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by Sen. Ben Mwangi
Atieno*



**REPORT OF THE STANDING COMMITTEE ON ENERGY ON THE
BENCHMARKING VISIT TO BRAZIL FROM 6TH – 16TH
SEPTEMBER, 2014**

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ABBREVIATIONS

ANP	- National Agency for Petroleum, Natural Gas and Biofuels
CNPE	- National Council for Energy Policy
CAPEX	- Capital Expenditure
ELECTROBRAS	- Central Electricity Agency
E&P	- Exploration and Production
FFVs	- Flex Fuel Vehicles
GDP	- Gross Domestic Product
LC	- Local Content
LPG	- Liquefied Petroleum Gas
MME	- Ministry of Mines and Energy
OPEX	- Operating Expenditure
ONIP	- Brazilian Petroleum Industry Organization
PETROBRAS	- Petrol Brasil SA
PROMINP	- Mobilization Program of the National Industry of Oil & Natural Gas
PPSA	- Pre-Salt Petroleum
PSA	- Production Sharing Agreements
SEBRAE	- Brazilian Micro and Small Business Support Service
UNICA	- Union of Sugar Cane Industry
WTO	- World Trade Organization

PREFACE

1. The Standing Committee on Energy was constituted on Thursday 27th February 2014 during the Second Session of the Eleventh (11th) Parliament pursuant to the provisions of Senate Standing Order No.208.
2. The Committee is mandated, under the Second Schedule of the Senate Standing Orders, *to consider all matters related to fossil fuels exploration, development, production, maintenance and regulation of energy.*
3. In executing its mandate, the Committee oversees the Ministry of Energy and Petroleum.
4. The Standing Committee on Energy comprises the following Members:

Sen. Gideon Moi	- Chairperson
Sen. Dawson Mwazo	- Vice-Chairperson
Sen. Kiraitu Murungi	- Member
Sen. David Musila	- Member
Sen. Charles Keter	- Member
Sen. Abu Chiaba	- Member
Sen. John Munyes	- Member
Sen. Kimani Wamatangi	- Member
Sen. Elizabeth Ongoro	- Member
5. The following Members of the Committee who constituted the delegation for the Benchmarking visit to Brazil that was undertaken on 6th -16th September, 2014;-

Sen. Gideon Moi	- Chairman
Sen. Kiraitu Murungi	- Member
Sen. David Musila	- Member
Sen. Charles Keter	- Member

The delegation was accompanied by the Principal Clerk to the Committee Mr. Boniface L. Lenairoshi and Mr. Peter Mulesi Waswa as the secretariat.

EXECUTIVE SUMMARY

Mr. Speaker Sir, the Standing Committee of the Senate on Energy was privileged to visit the Republic of Brazil from 6th -16th September, 2014 for benchmarking on local content policy and design in the oil and gas industry.

Kenya has walked along and difficult journey in its efforts to search for commercial oil and gas resources in the sedimentary basins. The current hydrocarbon discovery in various parts of the country has led to heightened interests by investors in oil and gas exploration. Consequently, the 19 exploration wells that have been drilled in tertiary rift indicate crude oil reserves of about 600 million barrels.

The bench marking visit to Brazil by the Standing Committee of the Senate on Energy was premised on the continuous search for knowledge, expertise and capacity to formulate criteria and procedures for local content policy and legal framework in the oil and gas sector in Kenya.

As Kenya focuses on diversifying and developing energy sector especially in petroleum industry, there is need to build local content and participation in order to attain self-sufficiency, employment creation, competitiveness and economic stability. The objective is to promote socio-economic development by stimulating domestic industries.

The visit was also informed by the concern that the discovery of oil reserves can both be a blessing and a curse to a country. The windfall can cause the so called "Dutch Disease" where oil is produced while the local populations remain very poor and disengaged from drilling operations.

Brazil has one of the best policy and legal framework on local content value in oil and gas. The concession contracts for exploration and production require operators to purchase a certain percentage of goods and services from locally established providers.

Since Kenya's petroleum industry (both onshore and offshore) is still at appraisal and exploration stages, there is need to develop the capacity as well as policy and legal frameworks on methods, criteria and measurement for local content in the sector. This will help avoid the "Dutch Disease" by ensuring that the oil and gas discoveries are not just a vector for national development but also offer socio-economic benefits for the local people.

