



# NATIONAL OIL AND GAS POLICY FOR UGANDA

THE POLICY GOAL IS TO USE THE COUNTRY'S OIL AND GAS RESOURCES TO CONTRIBUTE TO EARLY ACHIEVEMENT OF POVERTY ERADICATION AND CREATE LASTING VALUE TO SOCIETY.

FEBRUARY, 2008

MINISTRY OF ENERGY AND MINERAL DEVELOPMENT

## FOREWORD

It is with great pleasure that I present a foreword for this holistic National Oil and Gas Policy for Uganda. This policy which was approved by Cabinet on 30<sup>th</sup> January, 2008 is intended to guide the development of Uganda's emerging oil and gas sector following the discovery of commercial petroleum resources in 2006.

The National Oil and Gas Policy supersedes the Energy Policy for Uganda published in 2002 in matters of exploration, development, production and utilization of the country's oil and gas resources. Apart from creating a conducive environment for petroleum exploration to continue in the country and the anticipated development, production and utilization of any discovered resources to take place, the policy also seeks to put in place a framework for the efficient management of the oil and gas resources as well as revenues accruing therefrom.

Formulation of this Policy has been carried out through an extensive consultative process which has involved the review of policies of many petroleum producing countries, discussions with institutions of Government, local authorities and cultural institutions especially those in the areas with the potential for petroleum production in the country, civil society organizations and academia, among others.

Implementing this Policy will require putting in place new legislation for oil and gas administration and management of petroleum revenues, developing and implementing a communication strategy to manage public anxiety and expectations, preparation of procedures and criteria for competitive licensing and creation of a new institutional framework for the sub-sector. The Ministry of Energy and Mineral Development will prepare a strategic plan for the implementation of those activities

and continue to work in consultation with the different stakeholders to accomplish the same.

In conclusion, I wish to register my gratitude for the guidance received from His Excellency Yoweri Kaguta Museveni, President of the Republic of Uganda in developing the oil and gas sector in the country in general and in the formulation of this Policy in particular. I am grateful to colleagues in Cabinet for their participation in the consultative workshop which preceded the submission of the draft Policy to Cabinet and the enrichment of the policy document during discussion in Cabinet. My colleagues in the Ministry, Hon. Dr. Simon D'Ujanga, Minister of State for Energy and Hon. Kamanda Bataringaya, Minister of State for Mineral Development made good input. I wish to thank the Technical Team in the Ministry which spearheaded the process of formulating this policy and coordinated the consultations. The team was led by F.A. Kabagambe-Kaliisa, Permanent Secretary and included Reuben Kashambuzi, Commissioner, Petroleum Exploration and Production Department, Ernest N.T. Rubondo, Assistant Commissioner, Fred Kabanda, Principal Petroleum Geologist, Rev. Frank Tukwasibwe, formerly Principal Economist and Emmanuel Ajutu, Senior Policy Analyst. The consultants Farouk Al Kasiim of PetroTeam - Norway and Professor James Katorobo of Makerere Institute of Social Research provided good support in the development of this policy. The contribution of all the stakeholders who participated in the consultations is duly recognized. I am equally grateful to the Government of the Kingdom of Norway who, in partnership with the Government of the Republic of Uganda, facilitated the development of this Policy.



**Daudi Migereko [MP]**

**MINISTER OF ENERGY AND MINERAL DEVELOPMENT**

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## ACRONYMS

1.	2D	Two Dimensional
2.	3D	Three Dimensional
3.	API	American Petroleum Institute
4.	BOPD	Barrels of Oil Per Day
5.	CNG	Condensed Natural Gas
6.	CO <sub>2</sub>	Carbon dioxide
7.	CSO	Civil Society Organisation
8.	EA	Exploration Area
9.	EIA	Environmental Impact Assessment
10.	EITI	Extractive Industries Transparency Initiative
11.	EPS	Early Production Scheme
12.	GTL	Gas to Liquid
13.	HSE	Health Safety and Environment
14.	md	millidarcy
15.	MEMD	Ministry of Energy and Mineral Development
16.	NATOIL	National Oil Company
17.	NCHE	National Council for Higher Education
18.	NEMA	National Environment Management Authority
19.	NIMES	National Integrated Monitoring and Evaluation Strategy
20.	NPV	Net Present Value
21.	PAU	Petroleum Authority of Uganda
22.	PEAP	Poverty Eradication Action Plan
23.	PEPD	Petroleum Exploration and Production Department
24.	PMA	Plan for Modernisation of Agriculture
25.	PSA	Production Sharing Agreement
26.	RBP	Regulatory Best Practice
27.	UWA	Uganda Wildlife Authority

## **EXECUTIVE SUMMARY**

### **The Need for a National Oil and Gas Policy**

The effort to establish Uganda's oil and gas potential has been successful and it has now been established that the country has commercial reserves of oil. Four oil fields namely Mputa, Waraga, Nzizi and Kingfisher have been discovered and a minimum of three hundred (300) million barrels of oil is estimated to be in place in the Kaiso Tonya area, which covers less than 5% of the entire prospective belt. A significant level of investment continues to be made to undertake seismic surveys together with exploration and appraisal drilling in the country, and therefore the country's reserves are expected to increase as further exploration work is undertaken.

