG energy. In addition, we are keen on promoting programs around afforestation while offering LPG as a long-term sustainable cooking source of energy to back the afforestation agenda" noted Njenga.

The women and youth were further enlightened on the various business opportunities that come with distribution and retail of lubricants and LPG products.

The partnership is key in the achievement of United Nations SUSTAINABLE DEVELOPMENT GOAL number seven (7) of ensuring every household has access to affordable and clean energy, while upholding health standards through the reduction of diseases resulting from use of biomass fuels and indoor pollution.

National Oil Corporation of Kenya Communication Manager Lawrence Njenga handing over a 6Kgs SupaGas cylinder to a woman in Kajiado

SCHOOL OF PETROLEUM STUDIES - TRAINING CALENDAR FOR YEAR 2021

CODE	COURSE TITLE	DURATION		DATE
(B) OIL AND GAS RETAIL AND MARKETING COURSES				
SPS 007B	Strategic customer service course	3 hours	Module 1: Overview of customer service models	30/6/2021 | 12.30 p.m-3.30 p.m.
(C) HEALTH SAFETY SECURITY AND ENVRIONMENT COURSES				
SPS 002C	Petroleum sector contractor & service providers health, safety, security, and environment (HSSE) course	2 hours	Module 1: Contractor & service providers HSSE legal and regulatory framework	23/6/2021 | 10.30 a.m-12.30 p.m.
			Module 2: Occupational health and Safety audit	24/6/2021 | 10.30 a.m-12.30 p.m.
			Module 3: Emergency response planning and preparedness compliance	18/6/2021 | 10.30 a.m-12.30 p.m.
SPS 003C	Occupational health and risk assessment	2 hours	Module 1: Overview of the Occupational Safety and Health Act (OSHA)	6/5/2021 | 10.30 a.m-12.30 p.m.
			Module 2: Occupational safety and health audit	7/5/2021 | 10.30 a.m-12.30 p.m.
SPS 004C	Emergency response plan (ERP)	2 hours	Module 1: Emergency response plan	17-18/6/2021
			Module 2: Formulation of an ERP	
(E) LPG OPERATIONS SALES & MARKETING COURSES				
SPS 004E	Introduction to the LPG sector	2 hours	Module 1: Product knowledge & legal regulatory framework	13/5/2021 | 12.30 pm-1.30 pm
			Module 2: LPG infrastructure and business models	14/5/2021 | 10.30 a.m-12.30 p.m.
			Module 3: LPG innovations & emerging opportunities	17/5/2021 | 10.30 a.m-12.30 p.m.
(F) RISK MANAGEMENT COURSES				
SPS 001F	Risk management in the oil and gas sector course	2 hours	Module 1: Insurance and risk management	27/4/2021 | 10.30 a.m-12.30 p.m.
			Module 2: Foreign exchange and interest risk management	28/4/2021 | 10.30 a.m-12.30 p.m.
			Module 3: Credit risk management	29/4/2021 | 10.30 a.m-12.30 p.m.
(G) PETROLEUM PRODUCTS LOGISTICS & HANDLING COURSES				
SPS003G	Petroleum depots operations & distribution	2 hours	Module 1: Petroleum product storage and handling	24/5/2021 | 10.30 a.m-12.30 p.m.
			Module 2: Product knowledge & standards	25/5/2021 | 10.30 a.m-12.30 p.m.
			Module 3: Legal & regulatory framework	26/5/2021 | 10.30 a.m-12.30 p.m.
			Module 4: Supply chain management	27/5/2021 | 10.30 a.m-12.30 p.m.
			Module 5: Health safety & environment	28/5/2021 | 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.
(K) HUMAN RESOURCE MANAGEMENT COURSES				
SPS 001K	Employee relationship management	2 hours	Module 1: Labor relations and leadership	12/5/2021 | 10.30 a.m-12.30 p.m.
			Module 2: People management	
(L) PERSONAL DEVELOPMENT COURSES				
SPS001L	Reinventing yourself at the workplace	2 hours	Module 1: Reinventing your career	21/5/2021 | 10.30 a.m-12.30 p.m.
			Module 2: Productivity	
PHYSICAL CONTACT TRAININGS (IN-HOUSE BASIS)				
PIEA - WLPG	PIEA - WLPGA LPG Training			June 2021
SPS MIOG	Joint Incident Commercial Systems Management			June 2021

All Courses will be Online via Microsoft teams/Skype
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Climate Change: Impact and Interventions by Oil Companies- Kenya

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

According to UN, Climate Change is the critical issue of our time and we are at a defining moment. From shifting weather patterns that threaten food production and security, to rising sea levels that increase the risk of catastrophic flooding, and recently the extreme freezing conditions in some parts of the world. The impacts of climate change are global in scope and unprecedented in scale.

Without urgent and drastic action today, adapting to these impacts in the future will be difficult and costly.

The observed clear evidence of the impacts of climate conditions on human health is accumulating with time. A variety of direct, indirect, and systemically mediated health effects have been identified with effects of excessive and unpredictable weather patterns manifesting through direct effects such as heat stroke (and possibly death) and reduction in work productivity.

At OLA Energy, we understand the impact of climate change and the importance of climate change mitigation. It is for this reason that we are embracing renewable energy solutions particularly solar energy. We are also cognizant of the negative effects of lead in Fuel. The industry was part of PIEA lobby to move to non-leaded fuels which have less negative effects to the environment relative to leaded fuels.

Renewable energy – we are piloting Solar energy at Retail Service stations and retrofitting buildings to make them more energy efficient.

In the pollution reduction front, we adhere to the strict management of hazardous products to ensure no spills and resulting pollution. The partnership between PIEA and industry has ensured Safe Waste Oil Disposal (SWOD). The industry is also actively promoting use of clean energy, particularly LPG, educating staff and partnering stakeholders like customers, drivers and public on risks and how to mitigate. We are also engaging government and regulators on enforcement to ensure enforcement.

We are part of the Oil Industry Oil spill mutual aid group (OSMAG) which provides OMCs a platform for tier II & III oil spill response. The agency provides a multiagency support in case of a marine disaster. This is to ensure the industry has the required capabilities in line with maritime good practices on marine spills

OMCs through PIEA contribute in the industry standards by participating in development of Draft Standards by Kenya Bureau of Standards. This is aimed at safeguarding the quality of lubes and Fuels handled in the region.

Energy Conservation

At OLA Energy, we are keen on energy conservation through selection of less energy consumption and properly rated energy efficient equipment in our operations, and embracing energy conservation measures through use of modern lighting fixture which consume less energy e.i LED fittings.

We are also continually replacing of aging equipment with new and appropriately designed ones which consume less energy for improved services.

We have introduced Optimium, an efficient fuel, through injection of performance enhancing additives. All this is aimed at reducing GHG emissions, increasing driver satisfaction and reducing fuel bills.

Sustainable Development

In response to addressing the negative effects of sulphur emissions in the environment and fulfilment of IMO 2020 capping sulphur & SOx emissions the industry has facilitated handling of Very Low Sulphur FO(0.1%sulphur) in our facilities. This makes the port of Mombasa strategic for bunker operation.

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NCBA Leasing LLP Facilitate Corporations Fight Against Climate Change

Solar energy is one of the most effective tools we have in the fight against climate change and Kenya is uniquely positioned to tap into this resource.

East Africa is among the regions with a solar energy resource that is generally considered large enough to be technically and economically viable.

Kenya has high insulation rates, with an average of 5-7 peak sunshine hours and average daily insolation of 4-6 kWh/m2. The total potential for photovoltaic installations is estimated at 23,046 TWh/year. The government is aiming to install 300,000 domestic solar systems by 2030. For a long time, solar power was largely perceived as an option for rural electrification and off grid applications. Commercial and Industrial (C&I) firms have however today adopted and installed renewable energy systems to contribute to the power supply on their premises.

Mitchel Cotts, a one stop shop for Logistics Services has turned to solar energy to reduce its Carbon prints as well as reduce the cost of power bills. In 2019, Mitchell Cotts through Chloride Exide, installed 1,080 solar panels on the roof top of their cargo facility at Jomo Kenyatta International Airport (JKIA).

Their core business and operations generally have high power consumption owing to handling of perishables and the switch to solar has significantly reduced their power bills by about 70%. The System is embedded in the national grid and alternates the power source to the grid during night time and solar during the day.

Chloride Solar, a subsidiary of Chloride Exide Kenya designed the bespoke grid tied solar solution that is producing 350KW of power and now fully caters for the facility's daytime power requirements. Mitchell Cotts leased the Solar System from NCBA Leasing LLP and it came with no upfront capital outlay easing pressure on their working capital. NCBA leasing also supported the installation process, commissioning and maintenance matters leaving Mitchell Cotts with enough time to focus on their core business.

As part of its value proposition, NCBA Leasing provides its customers with

dedicated Asset Managers who are mandated to manage the leased assets by liaising with service providers on any issue that require their input, after sales service support, ensuring they deliver on their warranty obligations and provision of regular reports on usage.

Leasing is becoming a more viable financing option for solar PV's as rentals are fully tax deductibles over the lease term and the cash outflows on rentals are lower than regular power bills.

Another benefit is that leasing accords you the opportunity to upgrade the asset either during the lease term or at the end of the lease term eliminating the risk of obsolescence as the new technology would bring more efficient and reliable equipment. In case the equipment is still up to date at the end of primary lease term, NCBA Leasing provides an option to extend the lease into a secondary lease at lower rentals.

A combination of high-energy costs, flexible financing options and falling solar PV prices is accelerating sales of solar directly to C&I customers. As such, it represents a huge opportunity for solar energy.

Many companies still rely on expensive diesel generators to provide backup power during power outages. A World Bank 2013 enterprise survey estimates that 57 percent of Kenyan manufacturing firms use diesel generators to provide 15 percent of their electricity. It is estimated that businesses experience up to four power outages in a month, totalling 24 hours of lost productivity.

Taking into consideration that C&I's are responsible for approximately 72 percent of energy consumption in Kenya, their intermittent switch to diesel greatly contributes to C02 emissions.

Solarisation of C&I facilities will therefore play a big role in achieving the United Nations' sustainable development goal number seven which focuses on the provision of sustainable, affordable, reliable and modern energy for all.

NCBA Leasing LLP is a fully owned subsidiary of NCBA Group PLC that provides operating lease solutions to SMEs, corporate and government agencies in Kenya. The leasing subsidiary has come up with innovative solar leasing packages in partnership with solar experts like Chloride Exide. This is in addition to other classes of assets that they lease including Vehicles, Medical equipment, IT infrastructure, Plant and Machinery.

The company's longstanding expertise in leasing and access to affordable capital has enabled it offer affordable leasing solutions to clients, making NCBA the preferred leasing partner for many corporates.

How Fuel Additives Contribute to Sustainability

By Joseph Ndung'u

Joseph Ndung'u
BASF East Africa Ltd Technical Account Manager – East & West Africa

The number of oil companies in Kenya that treat fuel with additives has steadily increased over the years and currently stands at four oil companies.

Fuel additives are important to oil companies as they enable them to create a fuel brand, thus offering more value to their customers. Traditionally, oil companies only competed on price, but the customer has become more discerning and it is no longer only about price. Besides, the fuel margins have been shrinking and competing only on price has become strategically disadvantageous.

For this reason, oil companies have turned to fuel additives to add value to the fuel and differentiate themselves from competition. This business model has been found to be successful globally due to it's profit margins as it creates more business as well as enhances customer loyalty.

So, what are fuel additives and how do they contribute to sustainability? Fuel additives are multi-functional additives based on complex formulations that impact specific performance features on fuels. They are used to upgrade base gasoline and diesel beyond legal specifications.