- c) To explore the avenues for bilateral cooperation with Brazil in oil and gas exploration, development and production,
- d) To enhance the understanding of the Committee on the institutional coherence and management of the Energy and Petroleum sector and
- e) To understand the challenges in policy and legal frameworks in the implementation of local content programs.

The visit enriched the knowledge of the Committee as it gave them a better understanding of the process of implementing local content policy which involves the identification of gaps, quantifying the impact, setting the right targets, developing tools for monitoring & evaluation of the activities along the supply chain that enhances local content operations as well as prescribing penalties for non-compliance.

The lessons learnt from the Brazilian experience and practice can be effected in thematic areas such as; fabrication, IT support (including seismic data management and processing), operations and maintenance, maritime services; business support services (including accounting HR services and consulting), financing and trading.

There is an urgent need for Parliament of Kenya to enact a bold, detailed and comprehensive local content legislation so as to open up the oil sector to the local people. It is anticipated that the recommendations contained herein will translate into better policy and legal framework for developing local content at both the National and County levels of government in the Petroleum sector.

ACKNOWLEDGMENT

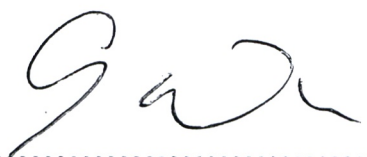
The delegation wishes to thank the office of the Speaker and the Clerk of the Senate for allowing Senators to conduct the study visit to the Republic of Brazil and for the facilitation, planning and organizing of the travel and the necessary logistics arrangements.

The delegation appreciates the Ministry of Foreign Affairs and the Kenyan Embassy in Brasilia, for their hospitality; organizing, coordinating and planning of the visits both in Brasilia and Rio de Janeiro. Special thanks also go to the Kenyan Mission in Abu Dhabi for coordinating the Committee stop- over in Dubai

Special gratitude also goes to the Ministry of Mines and Energy and the Management and staff of all the institutions that the delegation visited which include;- UNICA, PETROBRAS, ELECTROBRAS, ANP and ONIP for their openness in sharing their experience and knowledge with the Committee during the visit.

Mr. Speaker Sir, It is my pleasant duty pursuant to Standing Order 203 (6) to present the Report of the Standing Committee on Energy on its benchmarking visit to the Republic of Brazil from 6th – 16th September 2014.

I thank you all.



SIGNED.....

**SEN. GIDEON K. MOI, MP,
(CHAIRMAN)**

DATE... 14th October, 2014.....

CHAPTER ONE: INTRODUCTION

1.1 Background Information on Brazil's Oil & Gas Sector

Brazil occupies an area of 8,502,723 Sq.KM with a population of 200 million people and a GDP of 2.26 trillion US dollars which makes it the world's sixth largest economy. Commercial oil exploration began in 2008 and currently the oil production rate is 2 million barrels per day (PETROBRAS targets 4 million barrels per day by 2020). There are 77 companies and 23 basins the largest exporter of biofuels and sugar-based ethanol in the world. The net oil potential is 60 billion barrels of oil.

There are about 7.5 million sq.km of sedimentary basins which comprise of 2.5 and 5 million sq.km onshore and offshore, respectively. There are a total of 38 basins, 29 of which have high oil and gas potential. The proven oil reserves for both onshore and offshore are approximated to a net potential of 60 billion barrels of crude oil. The vast majority of proven reserves are located at Campos and Santos offshore basins on the southeast coast of Brazil. There are 77 companies involved in the exploration, production and development of oil and gas.

These statistics makes Brazil one of the world's largest exporters of crude oil from a production capacity of 2million barrels per day. Besides crude oil, Brazil is also the world's largest exporter of biofuels and sugar-based ethanol which account for over 50% of the domestic vehicle fuel usage.

The legal framework and its enforcement indicates that Brazil's proven and probable reserves in oil and gas makes the country one of the largest producers of oil in the world with enormous lessons on local content for Kenya to learn from.

CHAPTER TWO: VISITS, MEETINGS & PRESENTATIONS

2.1 Ministry of Mines & Energy (MME)

On Monday, 8th September, 2014 the Committee visited the Ministry of Mines and Energy (MME) in Brasilia and were received by the acting Minister for Energy in Brazil. The purpose of visit was to enable the Kenyan delegation understand how the Ministry of Mines and Energy operates and relates with other actors in the Brazilian oil and gas industry.