These developments have necessitated putting in place a National Oil and Gas Policy to address the entire spectrum of exploration, development and production of the country's oil and gas resources more comprehensively than in the Energy Policy of 2002. The broad objective of the Energy policy with regard to the petroleum sub-sector was to promote the petroleum potential of the country with a view of attracting investment in the sub-sector and monitor exploration programmes. Emphasis was laid on capacity building for petroleum exploration; acquisition of geoscientific data and information; attraction of investments for more expensive petroleum exploration operations like seismic surveys and drilling; contract negotiations; and monitoring of exploration operations. The country now needs to focus beyond the oil discovery stage and plan for sustainable oil and gas production, processing and utilization, hence the need for a more comprehensive policy framework with robust objectives, strategies and actions.

### **The Issues**

The policy identifies the following issues for the country with regard to the petroleum sub sector:-

1. Development of institutions, including legislation and manpower, necessary for effective management and regulation of the sub-sector.
2. Establishment of the country's oil and gas resource base so as to facilitate short, medium and long term planning for the sub-sector.

3. Management of the country's oil and gas resources together with the revenues accruing therefrom, in a manner that facilitates sustainable development and avoids distortion and destruction of the nation's economy.
4. Managing the impact of an emerging oil and gas sub sector on, among others, the country's governance system, the economy, the environment and subsequently human development.
5. Contribution of oil and gas resources to the country's energy mix.
6. Ensuring that the country provides a conducive environment for attracting the levels of investment required to establish the country's resource potential and facilitate its development.
7. Participation of the country's private sector and its entrepreneurs in the oil and gas activities.
8. Management of expectations, arising out of the perceived benefits of oil and gas activities, together with the anxiety arising from some experiences of poor management of this sub-sector in other parts of the world.

#### **The Policy Framework: The Principles, Goal, Objectives and Actions.**

This policy is based on the following principles:

- i) Using finite resources to create lasting benefits to society;
- ii) Efficient Resource Management;
- iii) Transparency and Accountability;
- iv) Protection of the Environment and Biodiversity;
- v) Spirit of Cooperation; and
- vi) Capacity and Institutional Building;

**The Policy Goal is to use the country's oil and gas resources to contribute to early achievement of poverty eradication and create lasting value to society.**



The objectives of the Policy are:

- i) To ensure efficiency in licensing areas with the potential for oil and gas production in the country.*
- ii) To establish and efficiently manage the country's oil and gas resource potential.*
- iii) To efficiently produce the country's oil and gas resources.*
- iv) To promote valuable utilization of the country's oil and gas resources.*
- v) To promote the development of suitable transport solutions which give good value to the country's oil and gas resources.*
- vi) To ensure collection of the right revenues and use them to create lasting value for the entire nation.*
- vii) To ensure optimum national participation in oil and gas activities.*
  
- viii) To support the development and maintenance of national skills and expertise.*
- ix) To ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity.*
- x) To ensure mutually beneficial relationships between all stakeholders in the development of a desirable oil and gas sub sector for the country.*

### **Linkages of the National Oil and Gas Policy to the Country's key policy frameworks.**

The impact and linkages of the National Oil and Gas Policy to the country's key policy frameworks like the Poverty Eradication Action Plan (PEAP), the Plan for Modernization of Agriculture (PMA) and the country's drive for industrialization, have been articulated in the respective sections of the policy document.

Uganda's Poverty Eradication Action Plan (PEAP) focuses on promoting private-sector led economic growth in such a way that growth leads to a reduction of absolute poverty in the country to levels below 10% by the year 2015. The development of an oil and gas sub sector in the country will contribute significantly to the early achievement of the above goal by enhancing the country's capacity to invest in productive sectors of the economy, development of new economic and social infrastructure, increasing power generation capacity and the general enhancement of energy security through production and refining of oil.

Oil and gas activities will have a positive impact on the country's Plan for Modernization of Agriculture (PMA) through the enhancement of areas with higher multiplier effects, like provision of energy services and infrastructure for rural agro-processing industries, together with the increased use of modern and mechanized agriculture through the provision of more affordable inputs like fuels and fertilizers.

Oil and gas operations will provide opportunities for both forward and backward linkages in the country's industrialization drive. On one hand, oil and gas activities will provide raw materials which will be used as inputs during the manufacturing process. On the other hand, oil and gas activities will act as a market for industrial products, both directly and indirectly. Oil and gas operations will provide the country an opportunity to develop a petrochemical industry. This will include industries like oil refining; the offshoot industries utilizing the refinery by-products to produce soap, plastics, pesticides, paints, medicine, asphalt, chemicals and others; together with industries arising from the utilization of natural gas like cement production, iron ore smelting and production of fertilizers.