The main components of gasoline performance packages are deposit control additives, friction modifiers and corrosion inhibitors.

Diesel performance packages typically contain deposit control additives, corrosion inhibitors, dehazers and anti-foam agents, as well as optionally cetane improver and/or lubricity improver.

It is such an array of additives that improve the performance of fuel way above that of normal fuels.

The benefits of using fuel additives can be classified into 3 main groups:
Benefits for the engine (performance and protection)
The responsible additives here are deposit control additives, dehazers, anticorrosion additives, friction modifiers, lubricity improver and cetane improver.

Benefits for the user and the environment
Deposit control additives, lubricity improvers, cetane improver and friction modifiers all contribute towards improved engine efficiency. An efficient engine burns less fuel and consequently less pollution is generated.

Benefits for fuel marketers
Fuel performance additives are used by oil marketing companies to create a fuels brand which they can effectively market to generate more revenues as well as enhance customer loyalty.

From the foregoing we see fuel additives making contribution to sustainability in three main ways:
- Improved fuel economy
- Reduced emissions
- Cost reduction

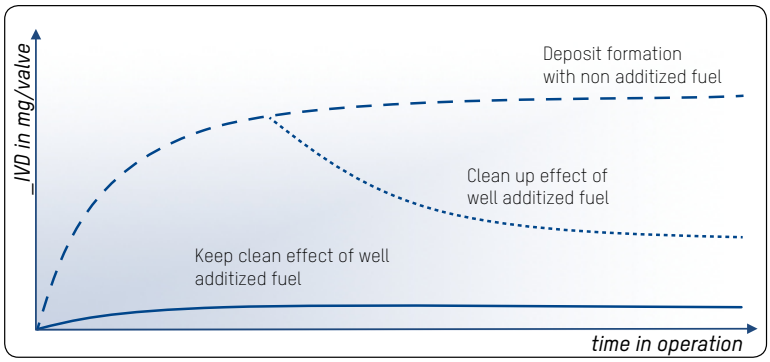
Fuel performance packages protect sensitive parts of the intake system of engines by forming a fluid protective film and thus preventing the formation of deposits (keep clean effect). The

cleaner engine system results in better performance, improved combustion with less pollution, a longer engine life and therefore also in a reduction of overall costs.

Under the brand name KEROPUR®, BASF is one of the leading developers and suppliers of fuel performance packages worldwide. These multifunctional performance packages keep engines clean and protect sensitive parts of the fuel system for better fuel economy, lower emissions, and a better driving experience.

1. Deposit control

The graph below shows the effect of KEROPUR® gasoline performance package in deposit control in an engine specially on the intake valves.



Deposits on Intake Valve (IVD)

The Effect of KEROPUR ®

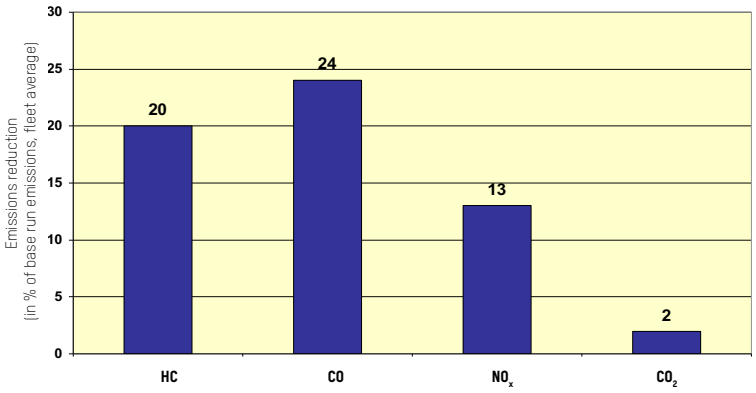
Clean Intake Valve

2. Protection against steel corrosion

Steel corrosion can cause severe damage in pipes and tanks. The steel finger tests below done according to ASTM D665 mod or NACE TM 0172 demonstrates the performance of KEROPUR ® packages.

3. Emission reduction

The figures depicted below are the results of a fleet test using a customized KEROPUR ® package. In total 12 vehicles were used (6 different types of cars, 2 of each type) and ran for 64000 km. Clear emission reduction were obtained for fuel containing Keropur® gasoline performance packages.



In recognition of the positive role that fuel performance packages contribute to both the life of the engine and to the environment, additization is strongly recommended by car manufacturers through the World-Wide Fuel Charter.

Joseph Ndung'u is BASF East Africa Ltd Technical Account Manager – East & West Africa, Fuel and Lubricant Solutions
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Images = © BASF SE

Evolving Towards a Greener and Cleaner City

Left to right: UNEP Deputy Executive Director Joyce Msuya, His Excellency Prof. Anyang' Nyong'o Kisumu County Governor, Mr. Bernad Ngugi Kenya Power CEO and Cristina Boelcke Friend of Karura at the launch of the UNEP electric mobility programme held on March 2nd at the Karura Forest grounds.

The UN Environment Programme (UNEP) recently launched the first public and private sector electric motorcycles pilot in Kenya. The first of its kind spearheading the transition towards electric mobility within the region.

The pilot project which is funded by the International Climate Initiative of the German Federal Ministry for the Environment, Nature conservation and Nuclear safety, is part of UNEP's leading Global Electric Mobility Programme, supporting more than 60 low-and-middle income-countries with the introduction and switch over to electric mobility. The programme supports country projects worldwide with the introduction of electric buses, electric taxi fleets, charging infrastructure and electric 2 & 3 wheelers as part of UNEP's mandate towards combatting air pollution and climate change.

The launch that took place in March this year at the Karura Forest grounds saw attendance of the Director General of the National Transportation and Safety Authority, the Director General of the National Environmental Management Authority, the Acting Director General of the Energy and Petroleum Regulatory Authority as well as representation from academia, press, civil society and at least 20 SMEs working on electric mobility in Kenya.

The objective of this pilot is to evaluate various aspects of electric motorbike operation to help policymakers develop the right policy frameworks to see a sustainable shift to low-emissions electric mobility in Kenya, starting with 2 &3 wheelers.

This pilot project comes at a time where the growth of motorcycles within East Africa has now exceeded that of private vehicles. These motorcycles are often built of old technology, poor quality, very inefficient and extremely pollutive. A recent UNEP study reveals that the average motorcycle is ten times more polluting the air per mile than a passenger car or light truck. Making this switch to electric motorcycles will be taking a huge leap forward towards clean mobility and injecting the city with fresh new life, improving air quality and living standards.

At the launch event UNEP unveiled the electric motorcycles donated for the pilot project by TAILG part of the Shenzen Shenling Car Company Limited (SSCC ltd) and distributed them to the four pilot partners; Power Hive, Kisumu County, Kenya Power & Lighting company and Friends of Karura in a distinguished hand-over ceremony in the presence of key

government officials, business leaders and members of the press.

"Shifting to electric bikes in Kenya, Rwanda, Uganda and elsewhere will reduce costs, air pollution and greenhouse gas emissions, as well as create green jobs " said Joyce Msuya , UNEP's Deputy Executive Director.

A recent UNEP study reveals that the average motorcycle is ten times more polluting the air per mile than a passenger car or light truck. Making this switch to electric motorcycles will be taking a huge leap forward towards clean mobility and injecting the city with fresh new life, improving air quality and living standards.

UNEP's Emob calculator reveal that a global shift to electric motorcycles could prevent 11 billion tons of carbon dioxide emissions, more than double the annual energy-related emissions in the United States of America. The Emob calculator also reveal that the global shift towards electric motorcycles would save motorcycle owners a combined US$ 350 billion by 2050, largely because electric vehicles are cheaper to fuel and maintain. At the same time, UK government High Level Climate Action Champion, Nigel Topping highlighted the importance of supporting the transition towards electric mobility in Kenya.

He emphasized the importance of increased investment in non-motorized transport infrastructure and the necessary collaboration and support required from country governments to support the shift towards sustainable transport systems.

The Cabinet Secretary Ministry of Transport and Infrastructure, James Macharia reiterated the government's commitment to implement fiscal incentives for electric vehicles to help meet the government's target of 5% of all newly registered vehicles to be electric by 2025.

The global fleet is set to double by 2050, with more than 90 percent of future vehicle growth projected to take place in low and middle-income countries. As a result, the participation of low-and-middle-income towards the transition to electric mobility is essential to curb the increase in carbon-dioxied emissions and preserve our planet.

Scaling up the transition to electric mobility in the country will require investments in battery charging infrastructure. Kenya's electric power generation capacity is sufficient to support the charging infrastructure.

However, while demand for motorcycles is high, particularly in rural areas, distribution networks are inadequate. This challenge may be tackled by using solar energy, setting up charging stations, consulting boda-boda operators and using lithium ion batteries.

The electric mobility pilot project taking place in four locations in Kenya, is expected to expand the UN Environment programme's efforts in climate change mitigation and energy conservation by reducing air pollution, improve energy security and creating green jobs across the country.

VTTI Kenya: A Commitment to Sustainability

By Esta Mwaloma

Esta Mwaloma
Health, Safety and Environment Manager, VTTI Kenya

At VTTI Kenya, we see sustainability as much more than caring for the environment. Sustainability is about taking the right choices, in the right way, to ensure our long-term success. While the products we store are necessary for the years to come, we need to ensure we minimise our impact on the environment and conduct our operations as sustainably and efficiently as possible.

Sustainability at VTTI Kenya's Mombasa terminal – whose ten tanks offer 111,000m^3 storage in total – focuses on four key areas: energy conservation, reducing paper use, waste separation, and the health of our team.

To conserve energy, we carried out an energy audit of the entire facility to understand our consumption patterns and consider steps we could take to reduce them. As a result of that process, we implemented a number of measures. Where it was practical, we switched to gravity transfer in our product movement operations. We also replaced all fluorescent lighting on the truck-loading racks and in our office buildings with LED. In December 2019 we converted our office facilities to solar power, with remote monitoring and diagnosis ensuring the reliability and maximum utilisation of this energy source. The project has resulted in significant power savings – we reduced our consumption by 30% in 2020 – and we are committed to devising new ways to improve on that figure in the future.

Cutting down carbon-absorbing trees contributes to global warming, soil erosion, habitat destruction and other environmental problems, so paper recycling is an obvious and easy way to reduce waste in the workplace. By recycling paper, trees are spared. At VTTI Kenya, we have encouraged our people to think twice about whether it is necessary to print - and to use recycled paper whenever possible. In addition, we have increased our use of screens for meetings and presentations instead of printed documents.

Recycling, reusing and reducing waste minimises the amount of waste that is sent to landfill, protects dwindling resources, reduces emissions, pollution and contamination, supports the waste valorisation chain and, ultimately, contributes to our community's waste reduction targets. To that end, VTTI Kenya supports the principles of the circular economy.

Sustainability is also about people. Promoting a healthy lifestyle needs to be supported in the workplace. At VTTI Kenya, this starts with enabling access to healthy food: fruit instead of sugary snacks, healthy juices instead of high-sugar soft drinks. Regular health checks and promoting physical activity are other components of this action. The long-term objective is to reduce the risk of chronic diseases and promote overall health and happiness.