The Minister welcomed the Kenyan delegation and informed the Committee as follows;

- a) The Minister for Mines and Energy is the chairperson of the National Council for Energy Policy (CNPE), which is directly under the presidency. The Council has the authority to propose to the President the national policies and specific measures in the energy sector,
- b) The Ministry oversees, regulates and implements policies in Mining and Energy sector and ensures that the supply of electric energy, oil, natural gas and fuels to consumers meets the country's energy security,
- c) In executing its mandates, the Ministry ensures that the national policies for energy use aim at identifying the most appropriate solutions for the electricity supply in different regions of the country as well as expand the country's competitiveness in the international market,
- d) The Minister observed that countries of South America and especially Brazil have a lot in common with the African people. There is a natural affinity with the African countries. He assured the committee that Brazil has worthwhile experiences and lessons that can be of assistance to Kenya's development,
- e) He expressed commitment that Brazil will always cooperate with Kenya in learning and exchanging ideas on development in any sector of the economy. He concluded by stressing that in the developing world, there is need to develop the infra-structure on which to anchor economic growth. He underscored the need for well-defined policy and legal environment to attract more investments in the oil and gas sector and

- f) The Minister presented on the roles and mandates of:- The National Council for Energy Policy-CNPE, Policy Framework for Regulation of Activities of Petroleum and Natural Gas, Mobilization program of the National Industry of Oil and Natural Gas -PROMINP, Hydro power projects in Brazil and Ethanol and Biodiesel Industry.

2.1.1 Observations/Findings

The Committee observed that:-

- a) Brazil has per capita power consumption of 2500kw/h with hydro potential of 260,000MW having explored only 31%,
- b) In the past 10 years, 15 million people have been connected to electricity,
- c) More than 50% of light vehicles use ethanol and there is a policy for the participation of biodiesel which is currently at 7%,
- d) Almost all the 39,522 gas stations have a dedicated hydrous ethanol pump,
- e) In order to utilize the ethanol and biofuel and ensure full participation of local farmers, 90% of the vehicles are locally manufactured and the automobiles use Flex Fuel Vehicle (FFV) engine model,
- f) The legal framework of oil and gas has evolved and developed over time and has established credible institutions that are charged with the development of the oil & gas sector in Brazil,
- g) As a result, the Brazilian oil and gas market has expanded through auctions and has attracted international investors through concessions,
- h) The mobilization program of oil and natural gas (PROMINP) aims at maximizing the participation of domestic industry of goods and services, under competitive and sustainable basis in the implementation of projects for oil and gas. This ensures local content and benefits for the surrounding communities,
- i) PROMINP in its operation enhances professional qualification, competitiveness at national industry, technological capacity & attraction of supplier development, promotion of Micro and Small Enterprises and financing programs for local content,

- j) Ethanol and biodiesel industry in Brazil is guided by strategic, socio-economic and environmental factors as follows;
- i) **Strategic Factors**-Matrix diversification, expansion of renewable and energy security.
 - ii) **Socio-Economic Factors**-Employment generation and income distribution, value addition to agricultural raw materials, strengthening of national energy industry, multiplicity of companies.
 - iii) **Environmental Factors**-Reduced emissions, Carbon dioxide balance and global warming mitigation and the international profile of the country as a “green economy”.
- k) The priorities of serving energy and at the same time provide social development has remained a challenge and requires experience sharing.

2.2 The Union of Sugarcane Industry (UNICA)

The Committee visited the Brazilian Sugarcane Industry Association (UNICA). It is the leading sugar cane industry organization representing more than 120 member companies and is engaged in sugar, ethanol and bioelectricity production.

Members were informed that;

- a) UNICA controls 60% of overall sugar production matrix in the Brazilian sugar industry,
- b) The association is a multi-disciplinary sector with full-time group of experienced executives, specialists and technical consultants whose expertise covers relevant areas such as the environment, technology, energy, international trade, corporate social responsibility, legislation, economics and communications,
- c) UNICA, pursues the National Commitment for the Improvement of Labor Conditions in Sugarcane Production, and places the adoption of better labor practices as the top priority for the sugar-energy industry,
- d) The total acreage under sugarcane is 64.7million hectares, which is only about 7.5% of the total and available land mass, hence its sustainability,