The Policy also addresses the cross-cutting issues between oil and gas activities and the country's education and research plans, employment opportunities and patterns, population distribution, land ownership and use, energy availability together with relationships with other countries. It also recognizes that if the country's petroleum resources and revenues are not well managed, the sub sector has the potential to have the most negative impact on society, "The Oil Curse" or the paradox of plenty. The oil curse is the negative effect of oil and gas resource utilization leading to economic stagnation, environment degradation and increased poverty. The oil curse can and should be avoided.

### **Institutional and Regulatory Framework**

Promotion of the country's petroleum potential together with implementing and regulating the initial exploration efforts have been ably undertaken by the Ministry of Energy and Mineral Development through the Petroleum Exploration and Production Department, (PEPD) and good results have been achieved. However, the increasing number of investors, subcontractors and other stakeholders are leading to an increase in the volume and complexity of tasks in managing this sub

sector. In line with Government's institutional reform policy of Regulatory Best Practice (RBP), policy, regulation and the business/commercial aspects of the oil and gas sub sector will be separated. The Ministry responsible for oil and gas will handle the policy aspects while new institutions will be set up to handle the regulatory and business/commercial aspects respectively. The regulatory functions will be handled by the Petroleum Authority of Uganda (PAU) while the business/commercial aspects will be handled by the Uganda National Oil Company (NATOIL). The roles of these institutions together with those of the other institutions of Government and Civil Society are described in the policy.

The Policy recommends upgrading of the existing regulatory framework by putting in place a new law for the administration of oil and gas activities and a law for the management of oil and gas revenues. The former will better provide for the development and production phases of the oil and gas value chain, bring on board international best practice in areas like improved oil recovery together with Health, Safety and Environmental standards. It will also operationalise the Oil and Gas Policy by providing for, among others, competitive licensing and national content in the sub sector. The latter will be formulated to regulate the payment, use and management of oil and gas revenues and their use to create lasting value for the entire nation. This will include prescribing the necessary frameworks to manage the revenues used to support the national economy and creation of a sustainable asset in form of a petroleum fund to store revenues not used in the national economy. It shall also provide for the sharing of royalties in accordance with the constitution.

### **The Formulation Process**

The National Oil and Gas Policy is a result of an intensive consultative process which started with the review of oil and gas policies from Algeria, Chad, Egypt, East Timor, Indonesia, Kenya, Libya, Malaysia, Mozambique, Nigeria, Norway, Pakistan, Russia, Sao Tome and Principe, South Africa, Tanzania, United Kingdom, USA and Venezuela.

Three consultative meetings and workshops were held with technical staff of various government institutions between 25<sup>th</sup>-28<sup>th</sup> April, 2006; 17<sup>th</sup>-18<sup>th</sup> July, 2006; and 31<sup>st</sup> July-1<sup>st</sup> August, 2006 after which a working document of the draft policy was formulated.

The draft policy was then forwarded to representatives of local and urban authorities, cultural institutions in the Albertine Graben, civil society organizations and academic institutions for their review before participating in a two day stakeholder's consultative workshop held between 29<sup>th</sup> and 30<sup>th</sup> November, 2006. Many views received during the workshop were incorporated in the draft policy. It was presented and discussed at the Permanent Secretaries meeting held on 7<sup>th</sup> August, 2007.

Additional consultative meetings were held on 10<sup>th</sup>, 12<sup>th</sup> of August and 3<sup>rd</sup> December, 2007 in Hoima, Arua and Kasese respectively. The meetings were attended by area Members of Parliament, officials of the District Executive Committees and Council Members of the districts of Hoima, Masindi, Kibale, Bullisa, Arua, Nebbi, Moyo, Amuru, Gulu, Kabarole, Kyenjojo Bundibugyo, Kasese, Kamwenge, Bushenyi, Rukungiri and Kanungu.

Guidance was received from H.E. the President when he reviewed the draft policy with the Ministries of Energy and Mineral Development, Finance, Planning and Economic Development and Justice and Constitutional Affairs at State House, Nakasero on 25<sup>th</sup> September, 2007. A consultative workshop was held for Cabinet on 26<sup>th</sup> September 2007 in which the draft policy was presented for consideration before formal submission for approval. The comments received during these meetings enriched the policy immensely. The policy was approved by Cabinet on 30<sup>th</sup> January, 2008.

# 1 INTRODUCTION

The effort to promote Uganda's oil and gas potential has led to intensified exploration work being undertaken in the Albertine Graben. This culminated in the confirmation of the existence of commercial reserves of oil in the country during 2006. It is now apparent that petroleum will be produced in the country. This has occasioned the formulation of a National Oil and Gas Policy to address the entire spectrum of exploration, development and production of the country's oil and gas resources more comprehensively than in the Energy Policy of 2002.

The policy seeks to put in place a framework that will create a conducive environment for efficient management of:

- Continued promotion and exploration of the country's oil and gas potential;
- Evaluation of the discovered oil and gas reserves;
- Exploitation and utilization of these reserves, and
- Revenues accruing from the country's oil and gas resources

Oil and gas are non-renewable extractive resources which are therefore finite. Their exploitation and utilisation shall therefore be undertaken in a manner that creates durable and sustainable social and economic capacity for the country. These resources have the potential to provide immense benefits to the country through creation of employment, generation of revenues, development of infrastructure, and subsequently fast-tracking social transformation of the country. Oil and gas resources and the revenues accruing from them can also pose challenges of windfall revenue phenomenon and the paradox of plenty if not well managed.

