

KPC/UoN 1ST OIL AND GAS PUBLIC LECTURE



Theme: *Oil and Gas Sector in the East Africa Region; Challenges and Opportunities*

Friday, June 1 2016, Taifa Hall, University of Nairobi



Inaugural Oil & Gas Public Lecture Series: “*The Oil and Gas Sector in East Africa Region: Challenges and Opportunities*”

Public Lecture Proceedings

June 1 2016. Taifa Hall. University of Nairobi



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Inaugural oil and gas public lecture series: ***“The Oil and Gas Sector in East Africa Region: Challenges and Opportunities”***

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KPC - UNIVERSITY OF NAIROBI INAUGURAL OIL & GAS PUBLIC LECTURE SERIES

TOPIC:
Oil & Gas Sector in East Africa Region: Challenges and Opportunities



DATE : 1st July 2016

TIME : 8.30 am.

VENUE: Taifa Hall

>> KEY NOTE SPEAKER



Hon. Charles Keter, MGH,
Cabinet Secretary,
Ministry of Energy and Petroleum.

>> PANELLISTS



Mr. Andrew Kamau,
Principal Secretary, State
Department of Petroleum.



Dr. Eng. Joseph K. Njoroge,
Principal Secretary, State
Department of Energy.



Mr. Daniel Kiptoo,
Petroleum Legal Advisor,
Ministry of Energy and
Petroleum.



Mr. Joe Sang,
Managing Director,
Kenya Pipeline Company.



Mr. Powell Maimba,
Chairman, Petroleum
Institute of East Africa.



Dr. Daniel Ichang'i,
Chairman, Geology
Department, University
of Nairobi.



Eng. James N. Mwangi,
Chairman, Energy and
Extractives Sector Board, Kenya
Private Sector Alliance(KEPSA).

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Acronyms

AGO	Automotive Gas Oil
BSc.	Bachelor of Science
CS	Cabinet Secretary
DVC	Deputy Vice Chancellor
EBK	Engineers Board of Kenya
GDP	Gross Domestic Product
IOCs	International Oil Companies
IT	Information Technology
JKIA	Jomo Kenyatta International Airport
KEPSA	Kenya Private Sector Alliance
KPC	Kenya Pipeline Company Ltd
KPRL	Kenya Petroleum Refineries Ltd
LPG	Liquefied Petroleum Gas
MoEP	Ministry of Energy and Petroleum
MoU	Memorandum of Understanding
MSP	Motor Spirit Premium
NOCK	National Oil Corporation of Kenya
NYS	National Youth Service
PIEA	Petroleum Institute of East Africa
PPP	Public Private Partnerships
PS	Permanent Secretary
R & D	Research and Development
TIVET	Technical Industrial Vocational and Entrepreneurship Training
UoN	University of Nairobi
VC	Vice Chancellor

Executive Summary

The Kenya Pipeline Company Ltd partnered with the University of Nairobi to host the inaugural oil and gas public lecture on 1st July 2016 at the University of Nairobi's Taifa Hall. Over 500 participants drawn from the Ministry of Energy and Petroleum, Chief Executives from oil companies, the Business Fraternity, KPC and University of Nairobi staff and Students from the School of Engineering and Physical Sciences. The meeting was opened by the by the Cabinet Secretary MoEP, Hon. Charles Keter and discussions were centred on the challenges and opportunities in the oil and gas sector.

The inaugural oil and gas public lecture series was held on July 1 2016 to discuss the Oil and Gas Sector in the East African Region with a focus on the Challenges and Opportunities in the sector. Over five hundred participants drawn from the Government, private oil companies, staff and students from the University of Nairobi engaged in oil and gas discussions focusing on the challenges and opportunities that Kenya faces in this sector. The meeting was opened by the Cabinet Secretary Ministry of Energy and Petroleum (MoEP), Hon. Charles Keter. Other key panelists who took lead in the panel discussions include Dr. Eng. Joseph Njoroge, PS, State Department of Energy, Mr. Andrew Kamau, PS, State Department of Petroleum, Eng. James N. Mwangi, Chairman, Energy and Extractives Sector Board, KEPSA, Mr. Joe Sang, Managing Director, Kenya Pipeline Company, Mr. Powell Maimba, Chairman, Petroleum Institute of East Africa and Mr. Daniel Kiptoo, Petroleum Legal Advisor, MoEP.

From a broad perspective of the oil and gas sector, the meeting examined challenges and opportunities that face the industry. Throughout the public lecture, ample opportunities were provided for interactive discussions. For Kenya to benefit from this resource, a few things must be set right. The right legislation and institutional structure must be put in place and the Government must maximize on all economic returns. Community engagement is also critical to increase public trust and manage public expectations. Capacity building also plays a critical role to enable all actors in the oil and gas sector perform their roles as required to spur the economic growth of our country.

Good governance, transparency, accountability and participation are prerequisites. With proper legislation in place, the petroleum bill should lay a firm foundation for the following:

- Management of Petroleum Resources with a long-term perspective;
- The whole country will benefit from the resource;
- Proper management of resources to secure revenues to the country; and
- The oil and gas sector shall contribute to the employment, welfare, safe environment and industrial development.

The meeting was convened and co-hosted by the University of Nairobi (UoN) in partnership with the Kenya Pipeline Company Ltd. At the end of the public lecture, the participants were able to agree on some major recommendations. It was also agreed that the public lecture series be held regularly either annually or bi-annually under the aegis of UoN/KPC.

KPC Brief

KPC plays a critical role in the petroleum supply chain through the transportation of bulk petroleum products imported through the port of Mombasa. With the rising economic growth in countries within the East African region and the expected increase in demand for petroleum products, it is expected that there will be increased turnover and business for the company. The vision of KPC is 'Africa's Premier Oil and Gas Company'.

KPC recently launched a strategic plan for the years 2015 to 2025 dubbed 'Vision 2025', a transformational plan geared towards creating a premier organization while transforming KPC to a diversified oil and gas business from the petroleum products transport company it has been.

To achieve this goal, a number of investments have been identified as strategic for business and market entry. KPC's vision 2025 is anchored on the following five key strategic pillars.

- 1. Business leadership** – aimed at winning/leading the market in Kenya.
- 2. Geographic Expansion** – with focus on leadership in the greater Eastern Africa Region
- 3. People** – aimed at ensuring amazing performance by all KPC employees
- 4. Systems and processes** – reliable and best in the world technology and systems
- 5. Image and reputation** – creating amazing relationships with all our stakeholders.

To achieve the 10-year strategic plan, KPC has an eye on the oil and gas business in Uganda, South Sudan, Rwanda, Burundi, Eastern DRC, Tanzania, Malawi, Zambia among other countries in the region. The vision will govern KPC's expansion agenda to all these African Countries.

To mitigate the shortage of skilled manpower in the Oil and Gas industry, KPC has transformed the Morendat Training School in Naivasha into a Centre of Excellence in Oil and Gas. As a vital player in the oil and gas sector, KPC is striving to meet the goal of providing sustainable, clean, reliable, affordable and safe security for Kenyan people. The organization is also striving to ensure that local and regional economies receive petroleum products to spur up Kenya's socio-economic growth. KPC attributes the strides it has made to the Ministry of Energy and Petroleum and its relevant agencies.