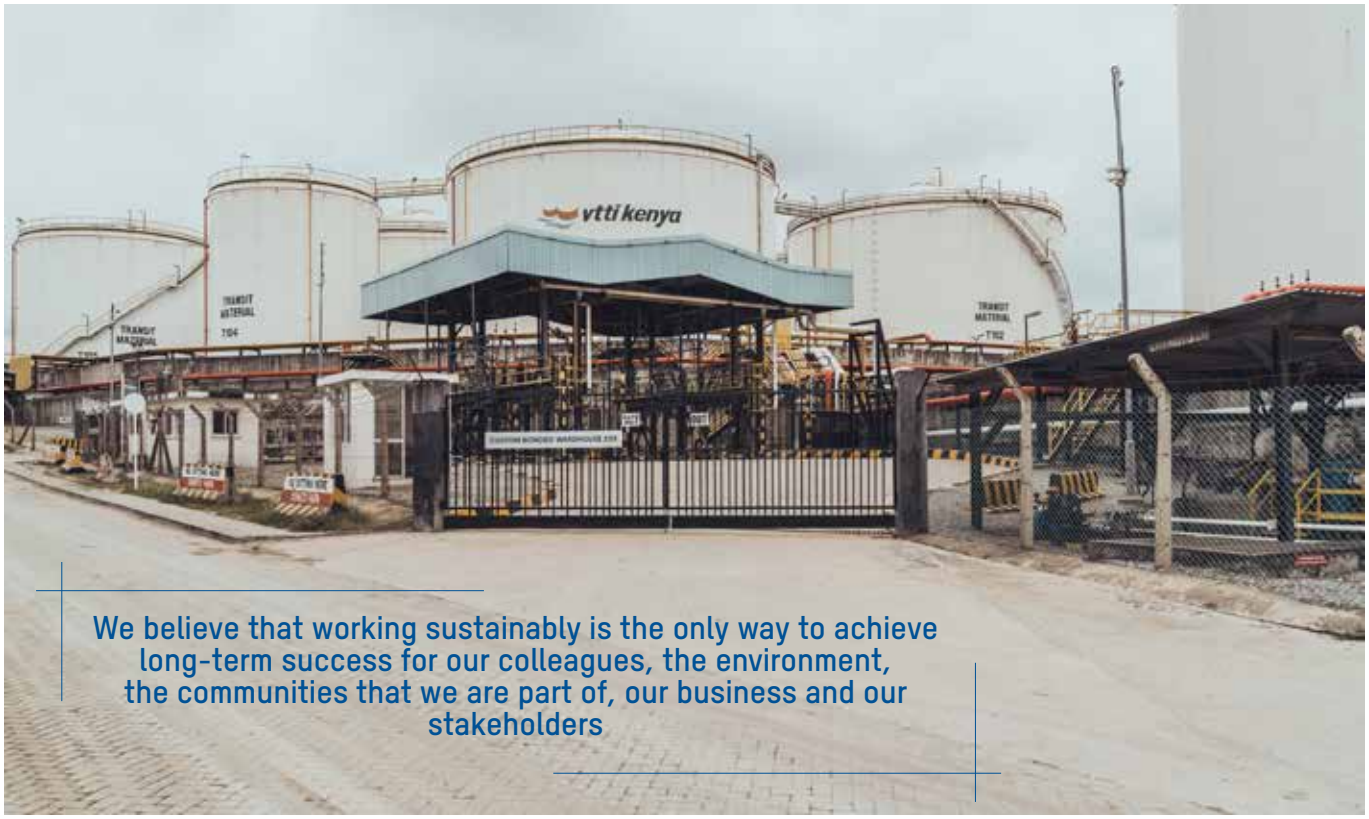
Our way forward

Building on our energy conservation effort, we are further investigating how to become more carbon-neutral in our operations. Throughout our international company, we see this effort taking shape. Our collective effort not just improves our environmental performance but also makes us look at energy use in a new and different light, showing the way to new opportunities.

Recognising the wide scope of sustainability, we have been re-examining what sustainability looks like from the perspective of our stakeholders as well. Sustainability has many faces and considering stakeholders' views and challenges helps us make more informed decisions. We seek to engage key stakeholder groups on sustainability where possible.

We will continue to take pragmatic but meaningful sustainability steps now and evolve the longer-term ambition as we learn more. We are committed to working towards a sustainable future and our commitments extend to the world outside our company, working with and supporting the communities we are in, and with other stakeholders. We believe that working sustainably is the only way to achieve long-term success for our colleagues, the environment, the communities that we are part of, our business and our stakeholders.

Solar panels installed over the staff parking lot to generate power for terminal office building.



We believe that working sustainably is the only way to achieve long-term success for our colleagues, the environment, the communities that we are part of, our business and our stakeholders

Combat Climate Change by Lowering Your Carbon Footprint

Africa is home to some of the world's largest natural resources. It accounts for over 11% of the world's crude oil and natural gas reserves. With an average electrification rate under 30%. This substantial demographic growth, combined with an increasing energy demand to satisfy Africa's growing needs, will exert unprecedented stress on the national energy capacity of most African countries.

The rate of electricity consumption at peak hours is higher than the generation, hence some loads must be switched OFF especially during the day in some residential areas to supply the busiest areas like industries and some offices.

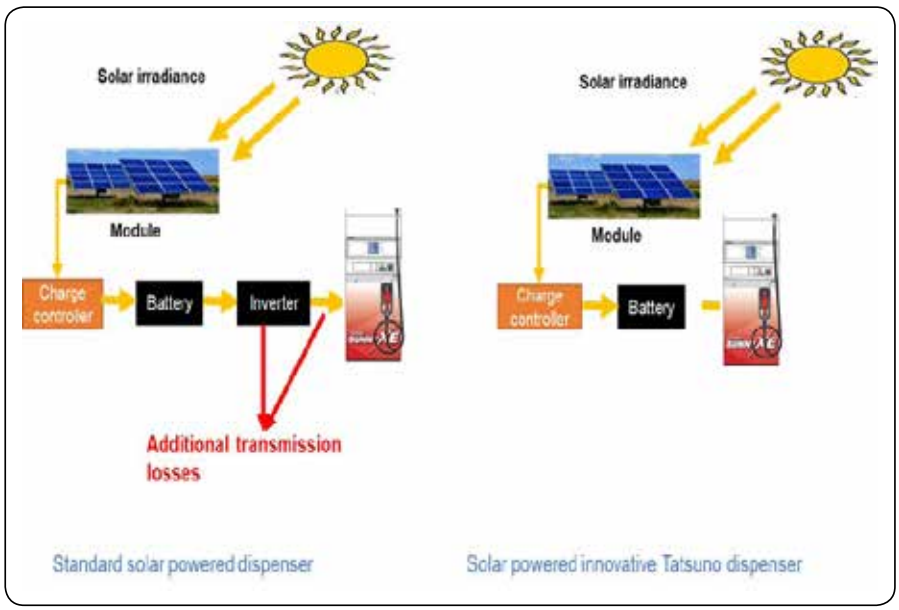
This fluctuation causes power blackouts in some areas especially during the day. Businesses like petrol stations experiencing power blackouts have installed standby generators to sustain the load during power blackouts.

The service stations and fuel dispensers on solar system are more independent of the grid and showcase expertise of oil companies in renewal energy. Since the fuel dispensers are the critical part of the station and the one consuming more power, it is necessary to get the same connected to Solar power to have an effective and economical operation.

While Solar powered gas stations are regarded as one of the most promising renewable energy technologies, the station also must carefully consider the high transmission losses due to use of inverter for switching power from DC voltage to AC voltage.

An innovative model

Tatsuno with its experience of over 100 years in fuel industry had carefully analysed that reduction in distribution and transmission losses in the solar system installed at the stations are efficient to the power dispatch to the dispensing unit. The intensive R&D has resulted in dispensing unit designed to work on DC voltage taken directly from the battery bank.



Comparison of the conventional Solar powered standard dispenser at the stations with Tatsuno dispensers.

Key advantages

a. The dispensing unit is designed to run on DC electrical power, no need of DC to AC conversion from the Solar panels.
b. Uninterrupted and quality power to dispensing unit ensures lowest total cost of ownership.
c. Zero down time and no loss of sales on account of electronic/electrical failure in dispensing units.
d. The system could be designed to take care of cloudy and/or rainy days for power backup.
e. An additional electrical power also supports lighting and other requirements of fuel station.

The above advantages ensure that higher monthly savings on power bills from Tatsuno dispensers, the quicker repayment of initial investment. The return on investment is lower than 4 years. While Solar dispensers and solar system helps the environment by combating greenhouse emissions and in turn every one of us, it also reduces our dependence on fossil fuels.

DT Dobie: Safe Driving Minimises Fuel Consumption

Joe Mungai
Fleet Management Consultant/ Driver Trainer, Mercedes-Benz Heavy Commercial Vehicles - DT Dobie

All the vehicles sold and serviced by DT Dobie are fuel efficient and meet, or exceed international standards covering exhaust emissions. The Company's offerings range in size from the compact four door Volkswagen Polo Vivo saloons to the giant Mercedes-Benz Actros prime mover trucks. The training centre at the Lusaka road premises provides courses for the drivers of purchasers of Mercedes prime movers and Hyundai light trucks with emphasis on safe driving and minimizing fuel consumption.

The latest Actros sets new benchmarks for performance and fuel efficiency. The transport business becomes increasingly competitive and the fuel consumption of this model has been reduced by up to four percent.

Confidence in the new model stems from the experience of the world's longest established and most highly reputed truck manufacturer. For over 100 years Mercedes-Benz has become famous for pioneering new vehicle technology and manufacturing robust vehicles.

As a truck only earns money when it is up and running. The new Mercedes-Benz Actros has been subjected to more than 60 million test kilometres. The unrelenting test programmes included fuel consumption calibrating, summer and winter trials at extreme temperatures, millions of kilometres on rough roads and endurance testing.

The power shift gear change system allows the truck to be driven in four transmission modes. Automatic mode most of the time, but it also has the option for manual use resulting in the best possible fuel consumption.

With the object of achieving class leading performance and reducing fuel consumption, the latest Mercedes Benz passenger car models have been equipped with smaller turbo charged engines. For example the four door luxury Mercedes C180 model has a 1500cc engine which gives the owner strong acceleration, speed and a low fuel bill.

Mercedes car bodies have well-honed aerodynamics which includes under car protection to reduce wind resistance.

To ensure good results from the latest technology and capabilities of the Actros prime movers and Hyundai light trucks, DT Dobie trains drivers to understand the vehicles so that they can get the best service out of them. The training combines driving and theory sessions which focus on the various vehicle features, fuel efficient driving, issues of professionalism, taking pride in being a good driver and safety for the driver and respecting of other road users.

"When DT Dobie sells a truck to a customer, we want the customer to get top value from his investment. Apart from proper servicing, the driver is the most important contributor to the life of the truck. As he handles the vehicle from the time it leaves our showroom training the driver maintains the value of the truck." Joe Mungai, the DT Dobie Driver Trainer, explains the reasons behind the driver training.

"Trucks cost the owners a great deal of money and the driver needs to understand the vehicle to be able to minimize fuel consumption and wear and tear. The latest trucks are very different from those which have been on the roads for 20 years. The advancement in vehicle technology makes it necessary for drivers to familiarize themselves and take advantage of the latest features."

Driver training has now been extended to the employees of buyers of fleets of Volkswagen cars, pick-ups and vans. This tuition is based on the DT Dobie training centre which was established over 45 years ago as the venue for instructing technicians on the repair and servicing of Mercedes cars and trucks.

Regular maintenance, servicing and repairs help owners of all the vehicles supplied by DT Dobie to continually benefit from good performance and fuel economy. The Company has workshops in Nairobi, Mombasa, Nakuru and Kisumu with the latest equipment for the use of factory trained technicians and supervisors who have access to large stocks of genuine spares.

DT Dobie has state of the art after sales service facilities in Nairobi and at branches in Mombasa, Nakuru and Kisumu with dealers and service centres countrywide. The workshops are staffed by factory trained engineers and technicians backed by stocks of genuine spare parts.