This policy is designed to maximize the benefits and meet the challenges by providing for appropriate resource management systems and procedures in line with the country's Poverty Eradication Action Plan (PEAP). It seeks to achieve this by providing for; the setting up of relevant institutions and capacity building in the country; attraction of companies to invest in the development of the country's petroleum sector; adequate and commensurate return on the companies' investments; ensuring the country's receipt of appropriate share and benefits from any oil and gas resources and activities; and ensuring efficient and effective utilization of these resources together with the revenues accruing there from.

The policy emphasizes the deliberate implementation of National participation in oil and gas activities in order to expand employment opportunities, acquire diversified skills and enable application of the skills learnt from the oil industry into other sectors of the economy. Development of an oil and gas sector provides the country opportunities for the mitigation of shocks from international oil and gas prices together with generation of revenues that can support development of other sectors of the economy, thereby contributing to both poverty reduction and the achievement of sustainable development.

A background to this policy, its scope and the status of the legal and contractual frame conditions are presented in the opening chapter. This is followed by a description of the country's oil and gas resource base. The subsequent chapter presents the key issues in the oil and gas sector in the country. The key issues identified in this policy include development of institutions to regulate the sector, the size of the country's oil and gas reserves, oil and gas revenue management, the social and economic impact of oil and gas activities, the contribution of oil and gas to the energy mix, attraction of the investment required for developing the sector, development of national capacity to participate in the sector.

The policy framework is then presented starting with the guiding principles, followed by the policy goal and policy objectives respectively. Strategies to achieve the identified objectives together with the recommended actions are also presented in this chapter. The policy proposes a new law to regulate the payment, use and management of petroleum revenues under the objective of ensuring collection of the right revenues and using them to create lasting value for the entire nation.

The policy then addresses the crosscutting issues as impacts of oil and gas activities on the other sectors. These include impacts on the national economy, environment and social conditions, education and research together with foreign relations.

An institutional framework for managing the oil and gas sector in the country is presented together with the roles of the different institutions therein. This policy is concluded by addressing its financing together with the systems for monitoring and evaluating its implementation.

## **2 BACKGROUND AND SCOPE**

### **2.1 BACKGROUND**

Ownership and control of minerals and petroleum in, on or under any land or waters in the country is vested in the Government by Article 244 of the Constitution of the Republic of Uganda, 1995. The Constitution empowers parliament to make laws regulating the exploration and exploitation of minerals and petroleum, the management of accruing revenues, payment of indemnities, and the conditions for the restoration of derelict lands. This mandate together with the Petroleum (Exploration and Production) Act, Chapter 150 of the Laws of Uganda, 2000 and the Petroleum (Exploration and Production) (Conduct of Exploration Operations) Regulations, 1993 provide the legal and regulatory framework under which the Ministry of Energy and Mineral Development through the Petroleum Exploration and Production Department (PEPD), has promoted and regulated the exploration of oil and gas in the country. This exploration effort has led to the discovery of commercial quantities of petroleum in the Albertine Graben, an area which runs along the entire western border of the country.

Government's strategy of promoting petroleum exploration in the country through capacity building, acquiring basic geoscientific information and using this information to attract investment in this sub-sector of development has been successful. Five out of the current nine Exploration Areas, identified to have good potential for petroleum production in the country have been licensed to international oil companies. Government continues to receive many applications for the unlicensed Exploration Areas.

The licensed oil companies are making significant investments in the country and some have advanced the exploration effort to the identification of specific petroleum prospects in the respective Exploration Areas licensed to them. Drilling of these prospects has recently led to the discovery of petroleum in the Waraga, Nzizi and Mputa prospects in the Kaiso-Tonya area of Exploration Area 2. These prospects have been found to contain high quality petroleum in quantities sufficient to commence planning for the development and production of oil in the country. Drilling and well testing of the Kingfisher prospect in Exploration Area 3A indicates that this prospect also has accumulations of high quality petroleum. Efforts are now underway to establish the reserves of oil and gas in these

discovered fields. These efforts include acquisition and interpretation of 3D seismic data over the fields together with further drilling to appraise their production potential.

In Exploration Area 1, 2D seismic data acquisition commenced at the beginning of 2007 and is ongoing. Similar surveys were also started in Exploration Area 5 towards the end of the year.

Three hundred (300) million barrels of oil are now estimated to be in place in the Kaiso-Tonya area where the Waraga, Nzizi and Mputa discoveries were made. The Kaiso-Tonya area covers less than 5% of the Albertine Graben, the area with the potential for petroleum production in the country. Plans are underway to produce 4,000 barrels of oil per day (BOPD) from the reserves identified to-date. This production will feed an Early Production Scheme (EPS) scheduled to start producing kerosene, diesel and heavy fuel oil during 2009. The heavy fuel oil will be used to generate 50-100MW of electricity to alleviate power shortages in the country. Kerosene and diesel will be distributed directly into the existing market.