- e) The Brazilian sugarcane sector has 390 mills, 70,000 sugarcane growers, provides direct employment to over 1 Million employees, has a GDP of US\$ 43.8 Billion, generates US\$ 14 Billion in foreign revenue and contributes 16.1% of the energy matrix in Brazil,
- f) Brazil is the 1st world producer and exporter of sugar with 22% of world production and 45% of world exports,
- g) Brazil is the 2nd Ethanol producer in the world with 25% of world production and 37% of world exports,
- h) Ethanol significantly contributes to the decarbonization of the Brazilian energy mix and is used as a tool to fight climate change with its use contributing to 90% reduction of Green House Gas (GHS) emissions hence improving the quality of life and fosters economies in public health expenditure,
- i) The Flex vehicles have given new impetus to the ethanol industry and ensured competitive prices as gasoline. 90% of the locally produced cars have engines that use ethanol while the 10% imported have fully gasoline engines.
- j) Since March 2003, 240 million tons of carbon dioxide equivalent of Green House Gas emissions have been reduced because of the use of Flex Fuel Vehicles (FFV) and the 25% mix of ethanol into gasoline,
- k) Biomass is used in the production of electricity and there is a huge synergy between the hydropower and the electricity coming from biomass that ensures that during the dry season (May – November) the biomass is used in production of electricity and hence helps to avert power shortage and
- l) Sugarcane is also used in production of green plastics – Coca Cola intends to have by 2020 half of their bottles in the world coming from sugarcane plastics.

2.2.1 Observations/Findings

- a) Uncertainties regarding the regulatory framework – as the ones affecting the U.S., Brazil and the EU, contribute to a low level of investments in biofuels production and inhibit technological development,

- b) Market failure: the associated benefits to the use of biofuels entail private investments that is short compared to what would be socially recommended and
- c) Rising cost of production in terms of labour and capital goods, indebtedness, closing units and competition with gasoline.

2.3 Central Electricity Agency (ELECTROBRAS)

The Committee visited Central Electricity Agency (ELETROBRÁS) in Rio de Janeiro on Tuesday 9th September 2014. Electrobras is a quasi-public and publicly traded corporation that deals with energy generation, transmission and distribution. It's headquarters is in Brasilia and its main office is in Rio de Janeiro.

The Committee noted that;-

- a) Electrobras was established in 1962 and is the largest enterprise that holds one of the cleanest energy in the world. It generates and distributes energy to almost half of Brazil.
- b) The federal government of Brazil is the majority shareholder with 49%, while the private entities own 51% of the shareholding.
- c) The Electrobras companies operate and manage 180 power plants that include 45 hydro- electric power plants, 125 thermoelectric plants, 8 wind farms, and 2 nuclear plants.
- d) These power plants account for 34% (42,987MW) of the country's total generation out of which 89% comes from low green-house gas emitting sources,
- e) ELECTROBRAS is responsible for 50% of the transmission lines (57,300 km of transmission lines),
- f) The company has mainly focused on generation and transmission and less on distribution. Transmission involves only the transfer of energy from source to distribution,
- g) The visit to ELECTROBRAS was beneficial because Brazil's energy generation mix is similar to Kenya's and comprises of hydro, fossil fuels, geothermal, biogas cogeneration, wind and solar.

2.3.1 Observations/Findings

The Committee noted that;-

- a) Brazil has the leading electricity matrix in the world that comprise of hydro (85,000MW), wind power (4,000MW) and nuclear (2,000MW),
- b) During the half year of 2014, Brazil had attracted almost 50,000MW of electricity from new investors,
- c) Brazil's hydroelectric potential is 260,000MW and has explored only 31%. There are 18 planned hydro plants. There are about 20,000km of transmission lines linking the northern and southern regions of the country,
- d) The cost of electricity in the developing world is very high and in Brazilian experience it costs 140 USD to produce 70-80M/h.,
- e) The Government of Brazil adopted a policy of "light for all" where 50 million people have been connected with power in the last 10 years,
- f) This model of the Brazilian government attracted the United Nations Secretary General's invitation to offer consultancies on United Nations program on Energy for all and
- g) In order to facilitate local content, the federal government gives money to private companies to connect the rural poor homes. The overall objective is to generate higher local demand for electricity.

2.4 National Petroleum Agency (PETROBRAS)

On Wednesday, 10th September 2014, the Committee was privileged to visit PETROBRAS the Kenyan equivalent of National Oil Corporation. PETROBRAS is a State run corporation linked to the Ministry of Mines and Energy.