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Total Quality. Assured.

TOTAL QUALITY. ASSURED.

Intertek is a market leader in Africa, offering fully accredited independent inspection laboratory services in all the major trading ports and terminals

Intertek provides brand protection and anti-counterfeit programs, that can deliver comprehensive solutions to combat every type of lubricant counterfeiting. With our partners, we have over 20 years of experience in brand protection programs with some of the most successful petroleum products companies in the world.

Kenya Fuel Marking & Monitoring Program

With 2,701,515,118 litres in export product volume, an additional 149,655,220 domestic kerosene volume marked, a total of 4887 petroleum retail outlet visited for testing and illegal fuel trade was found in 46 sites during the period January to December 2020.

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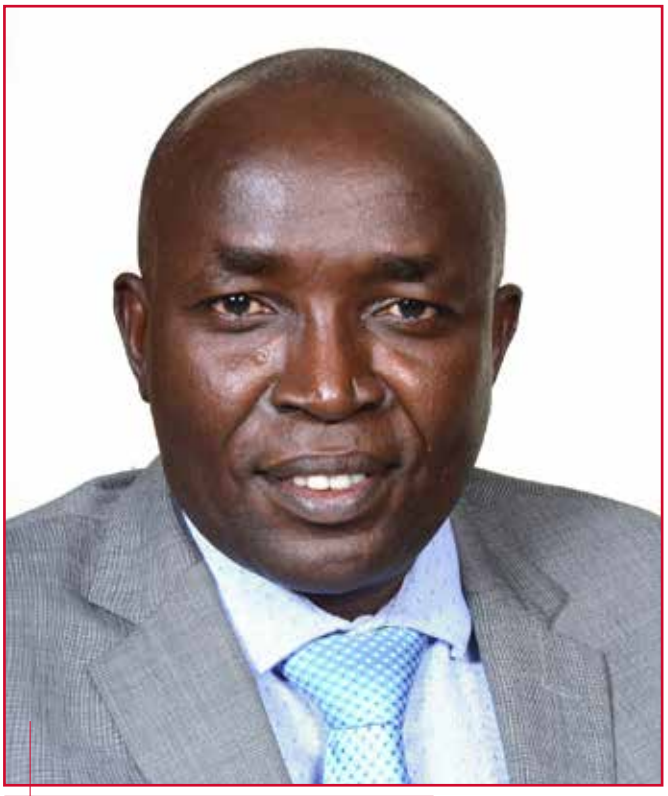
KPC's Role in Preserving the Planet

By Dr. Macharia Irungu



Dr. Macharia Irungu
Managing Director, Kenya Pipeline Company

Kenya Pipeline Company (KPC) plays a critical role in the energy sector and is cognizant of the transitions occurring in the energy landscape. With a core mandate of providing the Kenyan economy with the most efficient, reliable, safe and least cost means of transporting petroleum products from Mombasa to the hinterland, KPC is well placed in the energy-transport-trade nexus.

With the launch of Kenya Transport and Logistics Network, our role is even more integral in establishing a seamless and coordinated national transport logistics network through synergy with Kenya Ports Authority and Kenya Railways Corporation. Achieving this synergy means new ways of thinking and doing business. It is from this backdrop that we at KPC intend to explore renewable and sustainable energy sources to drive its systems.

Transportation of petroleum products through pipeline is an energy intensive activity. Our Company relies solely on the utility power to drive its operations hence the cost of electricity is a major cost driver for the company. Adoption of renewable energy to power our operations will accrue multiple benefits. This is because the use of renewable energy is a multifaceted approach that meets KPCs objectives on a number on fronts. Because the spectrum of renewable energy spans from sources such as wind, biomass, geothermal, hydropower and solar, it presents the most viable option.

According to The International Renewable Energy Agency's (IRENA) cost report, electricity costs from utility-scale solar photovoltaic (PV) fell 13% year-on-year, reaching nearly seven cents (USD 0.068) per kilowatt-hour (kWh) in 2019. This makes it an attractive investment option for industrial implementation.

Beyond the immediate benefit of bringing down the overall cost of conveying petroleum products, adoption of solar presents other opportunities for the company. The legal framework in Kenya is geared towards promoting energy efficiency and conservation in the industrial sector. The Energy Management Regulations require gradual investment in energy saving programmes informed by a statutory energy audit which is conducted every three years. The recommendations from these audits propose adoption of renewable energy sources by the company. Implementation of these recommendations not only enhance compliance with legal requirements but aligns well with SUSTAINABLE DEVELOPMENT GOAL (SDG) No. 12 which addresses responsible production and consumption.

By progressively solarizing our operations, the company will gradually contribute to wider sectorial objectives. The energy and transport sector present the greatest opportunity for reducing greenhouse gases emissions (GHG). This is because estimations are that the two sectors will account for 29.7% and 17% respectively of GHG emissions by 2030. Integrating solar in pipeline transport infrastructure therefore pairs well with other climate change objectives which aim to establish efficient, sustainable world-class transport systems and logistic services that can withstand the expected impacts of climate change.

While it is still not clear what impact a transition to low carbon energy will have on the oil and gas industry, KPC's solar energy project envisions an opportunity to build long term resilience in its business model while delivering value to its shareholders. Multiple benefits such as efficiency, sustainable development, contribution to reduction in carbon emissions and achieving wider sectorial objectives of the Kenyan government are also anticipated.

Sustainable Developments

We collaborate closely with all the communities in Kenya and especially those neighboring our installations; the Depots, Pump stations and along the Right of Way (ROW) which traverses 14 counties from Mombasa through Nairobi, Nakuru to Eldoret and Kisumu. To understand the diverse needs and expectations of the various communities and especially from their cultural and social perspectives, we have been engaging through community barazas and village committees.

The implementation of various development programmes seeks to mitigate potential negative social impacts through establishment of long-term, positive relationships with these communities in areas where we conduct our core business. As we go about our business to make profits, we acknowledge the fact that we have a cardinal responsibility of taking care of the environment.

We manage our Company prudently not only to earn financial profits but also to transform lives positively and to preserve and sustain the environment. As a responsible corporate citizen, we

Integrating solar in pipeline transport infrastructure therefore pairs well with other climate change objectives which aim to establish efficient, sustainable world-class transport systems and logistic services that can withstand the expected impacts of climate change.

KPC Board Chairperson, Rita Okuthe (3rd left) and Managing Director Dr. Macharia Irungu, (2nd right) hands over a dummy cheque of Kshs. 14 million to the Executive Director of Nation Council for Persons with Disabilities Harun Hassan. Yearly, KPC sets aside Kshs 14 million towards the Inuka Scholarship program in which a boy and a girl from each of the 47 counties are selected and sponsored through high school.

KPC sponsored the construction of a maternity wing at Lunga Lunga Health Centre in Nairobi's Industrial Area. Director Jinaro Kibet accompanied by Mr. Disterius Nyandika, the then Ag. GM Strategy, handed over Kshs. 20 million sponsorship cheque to the Nairobi County Government Health official.

are more conscious than ever of our social and environmental responsibility. We work closely with communities and offer support to social programs that add value and transform the lives of beneficiaries through sustainable corporate concept of linked prosperity.

Our key initiatives aim at addressing social inclusion through the empowerment of women, youth and people living with disability and integrating both government and community priorities. Through such strategic partnerships, a shared sense of responsibility is nurtured and that leads to natural sustainability of programs with positively impact on the communities in areas we operate.

A distinct Department of Foundation implements various projects, programmes and events aligned with the following focus areas;

i Special Groups Empowerment programs
ii Education
iii Social Empowerment programs
iv Health and Environment
v Sports
vi Community Engagement

The Inuka Scholarship Program

Through this program, we recognize and appreciate the importance of social inclusion and hence seeks to empower women, youth and people living with disabilities in the country. Every year, the Company sets aside Kshs 14 million to support Inuka education scholarship program to support children living with various forms of disabilities to enable them access secondary school education.

Begun in 2016 with its first batch beneficiaries joining form one in January 2017, the Inuka scholarship program supports education for children living with various forms of disabilities.

Currently, there are 376 boys and girls under the program, spread in various special schools across the country. Besides paying school fees and meeting other basic personal needs, staff at the Foundation Department regularly monitor and review the students' progress.

Why Businesses Must Tackle Climate Change Now!

By Sammy Maundu

Sammy Maundu
Retail Director, Lexo Energy

Climate change is real. The news reports on the environment and climate change are grim. Greenland and Antarctica are melting six times faster than they did in the 1990s, contributing to the rapid rise of sea levels and endangering delicate ecosystems. The year 2016 was the warmest on record, with 17 of the 18 warmest years occurring since 2000. In 2019 alone there were 15 extreme weather events, exacerbated by climate change.

Around the world we have seen wildfires in Australia and in the western United States and last year's record-breaking harrowing hurricane season, communities around the world continue to face devastating extreme weather events, many worsened by the climate crisis. Eleven percent of the world's population, 800 million people, are at risk because of these and related extreme weather events.

Closer home, climate change is increasingly impacting the lives of Kenyan citizens and the environment at large. This is evidenced by more frequent extreme weather events like droughts which last longer than usual, irregular and unpredictable rainfall, flooding (El Nino rains) and increasing temperatures.
The effects of these climatic changes have made already existing challenges with water security, food security and economic growth even more difficult. Harvests and agricultural production which account for about 33% of total Gross Domestic Product (GDP) are also at risk. The increased temperatures, rainfall variability in arid and semi-arid areas, and strong winds associated with tropical cyclones have combined to create favourable conditions for the breeding and migration of pests. This can be seen from the recent unprecedented locust outbreak that was deemed to be the worst locust outbreak in 70 years.

There is no doubt that climate change is rapidly altering our world and putting the lives of all living things in danger. However not all hope is lot. There is still time to stem the tide of global warming and create a new future for all of us.

The oil and gas industry has a responsibility to bend the curve and contribute to the fight against climate change. We are part of the problem, but we can and must be part of the solution.

Our strategies and actions should therefore be aimed at addressing three key concerns namely, Use less Energy, Pollute less and Go green.

Use less Energy

Research has shown that companies could improve their profits by 2-10% each year by saving energy. While improving energy performance may be great for the bottom line, there's another big reason energy use is so important. Energy efficiency gains could achieve about 40% of the emissions reductions required by 2050 to limit global warming to less than 2ºC.

At Lexo Energy we have effectively employed use of energy efficient lighting solutions across our various stations in a move aimed at reducing energy consumption.

Pollute less

The Oil and Gas industry's operations account for 9 percent of all human-made greenhouse-gas (GHG) emissions in addition to the fuels that create another 33 percent of global emissions.

To ensure minimal pollution, EPRA has been at the forefront in formulating a regulatory framework aimed at promoting environmentally sound

development and operations. These regulations focus upon planning for the impact to the environment from oil and gas developments, including the potential impacts to the soil, water and the entire ecosystem of the area in which oil and gas operations take place.

We at Lexo Energy ensure compliance with these through regular audits at station facilities, monitoring of compliance and submission of the reports to the Authority. This is done on an annual basis for existing premises and is a requirement before commencement of any project. This mitigates against any negative impact on the environment.

Lexo Energy has additionally employed the use of state-of-the-art technology that not only aims at real time detection of any product leakages into the ground but that also guarantees quality of product and services across the supply chain from the terminal to the service stations and ensures an effective inventory control and incident free operations.

Going Green

Green business strategies are not only good for the planet, but they can also be extremely beneficial for winning over customers. This is especially true for millennials who tend to be much more environmentally conscious. It is estimated that roughly three out of four millennials are willing to spend more money on sustainable products. Generations that follow millennials will most likely follow the trend for preferring sustainable products set by millennials because they will be even more impacted by global warming than millennials will be.