As more resources are confirmed through the ongoing exploration and appraisal programmes, plans to undertake medium to large scale refining in the country to satisfy national and regional petroleum products requirements shall be formalised in line with the country's policy of value addition. Consideration for exports to international markets shall also subsequently be made as additional reserves continue to be established.

Although gas has been discovered in the Nzizi prospect, it is still necessary to establish the size of gas reserves in the country before making concrete plans for its utilisation. If sufficient reserves of gas are found in the country, plans shall be made to utilise gas for electricity generation together with setting up petrochemical industries and other value addition processes like manufacturing of fertilizers and smelting of iron ore for steel production.

In view of these developments, and in order to provide an environment that is conducive for all stakeholders to efficiently and harmoniously participate in the development of the oil and gas sub-sector in the country, there is need to formulate a National Oil and Gas Policy. The National Oil and Gas Policy addresses the entire spectrum of exploration, development and production of the country's oil and gas resources more comprehensively



than the Energy Policy of 2002. It provides a basis for putting in place the necessary legislation, regulations and other aspects of the institutional framework required for the efficient development of the sector.

The Energy Policy has provided a good framework for attracting investment and undertaking of petroleum exploration in the country. The National Oil and Gas Policy will provide the necessary framework for continued exploration, together with development and production of oil and gas in the country. The National Oil and Gas Policy shall supersede the Energy Policy with regard to matters pertaining to upstream petroleum activities.

## **2.2 SCOPE**

The oil and gas value chain is subdivided into upstream, midstream and downstream respectively. Upstream covers promotion, licensing, exploration, development and production of petroleum. Midstream includes transportation, refining of oil and conversion of gas. It is recognised that upstream petroleum also includes aspects of transportation, especially with regard to transportation of oil and gas on petroleum fields and in between these fields and processing centres. Downstream petroleum deals with distribution, marketing and sale of petroleum products. The Energy Policy, 2002 provides for the regulation of the downstream sub-sector.

This policy provides for the administration, regulation and management of the upstream petroleum and presents a basis for regulating and investing in the midstream petroleum sub-sector.

The scope of this policy also includes relevant comments on the cross cutting issues regarding managing the social and economic impact of oil and gas activities on the other sectors of the economy together with management of revenues accruing from oil and gas resources. These comments are considered necessary in order to emphasize the necessary link between petroleum extraction policies and the overall policies and plans for economic and social development in the country.

This policy endeavours to avoid duplication of what is provided for in other existing national policies and plans, but makes reference to the following: Decentralization Policy 1992, Energy Policy 2002, National Environment Management Policy 1999, National Forestry Policy 2003, National Population Policy for Sustainable Development 1995, National Water

Policy 1999, Poverty Eradication Action Plan 2004/5 – 2007/8, Plan for Modernisation of Agriculture, Public Enterprises Reform and Divestiture of 1991, The National Fisheries Policy 2004, The Uganda Tourism Policy, 2003, The Uganda Wildlife Policy 1999 together with other national policies that impact on or are impacted on by this policy.

## **2.3 LEGAL AND CONTRACTUAL FRAME CONDITIONS**

### **2.3.1 Petroleum Act: Status and Future Requirements**

Petroleum exploration and production activities in the country are guided by the Petroleum (Exploration and Production) Act, Chapter 150 of the Laws of Uganda 2000. Downstream petroleum activities (i.e. distribution, marketing and sale of petroleum products), are guided by the Petroleum Supply Act of 2003. The former gives the responsibility of directing the upstream petroleum sub-sector to the Minister responsible for the sector. The Minister receives applications for any petroleum rights, and is responsible for issuing, renewing and revoking petroleum exploration and production licences. The Act also provides for a Commissioner of PEPD, who, together with the technical staff under him, carry out petroleum exploration promotion, initiate petroleum legislation and monitor oil companies' compliance with existing laws, regulations and agreements.

The Petroleum Act has served adequately the promotion, licensing and exploration for petroleum in the country, but will need to be reviewed after this Oil and Gas Policy is put in place, so as to operationalise the policy, make the Act more suitable to handle the development and production of oil and gas and appropriately capture the recent trends in the industry. The new Act will, among other things, include provisions for the development and production of natural gas; bring on board international best practices in areas like Improved Oil Recovery (IOR) together with Health, Safety and Environment (HSE) standards; provide a harmonious relationship with the proposed law on management of petroleum revenues; provide for National participation as an effort to enhance value creation by oil and gas activities; and provide for a more competitive licensing process. The new Act will also take cognisance of the Petroleum Supply Act (2003), and adequately relate to the emerging issues of the midstream petroleum sub-sector (i.e. oil and gas transportation, processing and refining).

### **2.3.2 Petroleum Regulations: Status and Future Requirements**

The Petroleum (Exploration and Production) (Conduct of Exploration Operations) Regulations, which were made in 1993, are the set of regulations currently guiding the conduct of operations in the upstream petroleum sub-sector.