The Committee was informed that;-

- a) PETROBRAS was established in 1953 as an integrated energy company engaged in exploration, production, refining, commercialization, transportation and petrochemicals, distribution of oil products, natural gas, biofuels and electricity,
- b) The company has international presence and operates through subsidiaries and affiliated companies in over 18 countries; US, Japan,

Mexico, Angola, Namibia, Benin, Nigeria, Gabon, Tanzania among others,

- c) In all its operations, the company ensures local content maximization in goods, services and systems guided by regulations by the ANP and PROMINP,
- d) There are 15 refineries; 12 commissioned and 2 under construction whose products are gasoline, diesel, lubricants, and many other oil derived products. These products are marketed locally and abroad large presence in South America with 7,710 stations,
- e) In the transportation of oil, gas and ethanol, there are 48 terminal, 57 ships and 9,116 miles of pipeline,
- f) The company generates electricity mix in 21 thermoelectric plants, 1 wind power plant and 1 solar power plant,
- g) In Agricultural sector, the company produces bio-fuels though at small scale from 5 biodiesel and 10 ethanol plants respectively. In addition, there are 3 fertilizer companies,
- h) Investments by PETROBRAS are projected to reach USD 220.6 Billion over the next 4 years. The segmentation for the investments will be 70% in oil exploration and production, 1.1 billion USD in Research and Development (R&D) in collaboration with the University of Brazil,
- i) The net contribution of PETROBRAS to the economy of Brazil in 2013 was USD 34.6 billion in direct taxes and USD 6.6 billion in royalties.

2.4.1 PETROBRAS Local Content Policy

PETROBRAS local content policy involves upstream and downstream activities and it states that;- *“The projects and acquisitions for PETROBRAS must support the challenges of Company’s Strategic Plan and therefore maximize local content based on competitive and sustainable basis, accelerating the development of markets where it operates, guided by ethics and generating continued innovation”*

2.4.2 PETROBRAS Local Content Drivers

PETROBRAS Local Content is guided by the following drivers;

- a) Capital Discipline-That local content should not increase the cost of capital projects.

- b) Integration of supply-coordinates and ensures the best way to reach the market,
- c) Local content Standardization-Defines the internal processes to plan and monitor local content,
- d) Local supplies-Encourages the development of local market in a sustainable manner,
- e) National Engineering-Prioritizes supplies with local engineering development and
- f) Technology Gaps-Encourages the development of the local market to overcome technology gaps.

2.4.3 Observations/Findings

The Committee observed that;-

- a) PETROBRAS has a lot of experience and best practice for local content in the oil and gas industry. The company sponsors various environmental and social projects such as elders, health, education, sports and art (Formula 1) and
- b) The objective is to ensure that the benefits of the oil and gas industry go beyond national economic aspects towards the local community,

2.5 National Agency for Petroleum, Natural Gas & Biofuels (ANP).

The Committee visited the National Agency of Petroleum, Natural Gas and Biofuels (ANP) on Thursday 11th September 2014. ANP was established in 1998. It is the regulatory body for activities that integrate the oil, natural gas and biofuels industry in Brazil. Its key activities include the management of oil field bidding rounds (Concession Regime) and also monitoring local content (minimum requirements, auditing and penalty application).

The Committee was informed that ANP;-

- a) **Regulates:** To establish the legal framework (resolutions, instructions) for the operation of the oil, gas and biofuel industries. The ANP reviews the documents and where local content equals or exceeds those percentages determines whether the commitment has been fulfilled or otherwise prescribes fines.
- b) **Contracts:** To organize auctions and sign contracts with concessionaires for the exploration, development and production of oil and gas.

- c) **Enforce Rules:** To ensure compliance with the rules in the regulated industry activities, directly or by agreements with other public authorities.
- d) **Compliance on Local Content:** Ensures Participation of small and midsize companies, the concession contracts include a clause that requires exploration and production companies to invest the equivalent to 1% of the gross earnings from large production fields in technological research and development projects and programs (R&D) in Brazil.
- e) **Certification:** The certification activities involve collecting data on the origin of components supplied, measuring local content for example, the goods and services that have been produced locally and ultimately issuing certificates.
- f) **Environment;** Ensures that the regulated companies put into practice proven efficient procedures and techniques for safe operations, energy efficiency, environmental protection and human health.