Many companies are now taking advantage of the rise of this green trend to make more money, win over customers, and help save the planet at the same time.

Lexo Energy is at the forefront of going green. One of our major focus areas is encouraging the use of LPG as an energy source therefore reducing over reliance on other energy sources that are detrimental to the environment.

It is our therefore our responsibility as Business leaders and corporates to take appropriate action to tackle climate change both for business, humanitarian, and planetary benefits. This can be done by making a climate action plan, setting emissions reduction targets, measuring progress, and supporting policies that advance climate change mitigation. Anything less would be to ignore the reality of the impact of climate change, and that would only hurt business and our future in the long run.

NCBA: Changing the Story Through Tree Planting

Kenya is one of the countries that is highly vulnerable to climate change with current projections suggesting that temperature will rise by 2.5ºC between 2000 and 2050, while rainfall will become more intense and less predictable.

Even the slightest increase in temperature and frequency of droughts will present major challenges for food security and water availability, especially in Kenya's Arid and Semi-Arid Lands (ASALs).

Climate change is likely to negatively impact Kenya's future development and achievement of the goals of Kenya Vision 2030 and the Government's Big Four agenda for 2018-2022 that focuses on ensuring food and nutrition security, affordable and decent housing, increased manufacturing and affordable healthcare.

As a country, we need to take deliberate steps to plant more trees. Planting trees has been identified as one of the biggest and affordable ways of taking CO2 out of the atmosphere to tackle the climate crisis. As trees grow, they absorb and store the carbon dioxide emissions that are driving global heating.

Through #ChangeTheStory campaign, NCBA led other players in the private sector to plant over 50,000 trees in Kibiko Ngong Forest and Michuki Park. In addition, with the efforts of its partners, they planted 7 million trees as part of an ongoing national campaign calling on all Kenyans to grow trees to improve the country's forest cover and reverse the environment changes

In realization of the importance of planting trees in combating climate change, the government has rolled out an ambitious plan to reach a cover of 10% by 2022. To achieve this goal, the Kenya Forest Service needs to have 360 million seedlings annually but currently faces a major shortfall with only 170 million.

In 2018, NCBA embarked on a reforestation journey in support of the government's agenda of attaining 10% forest cover by 2022. Through a campaign dubbed #ChangeTheStory, NCBA's rallying call was to create a movement that awakened the consciousness of Kenyans to plant and conserve trees. The ambition is to plant 30 million trees.

One of NCBA's Citizenship thematic pillars is Environment and Natural Resources that supports the community through environmental protection and preservation.

This pillar ties to the banks five-year strategy for community engagement whose focus is to elevate

Peter Kinyua, Chairman Kenya Forest Service and John Gachora, NCBA Group Managing Director planting trees during the NCBA Tree Nursery Launch on 3rd November 2020 at Karura Forest Nairobi.

#ChangeTheStory into a way of life which will encompass enhancing participation.

Through #ChangeTheStory campaign, NCBA led other players in the private sector to plant over 50,000 trees in Kibiko Ngong Forest and Michuki Park. In addition, with the efforts of its partners, they planted 7 million trees as part of an ongoing national campaign calling on all Kenyans to grow trees to improve the country's forest cover and reverse the environment changes.

In July 2020, NCBA launched a one million indigenous tree nursery at Karura Forest in partnership with Kenya Forest Services (KFS) for continuous and affordable supply of quality seedlings. NCBA invested Kshs. 13 million towards the project as part of its reforestation initiative. KFS on the other hand donated the 1.7 acres of land where the nursery has been constructed and is also providing technical expertise in modelling of the tree nursery. For ease of movement to the site, KFS put up a bridge and an access road through the forest. The first batch of tree seedlings should be ready by December 2021.

Moreover, NCBA has partnered with WWF to support Kieni climate initiative by setting up four model nurseries in four schools within Kieni - Nyeri county to raise 100,000 seedlings (fruit, indigenous and exotic tree species).

The region is adjacent to Aberdare forest, an important water tower and source of rivers serving the downstream communities in Laikipia, Samburu and beyond. Over the years, the region that was once well forested and with plenty of water for farming and domestic use has seen these resources disappear at alarming rates.

The pilot programme is part of WWF-Kenya campaign dubbed, Keep Kenya Breathing - a national campaign that provides an open platform and invitation to all stakeholders; government, the Kenyan public, corporates and peer organizations to take positive action in restoring Kenya's 10% forest cover.

The campaign is not only looking at general tree planting but ensuring tree growing in the key water towers across the country. This will improve the country's forest cover and change some of the issues we have seen the country experiencing including drought and the ongoing floods.

Part of the measures put in place to ensure that the saplings planted survive and grow into trees is through working with the local communities and empowering them to take care of the forest.

Despite their importance in combating climate change, forests still face serious threats ranging from illegal logging, encroachment, overexploitation, overgrazing, forests fires, pests and diseases.

If the country is to achieve the recommended UN tree cover of 10 percent, we need to not only plant more trees but also protect existing forests to minimize the negative impacts on the resources and avoid further degradation and deforestation.

NCBA Bank will continue to engage a broader number of partners, both from private and public sectors to support these projects through various ways possible. NCBA is pleased to see that the reforestation efforts so far have had a positive impact and would like to call on your support as they seek to strengthen their efforts.

Together, let's Go for it and #ChangeTheStory.

Co-op Bank's Innovative Financial Solutions Driving Renewable Energy Growth

Renewable & Clean Energy will continue to be a center of focus in meeting future of global energy demands which continues to grow fueled by increased population, urbanization, economic growth, environmental sustainability & protection. A spectacular example has been its impact in the motor industry which for a long time seemed unaffected by the changes in renewable energy. In a short span of 10 years, Tesla has gained sizeable market dominance in the motor industry with revenues climbing to $31.5 billion, up from $24.6 billion in 2019. Elon Musk the founder is a South African immigrant to the USA and one of the rarely talked about pillars of his success is the access to the worlds most innovative & successful finance raising markets which is the USA. This brings to focus the challenges, baby steps, innovation and unique position Africa has in financing renewable clean energy.

Unlike other areas of the globe which have developed a significant portion of their energy needs through non-renewable sources, Africa still has a clean slate to develop its nascent power requirements in a clean & sustainable way based on the abundance of these alternative sources of energy. One of the key factors affecting these developments is the access to innovative financial solutions to help in greater access to renewable energy solutions that are sustainable, pollution reducing, energy conserving & emission/carbon reducing. Co-operative Bank has been at the fore front in overcoming these challenges by providing innovative financial solutions.

Co-operative Banks approach has been in forging partnerships with various renewable energy development partners such as DFI – Development Finance Institutions, Insurance Guarantee Agencies, through developing financial products that are able to de-risked the projects through joint collaboration. The bank brings forth its wide network of clients (spread across Saccos, Retail & Consumer, SMEs, Corporate Banking), its core mandate in administration of loans & its ability to monitor re-payments & undertake initial credit scoring. The renewable energy partners help de-risk the banks exposure thus increasing the banks appetite in lending to these sectors & giving solutions to clients who may not in a normal credit scoring process qualify for a loan. The impact is that we can support sectors of the economy which desperately require renewable energy solutions who may not qualify using the financial models in the market. We are thus able to fulfill our joint mandate as a financial partner in the renewable energy space with a social mandate of giving solutions to all segments of the society.

The strategy has enabled Co-operative Bank to be a pioneer bank in the renewable energy financing where we have disbursed facilities worth USD 38 million over the last 8 years in collaboration with various DFIs.

Despite the initial success, we have from the experience observed some challenges facing financing of renewable energy in Kenya as below that working with our partners we can be able to overcome going forward;

Equipment sourcing & verification – There are three components to these; there is the quality assurance aspect ensuring that the components are from trusted sources that can be traced back to producers who can verify that the equipment is genuine as in any other sector there are companies selling counterfeits. The ability to have the companies who provide the equipment give warranty's & after sales service. The third point of having end to end single source of components which also enables better supplier pricing. The above points ensures that when the bank finances a project we are able to be confident that the equipment will work optimally for the period of loan requested, in case of supplier defaults the equipment will be replaced promptly, that the equipment will be serviced periodically by trained professionals ensuring its longevity & that our end consumer can negotiate for the best pricing available.

Security (e.g solar panels, invertors) – The ideal model would be to have the assets finance self-secure without need for additional security. The challenge is that the security is prone to vandalism & theft leaving the financier exposed incase the facility advanced is under distress since not all components can be tagged & traced. Even if recovery is possible the other challenge would be an established channel to ensure this equipment can be redeployed for use as a solution to another client.

Pre-Financing Technical & Feasibility Studies– Prior to financing any project all financiers usually require an independent guide on the viability of the project being financed. Unlike other developed sectors like real estate which have reputable companies that can undertake these studies, the renewable energy space in Kenya isn't as Furthermore, professionals in the field are unable to give financiers professional indemnity assurances on the reports generated to ensure professionalism in the sector. The technical & feasibility guides the bank in ensuring that the project has professionally been analyzed by experts in renewable energy projects.

The good news is that Co-operative Bank has been working with various partners to come up with solutions that can address these challenges. The bank has a Green Energy Leasing Program backed by insurance guarantees which involves the bank financing various clients energy needs through off balance sheet rental lease structures with Co-op Bank Fleet Africa (Co-operative Banks leasing subsidiary which is a joint venture between the Co-operative Bank of Kenya and global leasing specialist Super Group based in South Africa). The facility will target educational institutions, Agri processing institutions, Industries, Hotels etc. convert to solar or other green energy solutions by using a rental model that does not require huge capital expenditures & using current energy consumption payments as the means of analyzing repayment ability. The lending will be backed by insurance guarantee cover of 80%.

This is a solution to some of the challenges currently bedeviling the growth of funding for renewable energy and enables Co-operative Bank to cement its position in financial innovation. The problems facing financing of renewable energy in Africa are unique to the continent & each specific country. The only means of unlocking this potential is for African based financial institutions to be innovative using their unique experiences in the markets they serve to drive growth in renewable energy.

Total Kenya PLC Initiatives in Preserving the Planet

By Jackson Ongubo

Jackson Ongubo
Strategy Manager Total Kenya PLC

Energy plays a key role in mitigating climate change. As a broad energy company, Total commits to become a Net Zero emission company by 2050 with the society. Total has proactively joined with the industry and the international community to identify joint solutions for capping the increase in global temperatures below 2°C.

Total has been developing for years a 52 MWp PV solar farm project near Meru county (Isiolo PV Project), that is under its last stage of development. The project company has signed a power purchase agreement with Kenya Power in 2019 and is expecting to reach financial close in 2021.

At Total Kenya, in line with the Group ambition, we are committed to finding solutions to the challenge of climate change, while also supporting social and economic development in Kenya by providing energy that is more affordable, more reliable, cleaner and accessible to as many people as possible.

Total Kenya PLC ambition has taken diverse approaches. Among them is Total Access to Energy program, with reliable solar lamps solutions. The program was designed to test and develop innovative and profitable business models on a large scale, with a view to finding long-term solutions to the problem of energy access for low-income communities. Thanks to this program, more than 3.8 million solar lanterns and kits have been distributed since 2010 and 17.3 million people have been impacted. Further to this Total Kenya is determined to be a key player in renewable energy and development of carbon sinks such as promoting the planting of trees to increase our forest cover and protect our environment through our program Eco challenge.