There is need to revise these regulations in order to take into consideration the global improvements in technology over the recent past together with the increasing concern for environmental conservation and sustainable development. This will include implementation of international best practices like use of green dragon burners for flaring during flow testing of oil and gas wells instead of other types of burners which produce a lot of smoke and fumes and are therefore less friendly to the environment. The improved regulations will also better address the operations and activities undertaken during the development and production of oil and gas.

The activities to be regulated under the upstream petroleum sub-sector shall include exploration, development and the production of oil and gas. The new regulations will be in harmony with those for midstream (refining and transportation) and downstream (petroleum products distribution, marketing and sales) petroleum activities.

### **2.3.3 Petroleum Contracts: Status and Future Requirements**

In addition to issuing of licences to oil companies, the Act provides for the entry into agreement by the oil companies and Government. The type of agreement used in the country is the Production Sharing Agreement (PSA). The parties to PSA's are the government and licensees (oil companies). The PSA details the specific obligations and requirements of the parties to the Agreement. These include work programmes and financial obligations, Health, Safety and Environment (HSE) requirements together with other data and reporting obligations.

To facilitate ease of negotiating PSA's with oil companies, Government prepared a model Production Sharing Agreement detailing Government's positions on the different issues. The model PSA enables the oil company to easily identify areas on which it wishes to negotiate and forward counter proposals to Government. There will be need to update the model PSA in order to take into account the new policies and changing business environment in Uganda's oil and gas industry.

### **3 THE RESOURCE BASE: STATUS AND PROJECTIONS**

Uganda is a land locked country in East Africa with Kenya to the East, Tanzania to the South, Rwanda to the South West, Democratic Republic of Congo to the west and Sudan to the North. The cost of petroleum products constitutes over 15% of the country's total import bill and these products are mainly imported through the port of Mombasa in Kenya, a distance of 1300km from the capital city Kampala. Some products are also imported through the port of Dar es Salaam in Tanzania, which is a longer distance from Kampala.

Although Uganda is mainly covered by Precambrian metamorphic and igneous rocks, 20% of the country is underlain by sedimentary rocks, which have the potential for generating and accumulating petroleum deposits.

Petroleum occurrence was first recorded in Uganda in the early 1920's. One deep well was drilled in 1938 which encountered some hydrocarbon shows but was not tested. Several shallow wells were also drilled during the 1940's and 1950's for stratigraphic purposes. There was then a period of limited or no activity between 1940 and 1980 largely due to the Second World War and political instability in the country. A modern and consistent effort to establish the country's petroleum potential has been undertaken since the 1980s.

Aeromagnetic surveys undertaken during 1983 and 1992 respectively identified five sedimentary basins in the country. These are; the Albertine Graben, Lake Kyoga Basin, Hoima Basin, Lake Wamala Basin and Moroto-Kadam Basin. These aeromagnetic surveys were followed by ground gravity/magnetic surveys and geological mapping starting in the early 1990's. The aim of these surveys was to better define the extent and geometry of the sub-basins in these major sedimentary basins and study the types of rocks distributed therein with a view of establishing their suitability for petroleum generation and accumulation.

Follow-up work on the ground has shown that the most prospective sedimentary basin to-date is the Albertine Graben. The Lake Wamala basin and Kadam-Moroto exhibit thin sediment thicknesses which are not sufficient for the generation of petroleum. The sediments in the Hoima basin have been interpreted to be over mature for petroleum generation. Nevertheless, more work needs to be undertaken to properly evaluate the potential of Hoima and Kyoga basins.

The discovery wells drilled in the Kaiso-Tonya and Bugoma areas by Hardman Petroleum Africa Pty Ltd (now Tullow Oil) and Heritage Oil and Gas Ltd respectively have confirmed the existence of a working petroleum system in the Albertine Graben. Flow rates of over 12,000 barrels of oil per day (bopd) from three zones in Waraga-1, 1,100 bopd from two zones in Mputa-1, 14mmscf/d of natural gas from one zone in Nzizi-2, 1,800 bopd from one of the three potential zones of Mputa-3 and over 14,000 bopd from three zones in Kingfisher-1 have confirmed the existence of significant petroleum accumulations in the Graben. Currently, three hundred (300) million barrels of oil are estimated to be in place in the Kaiso-Tonya area where the Waraga, Nzizi and Mputa discoveries have been made. The Kaiso-Tonya area covers less than 5% of the Albertine Graben.

### **3.1 SOURCE ROCKS**

Source rocks are rocks rich in organic matter which, if heated sufficiently will generate oil and/or gas. In the Albertine Graben, bituminous, lacustrine, Miocene shales matured to generate oil and gas. Over 50 oil seepages are documented, and 10 confirmed, in and around Lake Albert. The seepages in the basin together with the shale sequences encountered on the surface during geological mapping and in the wells drilled, confirm the presence of high quality mature source rocks. The seepages confirm that these source rocks have generated oil which has migrated. A 200 m thick shale was encountered in the subsurface while drilling wells on the Turaco prospect in the Semliki Basin, Exploration Area 3B. Such a unit is expected to have sufficient potential to charge most of the prospects mapped in the Albertine Graben to-date. This could explain why all the drilled prospects in the Albertine Graben to-date have encountered hydrocarbons, a situation which does not always pertain in basins around the world where petroleum exploration is undertaken.