2.5.1 Observations/Findings

The Committee observed that ANP is further involved in;-

- a) **Exploration and Production:** Management of data and information on sedimentary basins; Continuous study of sedimentary basins, aiming its offering in bidding rounds; Choosing of bloc sites for exploration and production; Management of concession contracts.
- b) **Refining and Processing:** Authorization of the activities of oil refining, natural gas processing and biofuels production; Regulation of the transportation of crude oil, oil products, natural gas and biofuels; Regulation rules enforcement.
- c) **Distribution and Trade:** Quality specification of petroleum and natural gas products and of biofuels; Authorization of distribution and resale of fuels and regulation rules enforcement.

2.6 Brazilian Petroleum Industry Organization (ONIP)

The Committee visited the Brazilian Petroleum Industry Organization (ONIP) on Thursday 11th September 2014. ONIP is a private non-profit making organization that deals with institutions that have interest in the oil industry in Brazil hence its members includes all institutions in the oil and gas industry.

A presentation was made to the Committee under the theme of; *“Understanding local opportunities in the Brazilian Petroleum Sector”*.

The Committee noted that;-

- a) The National Organization of the Petroleum Industry (ONIP) objectives are to;- Maximize the benefits resulting from the expansion cycle of the oil & gas sector for the Brazilian society, gather and disseminate qualified data from the Brazilian- installed suppliers of goods and services and offers an extensive on-line data base of more than 900 local companies,
- b) To meet this mission, ONIP acts to contribute for the development of a favorable environment for new investments and operations in the Brazilian petroleum sector and to promote the increase of local content on a competitive basis.
- c) ONIP serves as a forum for all the companies and government agencies involved in the Oil & Gas sector in Brazil,
- d) ONIP’s members represent National Associations from the different sub-sectors of the Oil and Gas industry, including: exploration, drilling, engineering, tubes and pipes, naval construction and design, heavy machinery manufacturing, infrastructure, electric/electronic materials, services and others and
- e) ONIP also acts as an Information Center for the entire Brazilian Oil and Gas industry. ONIP’s home page contains information about the industry, including economic and technical data, proprietary industry analysis, presentations, conferences and workshops sponsored by ONIP, and other pertinent information.

CHAPER THREE: DEVELOPMENT OF THE LOCAL CONTENT IN BRAZIL

3.1 The Oil & Gas Industry in Brazil.

The Committee was informed that;-

- a) Local Content is defined as the degree of local ownership, control and financing by citizens of a nation, in a specific venture or entity that promotes and enables the optimal use of human resource, materials and services in that country,
- b) Local Content (LC) is also defined as the percentage of materials, equipment, systems and services produced locally in relation to the total amount of purchases made by concessionaire operating in that specific country,
- c) Local content consists of contractual commitments embedded in concession contracts (oil licenses or oil lease licenses) where oil companies are required to produce a minimum percentage of equipment and services from local suppliers,
- d) Since 2003, the Federal Government of Brazil has been implementing a local content policy for the oil and natural gas industry aiming to increase the domestic industry's stakes in the supply of goods and services and to put it on a competitive, world-class level in order to translate the sector's massive investments into the creation of jobs and income for Brazil,
- e) Under this movement, the Federal Government, by means of Decree No. 4925, of December 19, 2003, established PROMINP - The National Oil and Natural Gas Industry Mobilization Program,
- f) The creation of the program, coordinated by the Ministry of Mines and Energy and PETROBRAS, has provided many players involved in this industry with a standing discussion forum for the development of initiatives that improves, competitively and sustainably, the domestic goods and service industry's stakes in the implementation of oil and natural gas projects in Brazil and abroad,
- g) PROMINP did a major diagnosis of main resources needed, over time, for the implementation of planned projects, identified gaps related to the industrial infrastructure, supply of materials, equipments and components and professional qualification, having led since 2003, a significant set of actions with the goal of equating them,