Access to Energy Program in Total Kenya PLC

Total Kenya launched the Access to Energy program in 2011.
By January 2021, Total Kenya PLC had sold 500,000 solar lamps and home kits impacting over 2 million people across the social spectrum and avoided emissions of 460,000 tons of CO2. Our ambition is to impact an additional 3 million by 2025. The benefits derived from use of TOTAL's quality solar energy solutions include economic, clean, and healthy-to-use energy with no harmful emissions.

In Kenya, we have gone a step further to partner with established and tested electrical and electronic waste disposal and recycling partners to ensure a robust end-of-life management program thereby protecting the environment from dumping and pollution.

TOTAL Solar lamp sunshine range brand

TOTAL Solar lamp sunshine range being sold to customers at TOTAL stations

Total Kenya PLC a Major Player in Renewables

Total Kenya PLC kicked off the project in 2017 and by December 2020, we had 107 stations solarized across the country producing total energy of almost 1,000 MWh. As a result of this solarized station we have managed to avoid an equivalent of 510 MT of CO2 emissions and the ratio of solar power to the overall power consumption in the service stations is now ranging at 30-35%. By end of 2021

Total Kenya PLC will have solarized 70% of its entire retail service stations and the Kisumu Lubes warehouse. Our other logistic facilities of Nairobi Lubes warehouse shall be solarized in 2022 and the Lubricants Oil Blending plant shall be done in 2023.

Solar Panels installation at Gigiri TOTAL station

Solar Panels installation at Eastern Bypass TOTAL station

Inverter installations at TOTAL service stations

Total Kenya Eco Challenge

Launched in 2003, Total Eco Challenge is essentially a tree planting, public education and awareness campaign with an action focus added. The two combining as "inspiration" and "enablement". The tree planting activities are done in collaboration with the communities.

Our Total Eco Challenge has emphasized that trees outside indigenous forests can be used in many ways sustainably. Hence, the campaign's slogan "Miti ni Mali! Miti Tosha!" broadly translated to mean "Trees are Wealth! Trees are enough to sustain us." The Eco Challenge campaign champions the idea of "one person, one event, one tree", encouraging all Kenyans to commemorate every important moment in their lives be it getting a job, promotion, passing an exam, buying a car, getting married or having a baby by planting a tree.

Since establishment and in collaboration with the community and other partners Total Eco Challenge program has inspired the planting of 86.8 million trees between 2003 and 2019 across the country.

A past tree planting activity involving Total Kenya staff

Total Eco Challenge program in collaboration with Kenya Forest Service Kwale and the local community tree planting activity in Majoreni Area at the coast

As part of the Total Eco Challenge program and in collaboration with Kenya Forest Service Kwale and the local community, Total Kenya staff planted 3700 tree seedlings, mainly mangroves, at coastal area of Majoreni, Kwale County. Tree planting is in line with Total Foundation's focus area on Climate, Coastal Areas and Oceans.

Proper Regulatory Framework Key to Adoption of LPG in Kenyan Households

BY EPRA TEAM

Liquefied Petroleum Gas (LPG) is one of the cleanest sources of energy amongst petroleum fuels. According to data from the Energy and Petroleum Regulatory Authority (EPRA), the per capita consumption of LPG has grown from 2.3 kgs in 2012 to 6.7 kgs in 2020. The Kenya National Bureau of Statistics estimates that 54 per cent urban households in Kenya commonly use cooking gas as the main source of cooking fuel compared to rural households whose LPG usage is at 24 per cent.

Use of LPG is key in reducing household air pollution (HAP). Reliance on kerosene and biomass by rural households has immensely contributed to HAP, leading to increased cases of respiratory illness and in worst case scenarios death. Further, biomass especially wood and charcoal usage has put a strain on Kenya's forest resources.

Uptake of LPG has been slowed down because of some constraints in the supply chain and purchasing power of consumers. Unlike solid fuel and kerosene that can be purchased in small amounts for individual cooking needs, LPG users must purchase a full cylinder, filled in centralised bottling plants in standard capacity cylinder sizes of 3, 6 and 13kgs that can last for several weeks with regular household use. Over time, the LPG may well cost the household less to use than these competing traditional fuels.

The shift to cleaner alternative sources of energy such as LPG is therefore inevitable if the country is keen on reducing its Carbon Foot Print. For this to be realized, a proper Regulatory framework is not optional.

Accordingly, EPRA has been at the forefront to implement the Petroleum (Liquefied Petroleum Gas) Regulations of 2019 which govern the importation, transportation, storage and distribution of LPG in Kenya.

"We are confident that the continued enforcement of the Regulations will ensure an increase in the per capita consumption of LPG from the current 6kgs to above 10kgs in line with the Government's long-term strategy" said EPRA's Ag. Director General Daniel Kiptoo.

"We acknowledge that innovation will play a key role in ensuring that even the low-level income populations can afford clean cooking energy such as LPG. EPRA will thus continue supporting local and foreign investors keen on providing new solutions to existing problems in the LPG sub-sector."

To heighten LPG penetration in the Country, EPRA has licensed three (3) investors to supply LPG through the use of smart meters that allow sale of LPG through a token-based system as is in the electricity sub-sector. Such systems provide convenience and enables consumers to purchase the quantity that fits their pockets, thus providing the better alternative to Kerosene. By use of meters, the consumers don't face the hurdle of empty cylinder-exchange, are assured of a dependable source and do not need to worry if the LPG will run out without notice.

Further, other innovations that are supported by the LPG Regulations are the use of reticulated systems in households. LPG is sold via a metered system at safe pressures hence increasing convenience, safety and affordability. So far EPRA has approved one gated community to use reticulated LPG systems. EPRA has also facilitated the use of LPG as an alternative to gasoline and gasoil in internal combustion engines. The Authority has approved one (1) player to pilot the process within Nairobi and its environs. This is a good move towards reducing Kenya's Carbon Footprint, considering the increased level of vehicular mobility in recent years.

Effective definition and enforcement of regulations and market rules, based on best practices and international standards, is essential to establish a viable and scalable LPG cooking market. Such rules create favourable conditions for a safe, economically viable and scalable LPG sector while fostering the development of feasible infrastructure investment to establish and maintain a safe and reliable fuel supply chain.

Stakeholders during a past consumer engagement forum on the LPG Regulations, 2019 convened by EPRA.

Cognisant of the role that the media plays in educating the public, EPRA undertook an LPG sensitization campaign dubbed "Stori Ya Gas" in 2020. The campaign was aimed at educating the masses on the safe use of LPG and the role LPG can play in their energy strategies.

The LPG industry is constantly innovating in ways that help to provide safe, sustainable solutions well-suited to a range of tasks. EPRA's actions such as establishing a solid regulatory environment will be essential to further expansion in the country. Further, EPRA is supporting the National Government to ensure constraints in the supply chain are reduced. This will bring efficiency gains to consumers who will in turn enjoy lower prices.

Lawrencia Gichatha ,Total Kenya Finance Director hands over IT equipment to Bonnie Mbithi, CEO Computer for Schools Kenya (CFSK). The donation includes desktop computers, laptops, servers, printers, scanners, docking stations, routers, cameras & Uninterrupted power supply units. CFSK will refurbish the equipment before distributing it to needy schools.

Oliver Biyogo (R),Total Kenya Commercial Manager-Specialties & David Ayilo, Total Kenya Corporate Affairs Manager flag off a roadshow caravan that will traverse the country publicizing the newly launched TOTAL Lubricants packaging.

Total range of lubricants

PIEA Secretariat defending the 2021 - 2022 budget proposals at the National Treasury.

Engineer Nicholas Chelugo (in suit) from Kenya Urban Roads Authority (KURA) together with Jayne Murogo from Total Kenya LPG Plant, George Maranga - OLA Energy, Eric Wachira – Vivo Energy and other members of the PIEA Secretariat in a joint inspection tour of Nanyuki and adjacent roads repairs.

We Need More Than Green Energy to Preserve Our Planet

By Daniel Muasya

Daniel Muasya
Strategy and Operations advisor specializing on Energy

Green energy is generated from renewable solutions especially through solar, wind, hydroelectricity, biomass, and geothermal power. To be deemed green energy, a resource should not produce pollution, such as is found with fossil fuels. This means that not all sources used by the renewable energy industry are green. For example, power generation that burns organic material from sustainable forests may be renewable, but it is not necessarily green, due to the carbon produced by the burning process itself.

Green energy sources are usually naturally replenished, as opposed to fossil fuel sources like natural gas or coal, which can take millions of years to develop. Green sources also often avoid mining or drilling operations that can be damaging to eco-systems making them environmentally friendly as they are renewable and clean, meaning that they emit no greenhouse gases and are often readily available. Secondly, Green energy can lead to stable energy prices as these sources are often produced locally and are not affected by geopolitical crisis, price spikes or supply chain disruptions. Lastly, green energy represents a low-cost solution for the energy needs of many parts of the world and this is projected to improve as costs continue to fall, further increasing the accessibility of green energy, especially in the developing world.

Although used interchangeably, some differences exist between green, clean, and renewable energy. Green energy is energy that comes from natural sources, such as the sun, wind, water etc. Clean energies are energy types which do not release pollutants into the air, while renewable energy comes from sources that are constantly being replenished, such as hydropower, wind power or solar energy. Renewable energy is often seen as being the same as green energy, but there is still some debate as to whether this is true especially if evaluated from an environmental perspective, for example, can a hydroelectric dam which may divert waterways and impact the local environment really be called 'green?'. However, a source such as wind power is renewable, green, and clean – since it comes from an environmentally-friendly, self-replenishing and non-polluting source, additionally, it does not affect the environment in any way after consumption.

Currently, 90% of Kenya's energy is generated from renewable sources mostly coming from hydro and geothermal sources, making the country one of the top renewables, clean, and green energy producers in Africa. The government opted to leverage on the abundant solar, hydro, wind, biomass, and geothermal resources in the country to seek the expansion of renewable energy generation by prioritizing development of geothermal and wind energy to support its increased energy access initiatives like rural electrification programs and last mile connectivity projects launched in 2014. In addition, the private sector has exploited this opportunity by either partnering with the government through building projects that connect power to main the grid by signing Power Purchase Agreements as well as through solar-fed mini-grids and individual home solar solutions. An example is the 50MW Garissa Solar Plant commissioned in 2020, the largest grid connected solar power plant in East & Central Africa developed to harness the region's abundant solar energy resource. Currently, this project is contributing about 2% of the national energy mix and has significantly led to a reduction of energy costs in the country thereby promoting the development of clean, reliable, sustainable, and affordable electricity.

Despite the continued push towards a shift to green energy and slowing of upstream activities in Kenya, fossils fuel exploration cannot entirely be abandoned. The need for heavy industrial work is still rising and thus the energy needs. It is therefore important for energy players and Governments to continue exploring environment friendly strategies at extracting, refining and use, stages of fossil fuels as these activities can have serious consequences on wildlife, human health, water sources and other aspects of public lands. Additionally, both fossil fuel and select green energy sources are found to be environmentally unfriendly especially at waste management phase where energy storage equipment is mostly not responsibly managed and disposed after their shelf lives. Energy producers therefore need to consider environmentally friendly approaches while carrying out their activities.

Preserving Wildlife Habitats

In a world where forest cover is declining, increased energy activities continue to deplete wild and marine habitats at a fast rate. In addition, oil and gas drilling and extraction, and installation activities disrupt wildlife hence affecting their movement, communication, and even breeding patterns. Construction of way leaves could be built on animal migration paths, hence disrupting their movements. An example is a case where three rare species of giraffes were electrocuted in Soysambu conservancy in Kenya by electric wirelines in February 2021. In addition, a report by The Nation (Kenyan newspaper) indicates that at least eleven giraffes and dozens of birds had been electrocuted by power lines in the last two year in the same conservancy. Construction of several green energy generation sources e.g., wind power projects and supporting infrastructure which includes roads, pipelines, and other facilities built by oil companies can degrade and destroy these important habitats.