### **3.2 RESERVOIR ROCKS**

Reservoir rocks are rocks having sufficient porosity and permeability to store and transmit fluids. Thick sequences of good quality reservoir sands have been mapped in outcrop at several locations in the basin. The middle Miocene Kisegi sandstone outcrop in the Semliki basin has been analysed and found to have porosities ranging between 20% and 30%. All the wells drilled in the Albertine Graben have encountered good quality sandstone rocks interbedded with clays and silts. These sandstones have been analysed

to have potential to form good reservoirs, with porosities greater than 20% in most cases and occasionally up to 40%. Permeabilities range from 32 to 6,000 md in the wells where flow testing has been undertaken. These parameters would be considered very good for oil and gas reservoirs anywhere in the world.

Basement rocks impregnated with oil have been mapped in outcrops and also encountered in the wells drilled to basement. There is therefore a high potential for commercial oil and gas reservoirs in the basement rocks adjacent to the Albertine Graben. Reservoirs in basement are well known to produce oil in other parts of the world.

### **3.3 TRAPS AND SEALS**

The structural setting of the Albertine Graben provides for the development of full grabens and half grabens separated by accommodation zones. Areas around the accommodation zones and along the major basin bounding faults have provided good structural traps in which petroleum has accumulated. Tectonic activity has also created a range of potential structural traps including tilted fault blocks, anticlines together with the more complex 'flower structures' in the Graben.

Clay and shale sequences have been mapped intercalated with sands in the Graben. As is typical of rift basins, sediments in the Albertine Graben indicate relatively rapid facies changes during deposition. Relatively well worked sand deposits within the central part of the basin and alluvial fans along the basin margins are conducive for formation of stratigraphic traps.

Clay sequences of over 100m thick have been encountered both in outcrop and in the drilled wells. These sequences provide the seals required to hold hydrocarbon accumulations in the subsurface.

Preliminary interpretation of the data acquired in the Albertine Graben to-date also indicates good potential for shallow gas and shale gas accumulations. These types of gas plays are well known and are being exploited in other parts of the world.

### 3.4 LICENSING STATUS AND PROGRESS OF EXPLORATION

The Albertine Graben is currently subdivided into nine Exploration Areas (EAs), five of which are licensed to oil companies, and four are yet to be licensed as shown in Figure 1 below;