Highlights of KPC's major projects

To address some of the major challenges the company faces, KPC has initiated the following key projects.

- 1. Replacement of the Mombasa-Nairobi Pipeline** – The Mombasa-Nairobi Pipeline has been in operation for over 35 years and requires rehabilitation to maintain its integrity and now KPC intends to replace the pipeline with a larger diameter to meet projected demands of up to the year 2044.

- 2. Construction of a parallel pipeline from Sinendet to Kisumu** – KPC has constructed a parallel pipeline from Sinendet to Kisumu to increase the supply of petroleum products to Kisumu to increase supply of products to Kisumu.
- 3. Construction of additional storage tanks at the Nairobi terminal** – KPC is in the process of enhancing its storage capacity for fast moving products such as Automotive gas Oil (AGO) and Motor Spirit Premium (MSP)
- 4. Construction of additional jet A-1 tanks/depots from JKIA** – the Jomo Kenyatta International Airport (JKIA) is undergoing expansion so as to increase the number of flight operations. KPC is planning to develop additional Jet A-1 tanks at the airport to match the needs of the airport expansion.
- 5. Construction of additional loading arms in Eldoret** – KPC intends to construct a bottom truck loading facility at the Eldoret depot.
- 6. Development of Liquefied Petroleum Gas (LPG) storage and bottling facility in Nairobi** – this project will ensure there is availability and accessibility of LPG at cost effective process.
- 7. Purchase of Liquefied Natural Gas and selling to an independent power producer** – The Government through the Ministry of energy and Petroleum (MoEP) aims to increase electricity production in the National grid.



KPC, Crafting the Future

UoN Oil & Gas Program

The University of Nairobi has had fruitful relationships with institutions from Norway such as NORAD, University of Oslo, University of Bergen, University of Agder, University of Stavanger and University College of Bergen. In September 2-9, 2015, the Universities from East Africa led by the Vice Chancellor of the University of Nairobi, Prof. Peter Mbithi went to Norway (Bergen, Oslo and Kristiansand) to visit a number of Universities, Companies and R&D Centers in Oil and Gas courtesy of Web Student International, a Norwegian education firm based in Kristiansand, Norway.

As a result, the University of Nairobi has committed to set up a regional Centre for Energy and Petroleum Studies (CEPS) in partnership with Government of Kenya, Oil and Gas Companies and International Universities in developing the manpower to grow the new and emerging oil and gas sector in East Africa. The Centre will create capacity in high quality engineering competence development and education; provide access to turn-key-ready world class engineering education and labs; build a highly qualified workforce for capacity building locally, and provide qualifications to compete on the global energy job market; and accelerate industrial development through world class technology transfer and competence building.



Prof. Peter Mbithi Vice Chancellor (UoN) and team during a study tour on Oil & Gas in Norway

The University since then has forged local and international collaborations with Government, Industry and Universities. Such collaborations includes Ministry of Energy and Petroleum, National Oil Corporation of Kenya, Kenya Pipeline Company, Tullow Oil, Total ELF, Schlumberger International, Universities in USA, Norway, French, India, Australia and Brazil

such as Texas A&M University in USA, Pandit Deendayal Petroleum University in India and IFP School of Petroleum Engineering in France just to mention a few.

In a bid to address the training gap in the Oil and Gas sector, the University has also started a BSc. Petroleum Engineering in the School of Engineering, appointed a program coordinator and has admitted over 60 students who are now in their 2nd year. The Department of Geology in the School of Physical Sciences has also initiated Bachelor of Science in Petroleum Geosciences. The National Oil Corporation of Kenya, Tullow Oil, TOTAL Elf and Schlumberger International have donated Lab equipment, geological analysis software and sponsored graduate students doing Msc in Geology.

The University has partnered with French Development Agency (AFD) to develop a modern Engineering and Science Complex to build capacity for increased skilled manpower that meets critical areas needed by the petroleum, energy, mining industry and science and technology industry and regional demand to address the emerging challenges in technology, engineering and mining, health and agriculture. The complex will also create technical and vocational training, professional development, and graduate degrees that can be delivered through physical and online learning in Kenya and partner Universities in Europe, Australia and USA.

The project will provide a platform for collaborations with industry, government and French Universities; leasing out the Labs to multi-national corporations for Research & Development (R&D); research and consultancy services in engineering and related courses; faculty development, exchange programmes and internships for students; and government and donor funded scholarships for full-time engineering/science courses.



Prof. Mwangi Mbutia, Dean of Engineering (UoN) and team during an industrial tour in NOCK terminal



UoN, A World Class University

Preamble

Background to KPC- UoN Oil and Gas Public Lecture Series

The Oil and Gas sector presents numerous opportunities to both the Government and professionals in an effort to spur up the economic growth of Kenya. In an effort to maximize on the underlying opportunities, the Kenya Pipeline Company Ltd entered into talks with the University to host the first public lecture on Oil and Gas to demystify the Oil and Gas sector.

The first public lecture was held on July 1, 2016 and hosted a wide range of stakeholders from the Oil and Gas Sector

Oil and Gas in Kenya

Exploration for oil and gas in Kenya began in the 1950s, with the first well drilled in 1960. However, interest in Kenya increased after the discovery of large deposits of oil and gas in Mozambique, Uganda and Tanzania. In 2012, Tullow Oil, in partnership with Africa Oil and Marathon Oil began drilling in Turkana (in the Tertiary Rift Basin), and announced a discovery of an estimated 300 million barrels of oil. After drilling further exploration wells, Tullow announced in early 2014 that it had now identified 600 million barrels of oil.

The discovery of oil in Kenya has so far been a great development in the country. This has been followed by continued activities for the exploration of oil in a bid to make further discoveries to realize the full prospectivity of the discovered basins. Consequently, the extraction of oil has also kicked off. As the activities aimed at tapping into Kenya's oil potential are ongoing, there is need to look into the relevant laws and policies that govern the oil extraction sector in the country. It includes appraising these laws and policies to establish their effectiveness in meeting the desired objective of governing the sector.

On the other hand, news of recent discoveries of oil and gas in the region has created a disproportionate level of excitement and expectations that if not properly managed might lead to confusion, wrong investments decisions, lost opportunities and public despair. It is against this backdrop that the first public lecture was organised to demystify the myths on the oil and gas the sector by engaging the academicians and the industry players.

Hosting of the Inaugural Public Lecture on Oil and Gas

The Kenya Pipeline Company Ltd partnered with the University of Nairobi to host the inaugural oil and gas public lecture on 1st July 2016 at the University of Nairobi's Taifa Hall. Over 500 participants drawn from the Ministry of Energy and Petroleum, Chief Executives, the Business Fraternity, KPC and the University of Nairobi staff and Students from the School of Engineering and Physical Sciences.