Oil spills have devastating effects on both marine and wild animals both internally through ingestion and inhalation, and externally through skin and eye irritation. In addition, contamination of local ecosystems impacts communities who rely on said ecosystems to survive, with crops and food sources becoming poisonous or disappearing altogether because of food chains being destabilised. Fishermen and local ship workers can lose their sources of income due to the health problems associated with exposure to oil such as respiratory damage, decreased immunity and increased cancer risk depriving communities of essential resources and revenue needed to support themselves.

It is of importance that as organizations continue to carry out energy extraction and construction activities, proper environmental Impact assessments, and care, be carried out to achieve minimum disruption on both marine and wild animal as well as human habitats.

Reducing Greenhouse Effect

The most abundant type of greenhouse gas is carbon dioxide, primarily released into the air through the burning of oil, coal and gas that fuels everything from most cars to heavy industrial manufacturing while another gas, methane, is released during the extraction of natural gas through the method of "fracking." These emissions trap unwanted solar heat causing the planet's temperatures to rise, leading to frequent and long droughts, harsh heatwaves, and health complications, e.g., cancer. AS efforts to halt exploration and production of fossil fuels continue to bear fruits, it is important that the world joins energy producers in the efforts to reduce carbon emissions ultimately controlling green house effect. In large industrial manufacturing, there is need for continued innovation on energy efficient machinery that can effectively run-on sustainable energy fuels like hydrogen and solar. Accelerated innovations in transport that enhance accessibility towards efficient and sustainable transport sources like adoption of electric cars and other logistics enablers will be of substantial value as transport is a major consumer of energy globally. In agriculture, adoption of sustainable heating in greenhouse horticulture, improved processing of manure and enhanced usage of carbon in soil and vegetation will significantly reduce green house effect on the environment. In addition, governments need to champion growth in forest cover across the world to help in neutralizing carbon emitted in to the environment during daily human activities.

Energy Waste Disposal

Today, many cities continue to face the challenge of waste management as the push to adopt environmentally sound practices continue from the regulators and the civil society. The ideal waste management alternative is to prevent waste generation however, this may not be applicable in all cases. In 2017, kenya successfully discontinued manufacturing, sale and distribution of non-biodegradable plastic carrier bags effectively reducing environmental pollution to ecosystems significantly. Adoption of green energy remains as the ideal solution to minimizing waste management at production phase, however, there are components in the value chain that need careful consideration at the time of disposal e.g., bulbs and other end user materials. This is not the case in other complex sources of energy that generate radioactive wastes that require proper disposal mechanisms to avoid any chances of radiation to people or the environment.

Despite the continued push towards a shift to green energy and slowing of upstream activities in Kenya, fossils fuel exploration cannot entirely be abandoned. The need for heavy industrial work is still rising and thus the energy needs. It is therefore important for energy players and Governments to continue exploring environment friendly strategies at extracting, refining and use, stages of fossil fuels as these activities can have serious consequences on wildlife, human health, water sources and other aspects of public lands. Additionally, both fossil fuel and select green energy sources are found to be environmentally unfriendly especially at waste management phase where energy storage equipment is mostly not responsibly managed and disposed after their shelf lives. Energy producers therefore need to consider environmentally friendly approaches while carrying out their activities

To conserve the environment, it is therefore critical for organizations and governments to think through waste management processes of its activities and pick the most environmentally sound option from the highly favored method of prevention to the least favored traditional disposal method of landfill.

Conclusion

Preserving the environment is a collective responsibility for everyone in the society. Whereas the energy players continue to innovate new and green ways of energy generation, it is everyone's responsibility to ensure efficient energy consumption and environmentally friendly waste disposal mechanisms are adopted and employed at every phase of these projects.

The writer is Strategy and Operations advisor specializing on Energy. Daniel.muasya@theblueleadership.com

Tullow Oil Write-off Kenya's Exploration Costs

Rahul Dhir
Chief Executive Officer Tullow Oil PLC

Tullow Oil has written off $430 million (KSh46.8 billion) in exploration costs, attributing it to low global oil prices.

In its annual report for the year 2020, the British oil company said that the write off is a result of tanked oil prices in the first quarter of 2020 making it difficult for investors to put money in the industry.

This means that Kenya's dream of being an oil exporter is slipping away after Tullow writing off billions of shillings it has spent in exploring for oil in Lokichar.

Oil prices deteriorated at the beginning of 2020 to an average of $17 per barrel in April due to the Covid-19 Pandemic, making investors jittery.

The amount of money exploration companies recoup from their investment hinges on the price of oil in the international market, meaning currently, they are likely to take longer to recover their money.

The write-offs are in addition to a significant reduction in the activities Tullow is undertaking in the country.

The British firm has also cited major delays in the Kenya project among the key risks to its operations in the coming year.

Kenya accounted for nearly half of the exploration write-offs, which totaled $987 million (KSh106 billion).

In Uganda, the firm wrote off $451 million (Sh49 billion) last year, with the two East African countries accounting for 90 per cent of the exploration costs write-off.

"The total exploration cost write-offs for the year ended December 31, 2020 were $987 million (Sh106 billion), predominantly driven by a write-down of the value of Kenya due to a reduction in the group's long-term accounting nominal oil price assumption from $65 (Sh7,085) per barrel to $60 (Sh6,540) per barrel and Uganda was written down to the fair value of the consideration as part of the disposal," stated Tullow in its report.

It is the second year in a row that Tullow has made a major write-off on its exploration costs in Kenya, having written off $419 million (Sh45.7 billion) in 2019.

This has seen the firm's remaining recoverable amount drop to $247 million (Sh26.9 billion).

Despite the economic challenges, Tullow's Chief Executive Officer, Rahul Dhir said that the company's position in Kenya and other emerging basins present further opportunities to unlock value.

"Following the Government of Kenya's extension of our licences to the end of 2021, we are reassessing the development to make it viable at low oil prices. Our approach to unlocking value in these assets requires an innovative approach that leverages our deep geoscience and engineering expertise" said the CEO.

Tanzania – Uganda Sign EACOP Deal

The People Republic of Tanzania and the Republic Uganda signed the East African Crude Oil Pipeline project agreement paving way for the construction of 1,440KM of crude oil pipeline from Uganda's Albertine region to Tanzanian seaport of Tanga.

President Samia Hassan Suluhu of Tanzania and President Yoweri Museveni of Uganda met oil firms Total and CNOOC at Ugandan capital Kampala to seal the $3.55 billion pipeline, that could be the longest electrically heated crude oil pipeline in the world.

France's Total and China's CNOOC own Uganda's oilfields after Britain's Tullow exited the country last year.

The two presidents witnessed the signing of the three accords that included: a host government agreement for the pipeline, a tariff and transportation agreement and a shareholding agreement.

"The EACOP Tripartite Project Agreement has been signed by all parties with commitment for realization of the Equal project; for the benefit of all people of Uganda and Tanzania in the spirit of East Africa," said Sam Kuteesa, Uganda's foreign minister.

Extraction will take place at two oil fields: the Kingfisher field, which is operated by China National Offshore Oil Corporation Ltd, and the Tilenga field, operated by Total S.A.

The signatories have now agreed "to start investment in the construction of infrastructure that will produce and transport the crude oil," said Robert Kasande, permanent secretary at Uganda's ministry of energy.

Uganda discovered crude reserves in the Albertine rift basin in the west of the country near the border with the Democratic Republic of Congo in 2006. Government geologists estimated total reserves at 6 billion barrels, but the landlocked east African nation needs a pipeline to transport the crude to international markets.

The EACOP Tripartite Project Agreement has been signed by all parties with commitment for realization of the Equal project; for the benefit of all people of Uganda and Tanzania in the spirit of East Africa

Once completed, more than 10,000 job opportunities will be created during execution, according to the Tanzanian President.

"This pipeline project can be a core of bigger deployments," said Museveni, adding investors could use the EACOP land corridor to put up another pipeline to ship gas from Tanzania and Mozambique to consumers in Uganda, Rwanda, Congo and other countries in the region.

Uganda's crude is highly viscous, which means it needs to be heated to be kept liquid enough to flow.

Environmental activists say the project poses risks to protected environments, water sources and wetlands in both the countries due to C02 emissions from the burning of oil through the pipeline.

South Sudan to Take Over Its Oil Sector By 2027

Hon. Puot Kang Chol
Minister of Petroleum of South Sudan

The South Sudan government is building an Oil and Gas training and controlling data facility for capacity building as it makes plans to take full control of its oil sector.

Speaking during the launch of a petroleum report, the South Sudanese Petroleum Minister, Puot Kang Chol, said that the government is keen on equipping its citizenry with necessary skills for a smooth transition as it plans to phase out foreign investment by 2027.

"We are working on establishing a training facility -- a petroleum training center for the republic of South Sudan where we will be training young men and young women of the Republic of South Sudan, preparing them to take over from our partners when the time is ripe for us to do so," said Chol.

The Petroleum Minister added that construction of an oil data center is almost complete, a key milestone for the government as it prepares for the move of South Sudanese oil data from Khartoum to Juba.

"Our data is managed from Khartoum. With support from our partners, we are now at the last stage of building a data center in the Republic of South Sudan. The aim is for us to move our data from Sudan so that we manage it ourselves" added Chol.

The Ministry of Petroleum launched The Petroleum Report that covers South Sudan's oil production, cost of production, and fiscal regime from June 2016 to May 2020.

Undersecretary of the Ministry of Petroleum Awow Daniel Chuang noted the report is vital for sharing information.

"The launch is about oil production, cost of production, and fiscal regime that we have" said Chuang.

"What we have published today is going to help us in managing the oil sector and especially when we are trying to comply with our laws."

South Sudan depends on oil and has had a hard time in 2020, with lower oil prices taking a toll on the country's economy and the coronavirus has disrupted logistics and supplies.

Production is 170,000 - 172,000 barrels per day, below the projected total of 190,000.

Rwanda to Produce Another 15MW from Lake Kivu by June

Rwanda is set to produce 15 megawatts of electricity by June this year in its first phase of methane gas extraction from Lake Kivu.

The project's contractor, Shema Power Lake Kivu (SPLK), says the plant seeks to add 56 megawatts to the national grid after the initial investment of $400 million in methane gas extraction.

The project which started in October 2019, is set to be finalised by December 2022 will significantly increase power generation and address electricity shortage in Rubavu district a strategic area for Rwandan businesses eyeing the DR Congo market.

"This is one of the projects that will significantly increase power generation and the first phase is expected to address the challenges of electricity shortage in Rubavu District," said Laurent Butera, Branch Manager of REG in Rubavu District. Rubavu District will be the first to benefit from the methane gas plant. Currently, the district consumes between seven and 10 megawatts.

Despite its strategic importance to businesses, the district relies on power supplies from Musanze and Karongi districts.

"This is one of the projects that will significantly increase power generation and the first phase is expected to address the challenges of electricity shortage in Rubavu District the ," said Laurent Butera, Branch Manager of REG in Rubavu District. Rubavu District will be the first to benefit from the methane gas plant. Currently, the district consumes between seven and 10 megawatts.

The constructor, Shema Power Lake Kivu (SPLK), is working with Rwanda Energy Group (REG) to fast-track the project implementation.

"We are constructing the pilot phase, which will determine the subsequent phases. We extract gas from 300 to 450 metres underwater," said Laurent Sibomana, an engineer at SPLK.