- h) Through the engagement of the government, operators, associations, financial institutions, service providers, educational institutions, and the entire oil and gas production chain, projects led within the discussions platform created by the program attained significant results, transforming local orders into a growing share of this investment portfolio,
- i) In order to broaden the reach and scope of PROMINP in Brazil, in 2004, the Regional Forums were created, which functioned as local bases of the programme in several States of the Country, with the goal of meeting industry regional demands, encourage the supply of goods and services by the local industry and insert small and micro businesses in the regional and natural gas chain,
- j) The minimum local content required in concession contracts of ANP exploration blocks caused a need for creation of a unique way of measuring that could ensure uniformity, transparency and credibility to the various agents operating in the Brazilian oil and gas industry,
- k) In 2004, PROMINP Local Content Manual was created. This manual defines a local content calculating methodology for goods, systems, subsystems and services related to the industry,
- l) In 2005, the manual was established as the official methodology for measuring Local Content and was attached to the concession contracts. But in 2007, the manual was removed of the concession contract and incorporated in ANP Regulation (ANP Resolution No 36),
- m) In 2007, Local Content Certification System was regulated, establishing among other procedures, the certification methodology and rules of accreditation of certifying entities by ANP,
- n) The use of Local Content Manual allows for uniformity and standardization of the calculation criteria which provides for possibilities of monitoring Local Content evolution over time. Such monitoring detects opportunities for nationalization of goods and services as well as shortcomings in the supply chain, thus providing the adoption of support and encouragement measures to the Brazilian oil and gas industry,

- o) The National Professional Qualification Programme was created with the objective of providing qualified professionals in the Country to work on different links in the supply chain,
- p) PROMINP offers free tuition for 185 professional categories, executed in 34 cities involving 77 vocational education institutions with a an investment R\$ 236 million,
- q) The formal employability of students rose from 32.8% to 67.1 % upon completion of the courses,
- r) The year 2013 marked the 10th anniversary of the establishment of PROMINP. In that decade, there was the successive expansion of the investment program for the industry, particularly after the discovery of the pre-salt cluster, in 2007,
- s) Also in that decade, the country witnessed the resumption of the Brazilian ship building industry, with PETROBRAS emerging as a major global offshore ship building buyer,
- t) Based on its orders, the domestic shipyards' installed capacity increased significantly, both on account of investments in new plants and due to expansions and upgrades at existing facilities. In addition to creating jobs, the industry's development has brought a positive outlook to its entire supply chain, encouraging the generation of new technologies,
- u) From initiatives carried out under the program to build the domestic suppliers' capacity, to attract foreign companies to produce in Brazil, and the combination of domestic and foreign companies, part of what was once produced abroad has started being manufactured in Brazil, hence improving competitiveness among domestic market suppliers,
- v) Considering that production from the pre-salt fields is still beginning, it is anticipated that the magnitude of the investments in the industry will reach even higher levels at the end of this decade. In this sense, there are major challenges related to the ability to innovate and meet the demand for capital goods, steel, vessels, exploratory rigs, and everything else that is associated with investments in the oil industry,
- w) For this reason, PROMINP will continue steadfast on its path, so that everything that can be made in Brazil, is indeed made in Brazil,
- x) Annually, PROMINP holds a national meeting to assess the program's development throughout the year, and from the discussions raised, and

new sector opportunities, set guidelines for its initiatives in the following year,

- y) Local content has been used as criteria when assessing bid proposals for exploration and production together with the Minimum Exploratory Program and Signature bonus since the first round of bidding in 1999 and
- z) The local content also ensures National industry competitiveness - diagnosis comparison of global companies with national ones and bridges the gaps therein by;- Stimulating local suppliers to meet the demand and supply, Stimulating competitiveness of established local companies, Stimulating development of new local suppliers and Attracting international world class companies to invest directly in Brazil.

3.2 Observations/Findings

The Committee observed that;

- a) The Brazilian Government requirement for Local Content applies only in the upstream areas/activities related to concession of the oil fields exploration and production phases,
- b) Local content is not a sure cure against the “Dutch Disease”, unless other policies are applied to deal with persistent distortions such as currency overvaluation, relative interest rates e.t.c.,
- c) Local Content policies and legal framework should stimulate the production chain through incentives and not hinder it through market reserve policies. In a nutshell, policy should include clear goals and a system of rewards and penalties for non compliance,
- d) Local Content Regulations should be temporary and contain a phase-out mechanism, with set deadlines,
- e) Local content should be defined in terms of the level of ownership, control and financing by citizens in conformity with internationally accepted norms and the key tenets of international conventions, such as WTO’s General Agreement on Trade and Services (GATS),
- f) Policy design should give due attention to avoid international trade law violations such as multilateral regimes as WTO. Coverage of all

instances of LC, however, may require a specific multilateral understanding for the oil and gas sector,

g) Production Sharing Contracts (PSC's) should include greater provisions for local content that relate to:-