Structure of the Public Lecture

The meeting was opened by the Cabinet Secretary MoEP, Hon. Charles Keter and attended by CEO's and representatives from different oil and gas companies as well as academia and students. The complete workshop programme is attached as Annex 1. The complete list of speakers, facilitators and moderators appears in annex II; the public lecture programme. Prof. Peter M. F. Mbithi, Vice Chancellor, UoN made the Welcome Remarks to invite all guests to the

University. The Keynote Address was made by Hon. Charles Keter, Cabinet Secretary MoEP. Other Panelists included Mr. Andrew Kamau, Permanent Secretary, State Department of Petroleum, Eng. James N. Mwangi, Chairman, Energy and Extractives Sector Board, KEPSA, Mr. Joe Sang - Managing Director, Kenya Pipeline Company, Mr. Powell Maimba – Chairman, Petroleum Institute of East Africa, Mr. Daniel Kiptoo- Petroleum Legal Advisor, MoEP and Dr. Daniel Ichang'i – Chairman, Department of Geology, UoN. The Public Lecture was moderated by Terry-Anne Chebet, Senior Business News Anchor, Citizen TV and the Master of Ceremony was Prof. Henry Mutoro, the Deputy Vice-Chancellor, Academic Affairs, UoN.

Session I: Welcome Remarks



Vice Chancellor UoN making welcome remarks

The Vice Chancellor of UoN, Prof. Peter M. F. Mbithi welcomed participants to the public lecture and explained that the lecture was organized as a dialogue forum on the challenges and opportunities in the oil and gas sector in the East African region.

In his welcoming remarks, the VC pointed out that the University was pleased to partner with the Kenya Pipeline Company to host the first public lecture series to demystify the myths on the sector by engaging the academicians and the industry players.

The VC highlighted that the solid partnership between the University and the Kenya Pipeline Company is a strategic collaboration geared to provide research based information and data to guide this lucrative sector for the benefit of our country.

From the onset, there is an evident lack of capacity in terms of skills and knowledge to convert the opportunities in the oil and gas sector into real wealth for the benefit of our country. The universities must rise to the accession to train skilled manpower and produce research outcomes that are critical to the sustainable development of the sector. To achieve this, the University must look outside for strategic partnerships and collaborations that will assist in consistently refocusing and retooling its curriculum to the demands of the industry.

To attain the training of skilled manpower required in the oil and gas sector, the University has embarked on a journey to identify partners from successful countries such as Norway, India,

USA, Australia and France. In addition, the University has signed several Memoranda of Understanding (MoUs) with key local partners in the oil and gas industry such as the Ministry of Energy and Petroleum, Kenya Pipeline Company Ltd, National Oil Corporation, Tullow and Total ELF among others. Further, the University has recently courted partner universities in France, Norway, India, USA and Australia with a view to enhancing and updating its curriculum, exchange of students and faculty and the training of MSc and PhD students.

In conclusion, the VC recognized that educational institutions play a key role to the development of the oil & gas industry in the country. Therefore, institutions must take a leading role in the quest to develop competent and competitive local content for the Kenyan oil & gas sector.

Session II: Keynote Address

The keynote address was delivered by the Cabinet Secretary, Ministry of Energy and Petroleum, Hon. Charles Keter. The CS thanked both KPC and UoN for facilitating the public lecture. In his address, the CS emphasized that the oil and gas sector needs to be capitalized on and applauded the public lecture initiative that brought forth an opportunity to discuss matters oil and gas.

Oil exploration in Kenya began in the 1960s. Over the years, the oil industry has evolved. The CS noted that Development of every country depends on energy which plays a very vital role. He noted that Kenya's GDP growth is on the upward trend (58%) compared to other countries at about 3.8%. Kenya is a unique country with a high population. As a country it is important to think ahead in the development of the oil and gas industry around the country.

The CS emphasized that there is need for legislation and laws to govern the oil and gas industry. The Government is keen on locals' engagement in the oil and gas projects instead of importing labour and learning lessons from countries like Brazil in the business of manufacturing drilling machines. Despite the challenges Kenya is facing in this field, the country is moving forward in the oil and gas sector with the Energy and Petroleum Bill being debated in Parliament. Six thousand barrels of oil have been evacuated from Lokichoggio in the recent past and Kenya has entered in an MoU with Ethiopia to drill and supply oil in East Africa, South Sudan and the Northern Corridor. With these few milestones among the many other developments Kenya is making each day, the oil and gas is slowly evolving in Kenya. Oil is also being transported to Uganda through Lake Victoria.

Training is a requisite in the oil and gas sector. This calls for tailored training to meet the skills gap in the country. This further requires universities to tailor the courses they offer with industry needs such as training welders and therefore Universities play a very critical role in training and research in the oil and gas industry.

a) East Africa's Oil and Gas

In his keynote address, the Cabinet Secretary pointed out that the intention of the Ministry of Energy and Petroleum is to Deliver Universal Access to Energy in Kenya by 2020. The Cabinet Secretary gave an indication of the Sedimentary Basins in Kenya as 61 Exploration Blocks, Lamu Basin-261,000km², Mandera Basin-43,000km², Anza Basin-81,000km², Tertiary Rift-

100,000km², Currently there are Sixty one (61) gazetted blocks 36 are licensed thus 36 to eighteen (18) International Oil Companies (IOCs) and one (1) Block 14T to NOCK. 25 are vacant, 16 onshore and 9 offshore. Tertiary Total 25 blocks are available for licensing and already MOE&P has several expressions of interest in vacant blocks.

The Cabinet Secretary also highlighted the seriousness of shortage of skilled labour in the oil and gas sector by giving an example of only three welders in the whole country who are about to retire in three years leaving the oil sector in a very vulnerable situation and hence the urgent need for training of local on vital skills that match the industry needs.