"First, we separate gases from water, then different gases from methane, which is used to give power."

Sibomana added that power produced by the gas plant will be transferred to a REG power station, where it is connected to the national grid.

At least 74 per cent of households in Rubavu are connected to electricity, but residents say there are still challenges associated with stable supply.

"Sometimes power outages cause damage to equipment like fridges. We are hopeful that those problems will be solved once we have enough electricity," Odette Nyiramongi, a local hotelier, said.

Butera said that with a newly-built power substation in Rubavu District, these problems will soon be solved.

According to REG, 60 per cent of the households in Rwandan households were connected to electricity as of September 2020.

However, projects like methane gas extraction are expected to increase power generation in order to reach 100 per cent connectivity by the year 2024.

Uganda Seeks to Borrow $130m for Crude Pipeline Deal

The Ugandan government aims to borrow $130 million to fund its 15 percent share of the East African Crude Oil Pipeline.

The 15 percent share is owned through the Uganda National Oil Company and the money is a precondition for the government to solidify its ownership in the project.

The government will also use the loan to pay for "historical costs," which international oil companies have been footing since 2017 on behalf of the government, such as the project's design and environmental impact studies.

After failing twice, Uganda's Parliament's Committee on National Economy will now have the last say on whether the government gets the money in time for the final investment decision, (FID) to tie up its equity in the $3.5 billion pipeline project.

Syda Bbumba, National Economy committee chair, says the committee is still scrutinising the loan request by government and the different agreements tabled before them, to make an informed decision of whether to grant authorisation to borrow domestically.

Bbumba noted that parliament's concerns is the ambush by the government since it did not make the request during the budget planning cycle.

The East African Crude Oil Pipeline (EACOP) agreements being scrutinised include the Inter-Governmental Agreement, signed in 2017, the Host Government Agreement, the shareholder agreement, tariff agreement and transportation agreement all signed in 2020.

Early in the quarter, Junior Minister for Finance David Bahati held discussions with parliament's Committee on National Economy, and the Budget committee and explained the urgency of the loan, the shareholding structure of EACOP and its impact on Uganda's economy.

"Negotiations for the Final Investment Decision for EACOP are in advanced stages. The EACOP Bill has been drafted and is under discussion between government and the oil companies before it's eventually presented to parliament. Conclusion of these negotiations and the Bill will pave the way for FID and thus enabling construction to start," the Junior Minister for Finance explained.

Uganda National Oil Corporation Chief of Legal and Corporate Affairs Peter Muliisa, stressed that the corporation needs to urgently reimburse Total when the two parties sign the shareholder agreement and the FID.

The Eacop is a 1,445km long heated pipeline, a key component of the commercialisation of Uganda's oil, which will transport crude oil from the Lake Albert oil production sites at Tilenga and Kingfisher projects in western Uganda to Tanga in Tanzania.

Petroleum Taxes

	Import Duty	Former Rate of Excise Duty Kshs/Litre	Current Rate of Excise Duty Kshs/Litre	VAT	Road Mainten. Levy	Petroleum Devel. Levy Kshs/Litre	Current Rate of Import Decl. Fee	Railway Development Levy	Remission Kshs/Litre	Adulteration Levy Kshs/Litre
Motor Spirit (Gasoline) Regular	-	20.5095	21.5227	8%	18.00	5.40	3.50%	2.00%	0.45	-
Motor Spirit (Gasoline) Premium	-	20.9196	21.9530	8%	18.00	5.40	3.50%	2.00%	0.45	-
Aviation Spirit	-	20.9196	21.9530	8%	-	0.40	3.50%	2.00%	0.45	-
Spirit Type Jet Fuel	-	20.9196	21.9530	8%	-	0.40	3.50%	2.00%	0.45	-
Special Boiling Point & White Spirit	-	8.9378	9.3793	8%	-	-	3.50%	2.00%	0.30	-
Other Light Oils and Preparations	-	8.9378	9.3793	8%	-	-	3.50%	2.00%	0.30	-
Partly refined (including topped crudes)	-	1.5247	1.6000	8%	-	-	3.50%	2.00%	0.30	-
Kerosene type Jet Fuel	-	6.0514	6.3503	8%	-	0.40	3.50%	2.00%	0.45	-
Illuminating Kerosene (IK)	-	10.8357	11.3710	8%	-	0.40	3.50%	2.00%	0.45	18.00
Other Medium oils and preparations	-	5.5730	5.8483	8%	-	0.40	3.50%	2.00%	0.30	-
Gas Oil (automotive, light, amber for high speed engines).	-	10.8357	11.3710	8%	18.00	5.40	3.50%	2.00%	0.30	-
Diesel Oil (ind heavy, black for low speed marine and stationery engines).	-	3.8906	4.0827	8%	-	0.40	3.50%	2.00%	0.30	-
Other Gas Oils	-	6.6245	6.9517	8%	-	0.40	3.50%	2.00%	0.30	-
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 mixures	10%			14%	-	0.40				-

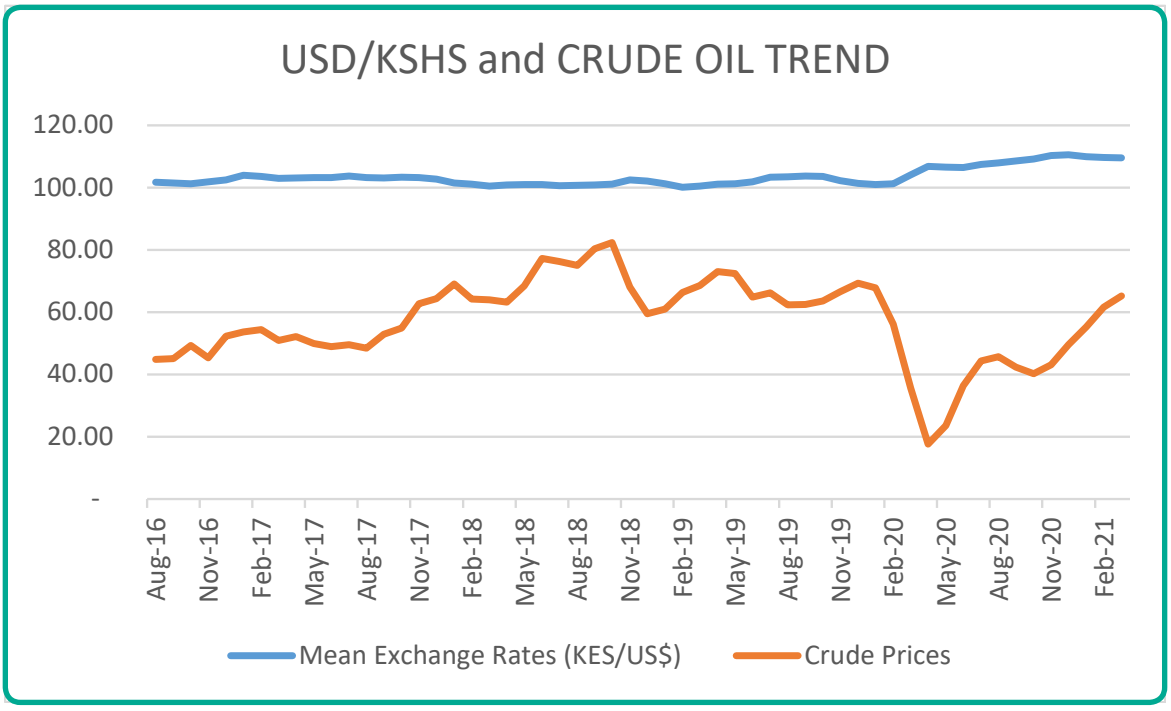
**The Commissioner General ("CG") of the Kenya Revenue Authority ("KRA") vide Legislative Supplement No. 107 Legal Notice No 194 of 2020 dated 1st October 2020 published new excise duty rates on certain excisable goods with specific rates.*

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
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
Nov-20	110.36	43.04
Dec-20	110.52	49.57
Jan-21	109.89	55.27
Feb-21	109.67	61.61
Mar-21	109.63	65.16



Pump Prices

Maximum pump prices (15th April 2020 to 14th May 2020)					
PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	120.41	122.81	122.44	123.36	123.36
Automotive Diesel	105.27	107.66	107.55	108.46	108.46
Kerosene	95.46	97.85	97.76	98.68	98.68
Maximum pump prices (15th March 2020 to 14th April 2020)					
PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	120.41	122.81	122.44	123.36	123.36
Automotive Diesel	105.27	107.66	107.55	108.46	108.46
Kerosene	95.46	97.85	97.76	98.68	98.68
Maximum pump prices (15th February 2021 to 14th March 2021)					
PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	112.78	115.18	114.85	115.77	115.76
Automotive Diesel	99.52	101.91	101.81	102.74	102.73
Kerosene	90.05	92.44	92.36	93.29	93.28
Maximum pump prices (15th January 2021 to 14th February 2021)					
PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	104.60	106.99	106.69	107.62	107.61
Automotive Diesel	94.01	96.40	96.31	97.23	97.23
Kerosene	84.75	87.12	87.08	88.00	87.99
Maximum pump prices (15th December 2020 to 14th January 2021)					
PRODUCT	MOMBASA	NAIROBI	NAKURU	ELDORET	KISUMU
Super Petrol	104.43	106.82	106.53	107.45	107.45
Automotive Diesel	89.43	91.82	91.76	92.67	92.66
Kerosene	81.17	83.56	83.52	84.43	84.43
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

EPRA Petroleum Prices

Breakdown of the costs of Super Petrol (PMS), Diesel (AGO) and Kerosene (DPK) in Nairobi: 15th April 2021 to 14th May 2021				
Cost Item	**Cost Description**	**Super Petrol**	**Diesel**	**Kerosene**
		Kshs/Litre	**Kshs/Litre**	**Kshs/Litre**
Landed Cost (a)	Weighted average cost for all imports	53.99	48.95	46.23
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%)	0.08	0.07	0.06
Depot Losses	0.5% PMS, 0.3% For DPK & AGO)	0.51	0.26	0.24
Delivery within 40kms of Nairobi	Delivery to petrol stations	0.54	0.54	0.54
Storage and distribution (b)		**3.29**	**3.03**	**3.00**
Importers Margin	Wholesale			
Dealers Margin	Retail Investment Margin			
	Retail Operating Margin			
Oil Marketing Companies Margins (C)		**7.95**	**10.08**	**8.89**
Excise Duty	Tax	21.95	11.37	11.37
Road Maintenance Levy	Levy	18.00	18.00	0.00
Petroleum Development Levy	Levy	5.40	5.40	0.40
Petroleum Regulatory Levy	Levy	0.25	0.25	0.25
Railway Regulatory Levy	Levy	1.04	0.94	0.88
Anti-adulteration Levy	Levy	0.00	0.00	18.00
Merchant Shipping Levy	Levy	0.03	0.03	0.03
Import Declaration Fee	Levy	1.81	1.64	1.55
Value Added Tax (VAT)	**Tax**	9.10	7.97	7.25
Taxes and Levies (d)		**57.58**	**45.60**	**39.73**
Retail Prices in Nairobi (a) + (b) + (c) + (d)		122.81	107.66	97.85
Summary		**Super Petrol**	**Diesel**	**Kerosene**
		KShs/Litre	**KShs/Litre**	**KShs/Litre**
Products Costs (a)		53.99	48.95	46.23
Distribution and Storage Costs (b)		3.29	3.03	3.00
OMC Margins (c)		7.95	10.08	8.89
Taxes and Levies (d)		57.58	45.60	39.73
Retail Prices in Nairobi		**122.81**	**107.66**	**97.85**

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.

SOURCE: EPRA

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