- i) The unbundling of contracts to match the capability of local suppliers in terms of timing, finance and manpower;
- ii) Ensuring that seismic processing work is undertaken in-country;
- iii) The transfer of technology and business expertise in the Energy Sector to Nationals;
- iv) The selection and training of Nationals consistent with operators performance standards; and
- v) The advertisement of invitations to bid for contracts in the local media

3.3 Benefits of Local Content

- i) The energy services sector can be enhanced by an emphasis on local content in servicing local and international markets,
 - ii) Focus on local content would raise competencies and capabilities and make the local energy sector more competitive globally,
 - iii) Ensuring tender evaluation contain appropriate criteria and weightings for Local Content,
 - iv) Provide feedback on pre-qualification evaluation to unsuccessful local companies so that they may themselves confirm gaps that exist, learn and develop into a stronger company,
 - v) Acquiring new technologies and securing license agreements and
 - vi) Improved focus on training at all levels –craft, managerial, etc.
- h)** On average, the percentage of Local Content on Exploration and Production ranges between 55% and 65% and there are plenty of opportunities for foreign companies to invest in Brazil. PETROBRAS has a Foreign Suppliers Attraction Programme which is doing a commendable job to woo investors into the country.

3.4 Challenges of Local Content

- a) Drawing from lessons in other jurisdictions, there are fears that strict enforcement of local content measurement and auditing may limit foreign direct investment into the oil and gas industry,
- b) The effect of LCs on trade discourages foreign imports and to stifle competition between domestic and foreign firms. The impact on trade of LCs depends on the percentage of local content required and the efficiency of existing firms. In an economy with inefficient firms, a high degree of required local content thwarts competition and
- c) In addition, LCRs might hamper innovation and quality in the energy sector. With a restrictive LC in place, investors might be deterred from investing in the energy sector owing to higher input prices. Meanwhile, the higher the LC, the more the energy sector will be protected from foreign competition, resulting in lower quality and higher prices. Over time, this may impact the quality of foreign direct investment (FDI) attracted to the sector and encourage rent seeking, and less efficient FDI.

CHAPTER FOUR; CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

It is anticipated that the recommendations contained herein will translate into better policy and legal framework for developing local content at both the National and County levels of government in the Petroleum sector.

These laws will not only streamline the industry but will compel International Oil Companies to open space for Kenyan entrepreneurs to invest, provide services, create wealth thereby uplift ordinary Kenyans from poverty.

Drawing from the interactions during the visit, the Committee observed that Brazil offers a lot of opportunities for Kenya in the management of the oil and gas industry particularly the implementation of local content policy and the attendant legal framework that are crucial for Kenya's nascent petroleum sector.

Members realized that the energy sector in Kenya, especially the petroleum industry has tremendous potential and opportunities to

stimulate local capabilities through local content frameworks for local companies.

4.2 Recommendations

The Committee recommends that:-

- a) Kenya requires a clear and measurable local content policy and legal framework in the petroleum sector that stipulates definitions, descriptions, procurement rules for national and international companies,**
- b) That Parliament should enact legislation that will enable the state agencies to; Develop, monitor, measure and audit local content policy, Provide more access to funding/local training and certification, Market the strengths of local energy sector globally, Enforce Production Sharing Contracts and Exploration & Production license local content requirements and Include incentives in contracts for international companies which develop local competencies,**
- c) There is need for capacity building and stakeholder engagement for setting up of an investment fund in the petroleum service sector to develop staff competencies /skills and for more practical empowerment of the local companies in the oil and gas supply chain,**
- d) There is an urgent need for Parliament of Kenya to enact a bold, detailed and comprehensive local content legislation as a way of empowering the local people to effectively compete with International Oil Companies (IOCs) as a way to open up the oil sector to the local people,**
- e) The Ministry of Agriculture, Livestock and Fisheries in conjunction with the Ministry of Energy and Petroleum to ensure that any sugar industry that is set up should have a renewable energy production component,**
- f) Kenya should seek technical support from Brazil in capacity building for Kenya's Sugar Cane Industry, Oil and Gas Sector, Industrial Processing and Development of New Technology, Public Policies and Sustainable Practices,**

- g) Memorandum of Understanding (MoU's) between key institutions and the two governments should be initiated so that Kenya can fully tap into the vast reservoir of knowledge Brazil possesses,
- i) Guidelines on local content should be incorporated in all contracts (Production Sharing Contracts (PSCs) and
- j) There is need for mandatory local compliance with internationally recognized standards.