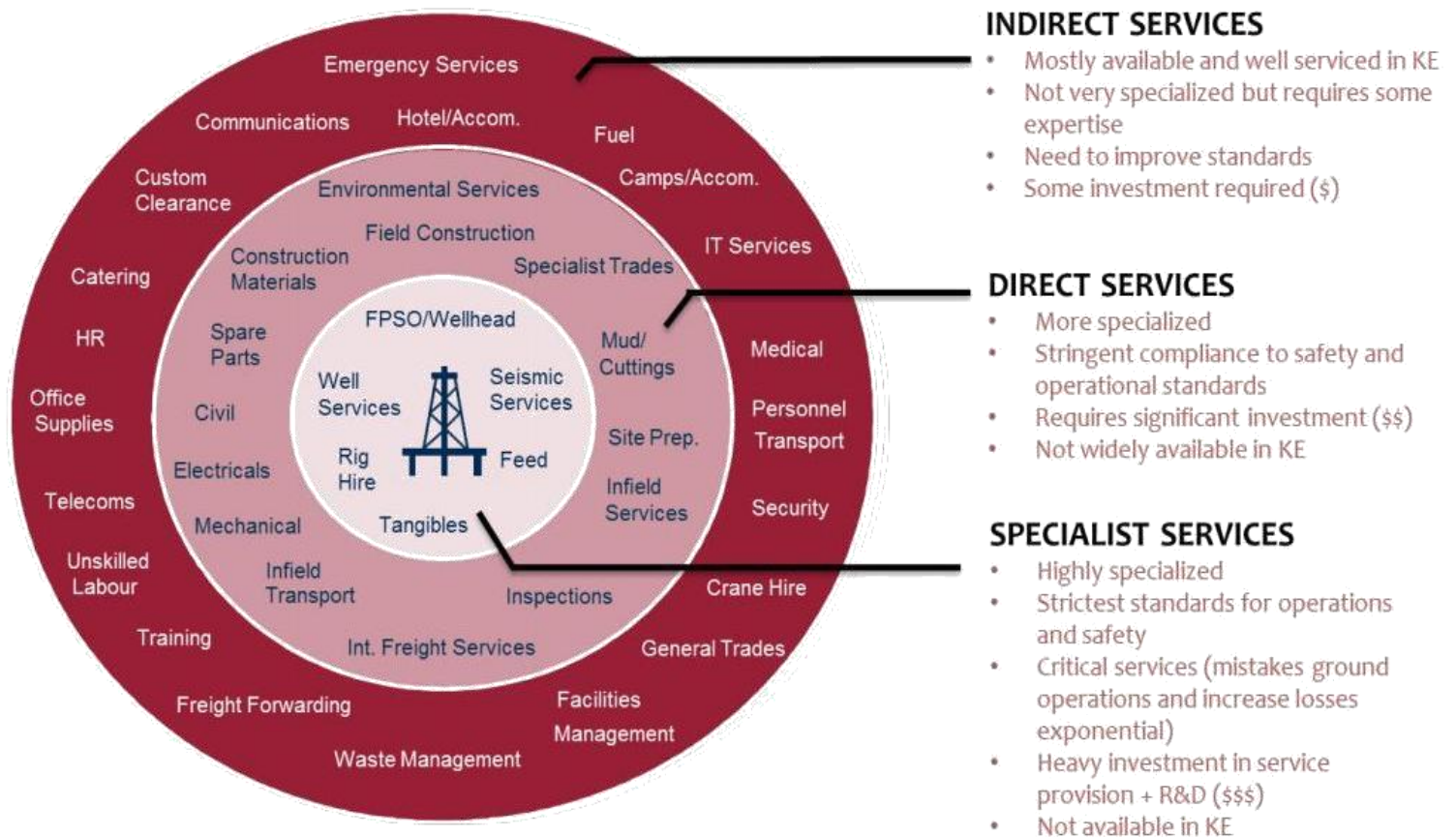
East Africa has become a hot spot for energy with huge gas finds in Tanzania, Uganda, and Mozambique and Kenya. This brings forth many alternative energy projects.



Hon. Charles Keter, Cabinet Secretary Ministry of Energy & Petroleum making Keynote Address

b) Opportunities in the Oil & Gas Sector

Despite the challenges that the oil and gas industry faces, the sector also offers a wide range of opportunities for specialists with different backgrounds. The diagram below illustrates the range of opportunities available for Kenyan professionals in the Oil and Gas sector.



Source: Ministry of Energy & Petroleum (2016)

c) Challenges in the Oil & Gas Sector

The huge economic contribution of the oil and gas sector to Kenya's economic growth makes its future of great importance both locally and to the global economy. However, despite the critical role oil and gas plays in economic transformation, the industry faces numerous challenges world over. On a future outlook, oil and gas is likely to be a major source of energy in years to come. For the industry to contribute in energy solutions and economic growth, the Government must address these serious challenges.

While the oil and gas sector is striving to offer solutions in the manufacture and refinery of oil in the country in a bid to spur Kenya's Economic Growth, the sector faces numerous challenges some of which the Cabinet Secretary highlighted below:

- Lack of adequate Oil & Gas Infrastructure;
- Lack of the requisite skills required for the Oil & Gas sector particularly in the upstream segment;
- High cost of capital required to put up Oil & Gas Infrastructure as well as the huge up front capital outlay required in the sector;
- Unavailable Technology and or lack of access to the appropriate technology required to develop Oil & Gas assets;
- The Volatility in the oil & Gas sector occasioned by the boom & Bust cycle in the global Oil price environment; and
- Unfair trade practices such as adulteration and anti-competitive practices.

To overcome the above challenges, the Ministry has initiated some interventions and programs aimed to address the challenges and spur economic growth.

- LPG Project towards Enhancing LPG Access;
- Development of the Hoima- Lokichar Crude Oil Pipeline;
- The Early Oil Pilot Scheme to achieve first Oil by mid-2017;
- Acceleration of Exploration in other Blocks in the country to prove more Oil & Gas resources;
- Development of the Lamu- Isiolo – Moyale Refined Product Pipeline with the Ethiopian Government;
- Devolving of the Pipeline Network to the Counties;
- Development of Oil & Gas storage facilities under the Public Private Partnerships (PPP) Framework.
- LPG Project towards Enhancing LPG Access
 - Removal of the Tax on LPG to encourage its use;
 - Increasing of the number of cylinders to improve access to LPG;
 - Mini LPG storage and refilling plants to be set up across the country;
 - Reintroduction on the tax on kerosene to be utilized to increase cylinder access and reduce adulteration of fuels
- Development of new legislation in the sector to address the challenges facing the sector.

d) Role of Educational Institutions in addressing Oil and Gas sector challenges

As a capital intensive and technologically-driven industry, the Oil and Gas sector and the higher educational system must work together. New technologies require a workforce trained to carry out complex tasks in a fast-paced working environment. The core reasons why the industry must work in synergy with higher education institutions is because there is a remarkable discrepancy between the existing technical skills and capabilities of the local professionals and the skills set the industry requires. There is also disparity between demand for and supply of skills in the oil and gas sector leading to inefficient use of resources. Lastly, training for the right skills set is a very complex and delicate exercise that is time consuming.

With this background, there is evident lack of capacity in terms of skills and knowledge to convert the opportunities in the Oil and Gas sector into real wealth for the benefit of our country. The Universities must therefore rise to the accession to train skilled manpower and produce research outcomes that are critical to the sustainable development of the sector.

In order to offer training on the required skills in the oil and gas sector, the University must look outside for strategic partnerships and collaborations that will assist it to consistently refocus and retool its curriculum to the demands of the industry. Below are the roles the Universities must play in addressing the oil and gas sector challenges.

- Training the requisite people by tailor making programs to address the sectors demands. Particularly blue collar jobs like welders and technicians as well as Oil & Gas specialized white collar practitioners such as petroleum Engineers, petroleum economists, petroleum lawyers, Geologists and Geophysicists;
- Research & development to produce innovative technologies that can be used in the sector in Kenya and across the World.
- Incorporating commercial arms which can trade and engage in the provision of goods and services in the sector.
- Educational institutions play a key role to the development of the oil & gas industry in the country. Therefore, institutions must take a leading role in the quest to develop competent and competitive local content for the Kenyan oil & gas sector.

Universities have a big role to play in training students hard science courses such as Marine Science and Technology, Sedimentology, Basin Analysis and Seismic Studies, Petroleum Geoscience, Hydrocarbon Research, Petroleum Engineering, Palynology, Organic Petrology and Thermal Maturation, Geophysics, Hydrogeology, Palaeobiology and Tectonics & Basin Studies among others.

However, Universities must also take into consideration the need for 'soft' skills to complement the 'hard' skills. The soft skills are made up of a cluster of personality traits, personal attributes, social graces, communication, language personal habits, friendliness, managing people, leadership, etc. that characterize relationships with other people and are necessary to succeed in the workplace, regardless of the job. Some of the common soft skills jobs include Business Managers, Financial Analysts, Technicians, Marketing Specialists, Environmental specialists, Conflict resolution specialists, Community liaison officers and Customer relations specialists

The Cabinet Secretary concluded his presentation by giving the following recommendations that need to be taken into consideration by the Higher Education Sector in Kenya.

- Urgent reforms of the educational system required;
- Meaningful collaboration between the government, International Oil Companies (IOCs) and local institution of higher learning;
- At the regional level, there should be a sub regional entity that provides training for and supports African-specific institutions;
- Need to adapt to the changing Kenyan industry trends;
- Rigorous Curriculum that emphasizes on both hard and soft skills;
- Link up with like minded institutions, regionally and internationally; and
- Coordination and collaboration between all the major stakeholders in the Oil and Gas industry.

Session III: Panel Discussions / Plenary Session



Panelists during the Oil and Gas Public Lecture

Session III: Panel Discussions / Plenary Session Summary

Moderator: Terryanne Chebet - Senior Business News Anchor, Citizen TV

Panelists

- Mr. Andrew Kamau- Ps, State Department Of Petroleum
- Eng. James N. Mwangi – Chairman, Energy and Extractives Sector Board, KEPSA
- Mr. Joe Sang - Managing Director, Kenya Pipeline Company
- Mr. Powell Maimba – Chairman, Petroleum Institute of East Africa
- Mr. Daniel Kiptoo- Petroleum Legal Advisor, MoEP
- Dr. Daniel Ichang’i – Chairman, Geology Department, UoN

The moderator presented a variety of issues and concerns that the rapid development of the oil sector in Kenya that the panelists needed to discuss such as:

- **Local content** - How can local companies benefit from supporting the sector?
- **Community development** - How can some of the finite revenues from oil and gas be used to stimulate sustainable development in communities?
- **Conflict prevention** - How does Kenya avoid oil production leading to conflict ('resource curse') as has happened elsewhere?
- **Environmental safeguarding** - How best can Kenya avoid pollution through oil spills, pipeline damage and gas flaring?
- **Corruption** - What measures can be put in place to ensure that revenues from oil are used effectively and efficiently for the benefit of all Kenya citizens, and therefore to avoid corruption and mismanagement?

Petroleum is the most important form of modern primary energy not only for Kenya but globally. We can only expect that as the Kenyan economy grows and increases in complexity, consumption will continue growing towards global averages. East Africa has become a hot spot for energy with huge gas finds in Tanzania, Uganda, and Mozambique and Kenya. This brings forth many alternative energy projects. Activities in the oil sector can be broadly categorized into

- a) Upstream Activities: Exploration; and Production of crude. Oil Field Services support the above activities
- b) Mid-Stream Activities: processing, storing, transporting and marketing of oil, natural gas and natural gas liquids.
- c) Downstream Activities: Refining; and Distribution and Sales.

PART I: Panel Discussions

Questions by the Moderator:

1. Why does the Government issue contracts to the French and multinationals mainly?
2. The Petroleum exploration act and bill is currently sitting at the Senate. How do the bills relate to the law and constitution?
3. Daily rate of production - What happens when oil and gas prices are high?
4. Will the Government publish production sharing contracts?
5. There are only three welders in the country. Blue collar jobs are not attractive anymore? What is the Government doing about this situation?
6. Is 30% of all procurement in the oil and gas sector going to women, youth and people with disability?
7. What is the function of the KPC School of Excellence?
8. Does the Government have plans of investing in petrochemicals?
9. What is the government doing to ensure the environment and Kenyans are safe?
10. Has KPC commissioned the Sinendet-Kisumu pipeline?

Responses

Mr. Andrew Kamau (*PS, State Department of Petroleum*)

- a) Company to company contracts are being signed by the Ministry.
- b) All provisions under the law and constitution are taken into consideration when crafting the bills in the oil and gas sector.
- c) The Oil refinery in Mombasa can be made more economical to offer the cheapest possible fuel for 'Mwananchi'. India and Saudi can deliver oil cheaper than Kenya can refine it, these calls for a proper examination of the economies of scale in Kenya.
- d) Lack of funding in the oil and gas sector is a big problem. Funding has been obtained from USA and Australia among other countries in the form of loans and bursaries to students. The Kenyan Government, oil companies and foreign donors are in talks on how to strengthen the funding aspect.
- e) A Skills Gap Analysis exercise has been done to find out what skills Universities and polytechnics have to offer and what the gap is.

- f) Young people need to be educated that jobs like welding are lucrative and there is need to get the skills going. The Government is also in the process of setting up a database for all oil exploring companies and make plans to export the resource people.
- g) The Government is investing in Lamu Island for the production of petrochemicals.
- h) The Government is scaling the Ministry of Energy and Petroleum and other government agencies like NEMA to ensure our environment is safe. There is dire need to educate local communities on what to expect in the oil and gas manufacturing industry.
- i) The Government is also undertaking an Environmental social impact assessment and looking into how communities should be educated on environmental safety.
- j) Centres of Excellence to offer specialized skills are now being set up by different institutions both private and public such as KPC.

Eng. James N. Mwangi (*Chairman, Energy and Extractives Sector Board, KEPSA*)

- a) There is need for local content right from the beginning of the oil exploration process. The Government should partner with private sector in a meaningful manner. As the Government starts unveiling tenders, there should be a provision for local participation.
- b) The Private Sector has given a lot of input in the oil and gas bill.
- c) The Government should offer competitive jobs in the oil and gas sector.
- d) Through KEPSA and other engagements with parliament, the Government has set up the Public Procurement Act to address procurement issues. The Government should also set up more Centres for training to ensure more women get jobs in the oil and gas sector.
- e) Kenya has drilled 76 wells so far that drill about 750 million barrels of oil in contrast with Uganda that has drilled 200 wells. The point of discussion should be on how to refine the oil locally to benefit Kenya.
- f) Kenya is a gateway to oil refined products. The Government should therefore consider putting in serious infrastructure even through neighboring countries such as Uganda and Rwanda to transport oil through ships at the Indian Ocean with an aim of saving money. Recently, Kenya signed an MoU with Ethiopia and Lamu on oil shipping. Kenya is on the journey to invest and involve local counties and local investors.
- g) There has been a government initiative to develop a petroleum master plan. KEPSA has given contributions through the public and private stakeholder programs. The purpose of the master plan is to reduce the cost of oil in the country. As investors come in, the Government should consider offering some incentives to them.

Mr. Joe Sang (*Managing Director, Kenya Pipeline Company*)

- a) KPC has plans in place to ensure that 30% of all procurement goes to women, youth and persons with disability. In early 2016, training for women, youth and Persons with

Disability on how to take advantage of the 30% procurement provision was undertaken. Training has also been done in Mombasa to women, youth and Persons with Disability.

- b) The KPC School of Excellence is purely for capacity building offering practical solutions in the oil and gas industry. The school will be up running from July 1 2016 and Managers have already been appointed. Replacement of the line from Mombasa to Nairobi is also in progress. This is work that can be done by Kenyan youth if given training and in return the cost of doing business in Kenya will go down.
- c) KPC is also looking to partner with KPRL in Mombasa and investing in back storage, fiber optics from Mombasa to Nairobi to Kisumu. This extends to investing and commercializing in the fiber optic business.
- d) KPC has a vision 2025 plan with a dream of becoming 'Africa's premier Oil and Gas Company' anchored on business leadership in Kenya. KPC's current market share is at 80% with 20% being by road. KPC is looking to increase its market share from 80-100%.
- e) KPC also has plans in place to move the pipeline to at least five to six other counties in next 10 years.
- f) The main five pillars that KPC lays its foundations on include
 - Systems and processes – investing in technology
 - Image and reputation – trying to clean up and build a reputable image with new management in place,
 - People – looking to invest in best talent by rolling out a young professionals programmes
 - Geographic expansion – KPC plans to move out to other 9 countries in East Africa
 - Business Leadership – aimed at winning/leading the market in Kenya
- g) A 120 km line has just been commissioned from Sinendet in Nakuru to Kisumu. Over the last five years, the market share has been lost to Rwanda and Burundi. The Sinendet Project will serve Kisumu, Eldoret and Migori. KPC has received funds from the Government to go into the region. This will allow KPC to also invest in oil jet from Kisumu to Rwanda and Uganda

Mr. Daniel Kiptoo (*Petroleum Legal Advisor, MoEP*)

The Government should look beyond the 30% procurement provision and focus on local content and training for value addition. How does Kenya produce competent employees in the oil and gas sector? How do we provide solutions? How do we come up with innovations and patent them?

Mr. Powell Maimba (*Chairman, Petroleum Institute of East Africa*)

- a) Kenya should learn lessons from other countries. For instance, John D. Rockefeller pioneered the kerosene and oil production and manufacture of pipelines and eventually became the key driver of American economy. This has greatly contributed to over 100 years of development. Oil is a long-term journey involving multiple areas of life. As our country goes into age of oil production, new skills are discovered. It is therefore important to identify the skill gaps because the oil industry is going bigger and bigger requiring more skills and activities. For instance, there are over 1500 filling stations in Kenya with an average of 20 staff, KPC in its activities has so many activities and this gives room for skilled local human resource. The University must therefore begin understanding the industry traits.
- b) On the issue of oil being a resource curse, the Government should put in place the right legislation and work with the private sector. Kenya must also adopt its standard procedure for dealing with matters relating to oil and gas and stop comparing from one country to another because our circumstances are different. However, this does not eliminate the issue of borrowing lessons learnt from other countries. Kenya should also strike a balance in stirring economic growth and promote other economy sectors such as engaging the academia and private sector.
- c) What challenges do oil distributors face in Kenya? Over the years, meeting demand has been a problem. There has been pressure to meet certain parts of the country's demands. The oil and gas journey is still a long one but KPC has put in place a strategy to help unlock some parts of the country locked out due to logistical challenges. A lot of oil is being drilled and it should be taken to where it is required with no problem. It is important to note that all East African countries rely on Kenya.
- d) Kenya and East Africa have been the cheapest in oil pump prices. While the cost of Diesel went 1% up worldwide, in Kenya, it went 16% down. Kenya is able to refine oil at very competitive rates. At the moment, the country is enjoying the best prices the world has to offer.
- e) How do locals benefit from oil exploration plans? As the Kenya engages with communities, communication is important to demystify the oil sector. There is also need for continuous engagement with the National Government, County Government and the community to understand resources should benefit the whole country.
- f) Must Kenya refine its oil? Yes, Refinery creates employment and can be used as form of social responsibility.

Dr. Daniel Ichang'i (*Chairman, Geology Department, UoN*)

- a) How can Kenya avoid having a resource curse such as the one in Congo and Angola due to its oil discovery? Finding oil is not necessarily good news. With the new constitution in place, transparency is vital in awarding contracts. Kenya must transcribe to transparency initiatives and adopt international world practice, this will overcome the curse.

- b) The welding job is very lucrative and respectable. Welding however must be internationally certified.
- c) The Ministry of Energy and Petroleum should assist Kenyan Universities to develop and build capacity, fund the purchase of equipment and retain funds within the country.
- d) Once Centres of Excellence are set up, they must be able to financially sustain themselves. Funds from the Ministry of Energy and Petroleum should trickle down to sustain Centres of Excellence that have been set up.



Participants during the Oil and Gas Public Lecture in Taifa Hall, UoN

PART II: Plenary Discussions (Q&A Session)

Moderator: Terry-Anne Chebet - Senior Business News Anchor, Citizen TV

First round of questions

1. How are young people going to get assistance into making sure the oil and gas era is a blessing to our country?
2. What is the government doing to ensure that the right skills set are identified for human resource in the oil and gas sector? Did the Government take into consideration the Employment Act when preparing the Petroleum Bill?
3. How will the Ministry of Energy and Petroleum ensure that the petroleum bill is in compliance with the petroleum act?
4. Is the Skills gap analysis study accessible to public?
5. Does KPC plan to open up to the sale of its shares to the public?
6. Does the Ministry have a Database of oil and gas partners?

Responses

Mr. Joe Sang (*Managing Director, Kenya Pipeline Company*)

KPC is looking to partner with the private sector and County Governments under Public Private Partnership Act.

Mr. Andrew Kamau (*PS, State Department of Petroleum*)

- a) Shareholding is being considered for the new crude oil pipeline from Lokichar to Lamu but not on the old pipeline. The Government is also looking into pension plans too.
- b) The Skills Gap Analysis Study report will be made available on the MoEP and UoN website. Enterprise development is also being carried out by MoEP to promote entrepreneurs. The skills gap analysis took into consideration the list of companies that can be involved at the very beginning of the petroleum exploration and production.
- c) On the issue of scholarships, students need to position themselves at the right place with right people. The Government should also have a criterion to identify students who require sponsorship.

Mr. Powell Maimba (*Chairman, Petroleum Institute of East Africa*)

- a) The Petroleum Bill and Employment Act are both based on the constitution and therefore there is no inconsistency between the employment act and petroleum bill.

- b) The Government is open to work with the private sector under the PPP Act.
- c) A lot of potential areas in the oil and gas sector have not been classified. The Private sector and Government should identify opportunities in the industry then train on skills required.

Eng. James N. Mwangi (*Chairman, Energy and Extractives Sector Board, KEPSA*)

The courses the Universities offer must be mirrored on what the gaps in the market are. The Skills gap analysis report should help inform potential students to pick courses that are informed by industry needs. The School of Petroleum studies is trying to build the right skills set for the oil and gas industry.

Dr. Daniel Ichang'i (*Chairman, Geology Department, UoN*)

Students and academia should focus on competence based training in line with their areas of interest and apply for ongoing trainings to develop their competence. Funding is still a problem but being looked at by the government.

Second round of questions

1. Why are the international corporates in the oil and gas industry blocked from accessing Government Offices and are not given an opportunity to seek for opportunities?
2. Where are the women in the oil and gas industry?
3. The prices of foreign sugar are low compared to locally produced sugar. Will it be the same thing in oil industry?
4. What steps is the Government taking to address the skills-gap issue in the oil industry?

Responses

Mr. Andrew Kamau (*PS, State Department of Petroleum*)

- a) Government needs to set up a skills database of entrepreneurs and business people in the diaspora. There are also opportunities for professionals from the diaspora.
- b) KPC has been conducting Skype interviews with professionals from the diaspora.
- c) There are very few women professionals in the oil sector. There is a sector dealing with gender in extractives which has been advertising in newspaper for trainings and unfortunately there is a low turn-out in women.
- d) The Skills for Oil and Gas Africa funded by the Department for International Development offers an incredible programme running in partnership with TIVET.

They are working with employers to offer competence based training-tailored courses for standards required in oil and gas industry. With international certification, professionals who undergo the training can work anywhere in the world.

Mr. Powell Maimba (*Chairman, Petroleum Institute of East Africa*)

Women are best retail operators in the oil industry. To extend this, the Energy and Extractives Sector Board and Petroleum Institute of East Africa (PIEA) have been trying to look into more women involvement in distribution of oil and products. PIEA's appeal to women is for them to be more engaged in oil business.

Dr. Daniel Ichang'i (*Chairman, Geology Department, UoN*)

- a) Oil prices are influenced by the global industry and therefore the prevailing conditions will dictate local prices.
- b) Employers always complain on quality of graduates-we are hammering ourselves about lack of quality of training. Getting a degree is not an end in itself. We need ongoing training in new emerging areas.

Eng. James N. Mwangi (*Chairman, Energy and Extractives Sector Board, KEPSA*)

Looking broadly at Universities, there have been challenges in offering Engineering courses that are not certified. The Engineers Board of Kenya is currently addressing this issue. Universities must align with university requirements in the different courses they offer.

Third round of questions

1. Wouldn't refining our own oil as a country be cheaper than buying refined oil? The Government needs to get managers with the right skills to manage our refineries
2. Students find it difficult to access data for research purposes. Is it possible for the Ministry of Energy and Petroleum to share data for research purposes?
3. There is need for skilled labour personnel in the oil and gas industry. Why is the Government not offering adequate technology and machinery for oil drilling?

Responses

Mr. Andrew Kamau (*PS, State Department of Petroleum*)

Data is available at the Ministry for Research purposes. Interested students should write to the Ministry and officially request for data.

Mr. Powell Maimba (*Chairman, Petroleum Institute of East Africa*)

There is lots of data on the PIEA website that students can access for research purposes. PIEA also offers relevant training on the oil and gas industry.

Mr. Andrew Kamau (*PS, State Department of Petroleum*)

There are oil rigs available in the country forming a concentrate water pipe that is used to smoke legal essential oils and concentrates and national oil is in the process of converting them for oil exploration. The National Youth Service also plans to set up a School of Oil and Gas.

Wrap up

Mr. Powell Maimba (*Chairman, Petroleum Institute of East Africa*)

- a) The Petroleum Institute of East Africa offers the best training and skills training to run the oil and gas industry and professionals in this sector should take advantage of this.
- b) The oil industry is a highly technical field. Oil production is the future of the country and each profession must be involved.

Mr. Daniel Kiptoo (*Petroleum Legal Advisor, MoEP*)

The oil and gas public lecture session is very important in demystifying the oil and gas sector. How can the involvement of everyone be done? How best can communication to the locals be done? What are legal challenges the sector faces? What is the policy direction and legal implications in the sector? How can professionals find a niche and create space for themselves?

Mr. Joe Sang (*Managing Director, Kenya Pipeline Company*)

The public lecture series will be hosted annually to offer more opportunities to demystify the oil and gas sector.

Mr. Andrew Kamau (*PS, State Department of Petroleum*)

There is a need for exposure in the oil industry particularly on what to study or train. The Government will set aside more funding, exposure to students and professionals and opportunities to partner with other companies. A database of all players in the oil and gas sector will also be put together.

Dr. Daniel Ichang'i (*Chairman, Geology Department, UoN*)

Kenya needs to train more students in the oil and gas industry and the Government should help fund necessary infrastructure for training. The training must be competence-based translating into internationally certifiable students/professionals.

Eng. James N. Mwangi (*Chairman, Energy and Extractives Sector Board, KEPSA*)

- a) KEPSA is comprised of over 10,000 corporate members registered as companies or business membership organizations. KEPSA is purely doing advocacy work and has 16 sector boards mirroring ministry boards (energy and mining).
- b) KEPSA aim is to foster Economic Growth and strives to encourage young people to become entrepreneurs by offering initiatives to partner with government.
- c) KEPSA engages all arms of government and regional agencies in their work. As private sector, there is a strong platform to engage government.

ANNEXES

Annex I: Oil and Gas Public Lecture Programme

TAIFA HALL, FRIDAY 1ST JULY 2016, 9.00-11.00 AM

8.00 – 8.30 Registration

8.30 – 9.00 Receiving Of Key Guests and Panelists

9.00

Prayer

- Choir/Entertainment
- Welcome Remarks By The Vice Chancellor
- Brief Remarks by the Chair, KPC Board of Directors
- Keynote Address By The Cabinet Secretary MoEP, Hon. Charles Keter

10.00

Panel Discussions

- Mr. Andrew Kamau- Ps, State Department Of Petroleum
- Eng. James N. Mwangi – Chairman, Energy and Extractives Sector Board, KEPSA
- Mr. Joe Sang - Managing Director, Kenya Pipeline Company
- Mr. Powell Maimba – Chairman, Petroleum Institute of East Africa
- Mr. Daniel Kiptoo- Petroleum Legal Advisor, MoEP
- Dr. Daniel Ichang’i – Chairman, Geology Department, UoN
- **Moderator:** Terryanne Chebet

10.30

Question and Answer Session

11.00

Vote of Thanks
Departure

Master of Ceremony: Prof. Henry Mutoro, DVC Academic Affairs, UoN

Annex II: Speech by the Vice Chancellor, UoN

- The Cabinet Secretary Ministry of Energy and Petroleum, Hon. Charles Keter
- Mr. Andrew Kamau- PS, State Department Of Petroleum
- Eng. James N. Mwangi – Chairman, Energy and Extractives Sector Board, KEPSA
- Mr. Joe Sang - Managing Director, Kenya Pipeline Company
- Mr. Powell Maimba – Chairman, Petroleum Institute of East Africa
- Mr. Daniel Kiptoo- Petroleum Legal Advisor, MoEP
- Chief Executives
- Business Fraternity
- Staff of KPC and the University of Nairobi
- Students
- Members of the fourth Estate
- Ladies and Gentlemen

Good morning!

I take this special moment, on behalf of the University of Nairobi, to warmly welcome you to this inaugural public lecture series on Oil and Gas in our region.

We are pleased to partner with the Kenya Pipeline Company to host this first public lecture series on oil and gas sector to demystify the myths on the sector by engaging the academicians and the industry players.

News of recent discoveries of oil and gas in the region has created a disproportionate level of excitement and expectations that if not properly managed might lead to confusion, wrong investments decisions, lost opportunities and public despair.

We do not want Kenya and indeed eastern Africa to add to the many statistics of lost opportunities and despair in the management of oil and gas wealth.

The solid partnership between the two giants; the University Of Nairobi and The Kenya Pipeline Company is a strategic collaboration geared to provide research based information and data to guide this lucrative sector for the benefit of our people and country.

Although petroleum exploration in East Africa predates independence, it is only recently that commercially viable oil was found in Turkana County. This coupled with the findings in Uganda and Tanzania as well as the admission of South Sudan to the EAC marks a golden era for the exploitation of Oil and Gas in East Africa.

I hasten to warn that we might not reap the enormous benefits in the sector unless we address the real and the imaginary challenges that are synonymous with oil and gas sector in Africa.

From the onset there is an evident lack of capacity in terms of skills and knowledge to convert the opportunities into real wealth for the benefit of our people. The universities must rise to the accession to train skilled manpower and produce research outcomes that are critical to the sustainable development of the sector.

To achieve that the university must look outside for strategic partnerships and collaborations that will assist to consistently refocus and retool its curriculum to the demands of the industry.

There is an acute demand for graduates equipped with hands-on practical skills, robust research and efficient knowledge management systems in the region.

It is against this background that the University has embarked on a journey to identify partners in the oil and gas industry from successful countries like Norway, France, India, USA and Australia to support activities in this area.

The University has also entered into collaboration with key local partners in the oil and gas industry such as the Ministry of Energy and Petroleum, Kenya Pipeline Company Ltd, National Oil Corporation, Tullow and Total ELF among others.

We have recently courted partner universities in France, Norway, India, USA and Australia with a view to enhancing and updating our curriculum, exchange of students and faculty and the training of MSc and PhD students.

I am grateful to the Ministry of Energy and Petroleum for giving us seed capital to establish Petroleum Engineering courses at the University of Nairobi to train over 200 students in oil & gas and energy related courses both locally and internationally.

I am also pleased to report that the first batches of students have been admitted to this degree program and have completed their first year of study.

The Petroleum Engineering program at the University of Nairobi is primarily concerned with the economic extraction of oil and gas from the earth.

Ladies and Gentlemen, I would like to take this opportunity to appreciate the following industry partners for partnering with us in training young Kenyans in taking the leadership in Oil and Gas:-

- National Oil Corporation of Kenya (NOCK) for the donation of lab equipment worth Kshs 100 million;
- Total Elf for donation of US\$ 50,000 for training four Postgraduate students;
- Schlumberger International for donation of US\$ 6 million towards geology software;
- And Tullow Oil for the promissory note to furnish our laboratories.

I call upon others industry players to follow suit and partner with us in developing a Centre of Excellence in Oil and Gas and related Energy studies by investing in postgraduate training, research and innovation, students internships and attachments, incubations and commercialisation of intellectual outputs.

I am happy to announce that we have entered into an agreement with the French agency for Development (AFD) to construct a new and modern Engineering and Science Complex.

Upon completion, this complex will house some units of the existing schools of Engineering and Physical Science as well as new planned course in Chemical & Industrial Engineering, Nuclear Engineering, Energy studies including, Geothermal, Solar and Wind as well as Leather and Textiles Technology.

The Science Complex is envisaged to be Africa's Centre of Excellence in Engineering, Science, Technology and Innovation and is anticipated to provide holistic higher education in engineering, science, technology and innovation that will accelerate the attainment of vision 2030.

In conclusion, I wish to congratulate our partner, the Kenya Pipeline Company, for recently setting up an Oil and Gas Centre of Excellence at Morendat, Naivasha. This initiative is meant to cut down costs incurred in hiring foreign experts to work on the country's oil and gas infrastructure in the region.

The University of Nairobi will be honoured to partner with KPC in this area and together provide the leadership and knowledge required to turn dreams into opportunities.

With those few remarks, I wish to thank all the stakeholders present for their support.

Thank you.

PETER M.F.MBITHI, PhD, EBS

VICE CHANCELLOR

AND

PROFESSOR OF VETERINARY SURGERY

Annex III: Public Lecture Recommendations

The following general recommendations came out of the public lecture discussions.

1. There is need for legislation/laws (Energy Petroleum Bill) to govern the oil and gas industry.

Action: Ministry of Energy and Petroleum to follow up

2. The Government should engage locals in the projects in oil and gas industry and avoid importing labour.

Action: Ministry of Energy and Petroleum to follow up

3. There are numerous lessons MoEP can learn lessons from Brazil on the manufacturing of drilling machines.

Action: Ministry of Energy and Petroleum to follow up

4. The Government should partner with private sector in a meaningful manner in the oil and gas sector

Action: Ministry of Energy and Petroleum to follow up

5. Local content provisions in the constitution must be looked at.

Action: Ministry of Energy and Petroleum to follow up

6. Young people need to be educated that jobs like welding are lucrative. There is need to get the skills going and this calls for teaching institutions to offer courses that meet industry needs.

Action: Universities and Technical colleges

7. The Government should set up a database for all oil exploring companies in the country and consider exporting the jobs.

Action: Ministry of Energy and Petroleum to follow up

8. Government should focus on working with Kenyan enterprises as part of local content entrenchment

Action: Ministry of Energy and Petroleum, KEPSA

9. University must look outside for strategic partnerships and collaborations that will assist it to consistently refocus and retool its curriculum to the demands of the industry.

Action: Universities and Technical colleges

10. There is need for meaningful collaboration between the government, International Oil Companies (IOCs) and local institutions of higher learning.

Action: Government, International and Local Oil Companies, Universities and Technical colleges

Conclusion

In conclusion, the host institution was appreciative of the opportunity which the public lecture provided to discuss a whole array of opportunities and challenges in the Oil and Gas sector. There was a recommendation to have the public lecture series annually under the co-sponsorship of both KPC and UoN.

As a way forward, the meeting suggested that the public lecture series be held either annually or bi-annually to open up more forums to discuss matters pertaining to the oil and gas sector. The panelists during the public lecture also conceded that there is dire need to review the legal framework to help unlock investment opportunities amongst players. The following are the overall recommendations from the Public Lecture.



The Kenya Pipeline Company Ltd partnered with the University of Nairobi to host the Inaugural Oil and Gas Public Lecture on 1st July 2016 at the University of Nairobi's Taifa Hall. Over 500 participants drawn from the Ministry of Energy and Petroleum, Chief Executives from Oil Companies, the Business Fraternity, KPC and University of Nairobi staff and Students from the School of Engineering and Physical Sciences. The meeting was opened by the Cabinet Secretary Ministry of Energy and Petroleum, Hon. Charles Keter and discussions were centred on the challenges and opportunities in the Oil and Gas sector in the East African Region.