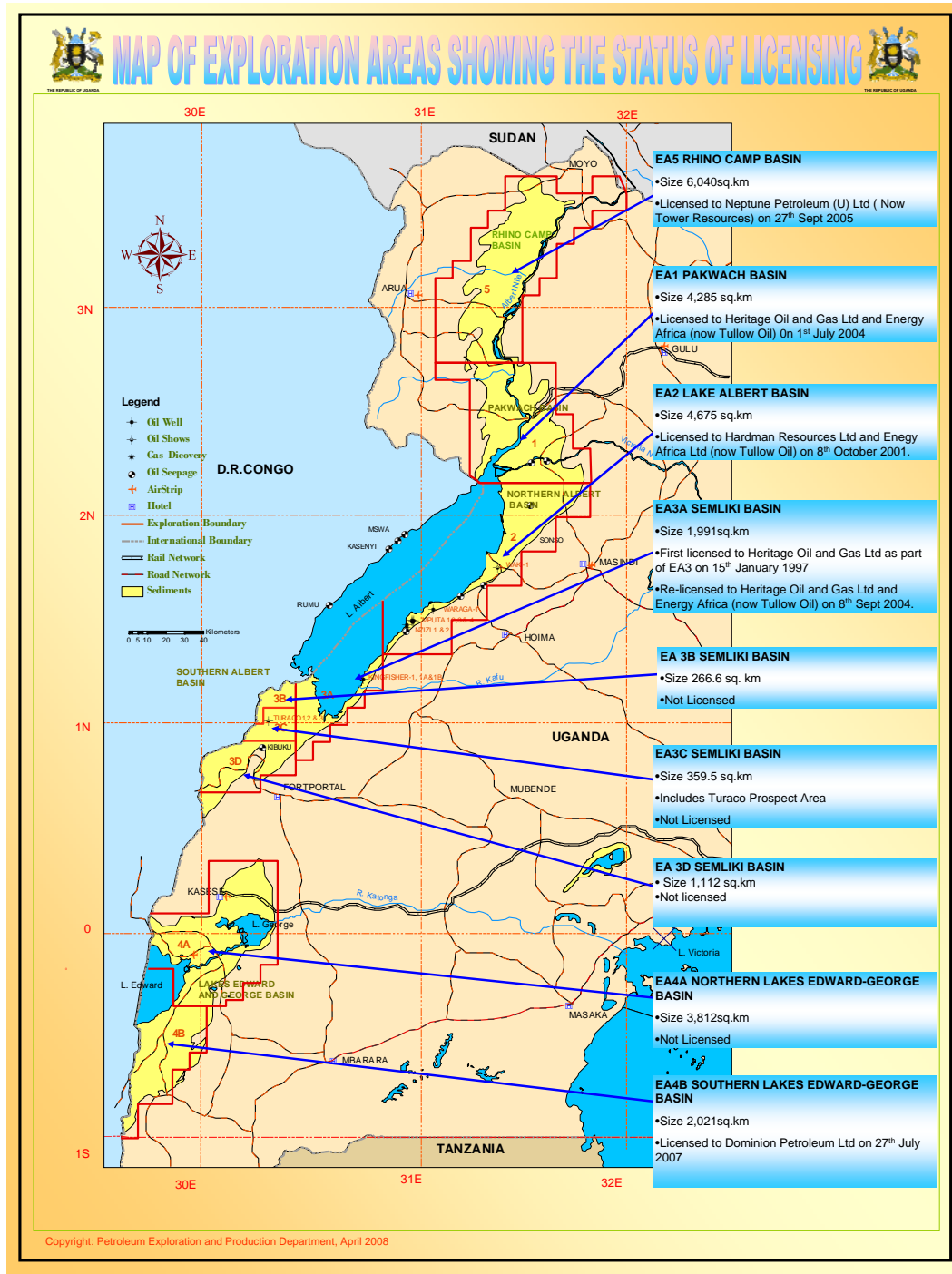


Figure 1; Exploration Areas in the Albertine Graben and the Status of Licensing

***Exploration Area 1 (Pakwach Basin):***

Exploration Area 1 was licensed to Heritage Oil and Gas Ltd in partnership with Energy Africa, (now Tullow Oil) on 1<sup>st</sup> July, 2004. 2D seismic data has been acquired in the area during 2007. Interpretation of the seismic data has identified potential prospects for drilling. Plans to drill the identified prospects are under consideration.

***Exploration Area 2, (Northern Lake Albert Basin):***

Exploration Area 2 was licensed to Hardman Petroleum Africa Pty Ltd in partnership with Energy Africa Ltd. (now Tullow Oil), on 8<sup>th</sup> October 2001. Hardman Petroleum Africa Pty Ltd. was bought by Tullow Oil in January 2007 making the latter the sole licensee. 2D seismic data were acquired over Lake Albert and on land during 2003 and 2005 respectively. Interpretation of the seismic data identified several prospects, both onshore and offshore. Two of these prospects onshore namely Waraga and Mputa have been drilled and found to contain oil. A third onshore prospect, Nzizi, has been found to contain natural gas. Drilling of the fourth prospect, Ngassa, commenced during November, 2007.

Three zones in the Waraga-1 well which was drilled on the Waraga prospect were tested and gave a combined flow rate of over 12,050 bopd. The oil encountered in the three zones has a specific gravity ranging between 31-34<sup>o</sup> API. Four wells namely Mputa-1, Mputa-2, Mputa-3 and Mputa-4 have been drilled on the Mputa oil field. Three zones in Mputa-1 well were also tested and two of the zones were found to have a combined flow rate of over 1,100 bopd with oil of 32<sup>o</sup>API. Although hydrocarbons were encountered, no flow testing was undertaken at Mputa-2 mainly because of the slim hole nature of the well which could not accommodate the testing equipment.

Mputa-3 was flow tested during August, 2007 and it flowed 1,800 bopd from one of the three zones that were found to contain oil. The other two zones which were not tested are believed to be in communication with those in Mputa-1 which were tested earlier. Mputa-4 was flow tested during October/November, 2007 and oil of 33<sup>o</sup> API flowed at 1,160 bopd from the interval that was tested. The Nzizi-1 and Nzizi-2 wells drilled on the Nzizi prospect encountered both oil and natural gas. Drill stem testing of Nzizi-2 flowed 14mm<sup>3</sup>/d of dry natural gas.



Acquisition of 3D seismic data in the Kaiso-Tonya area and over the adjacent part of Lake Albert commenced during June 2007 and is expected to last a period of nine months. These seismic surveys and drilling programmes will lead to better definition of the reserves in the identified oil fields and prospects.

Plans to develop an Early Production Scheme from these discoveries are underway. Construction of a topping plant (mini-refinery) is expected to commence during 2008. Production of oil to supply this topping plant (mini-refinery) and generation of electricity using HFO from the plant are expected to start during 2009.

***Exploration Area 3A (Southern Lake Albert Basin):***

The area was first licensed to Heritage Oil and Gas Ltd as part of EA3 on 15<sup>th</sup> January 1997. The area was re-licensed to Heritage Oil and Gas Ltd together with Tullow Oil on September 8<sup>th</sup> 2004. Seismic data were acquired over the lake, land and transition zones during 2003, 2004 and 2005 respectively. Interpretation of the seismic data led to the identification of several prospects both on land and under the lake. The companies drilled the first well, Kingfisher-1 on the Kingfisher prospect on the shores of Lake Albert. The well identified three hydrocarbon bearing zones which were tested and flowed a cumulative total of over 14,000 bopd.

A 3D seismic survey over the Kingfisher and Pelican prospects in this Exploration Area was undertaken during 2007. Interpretation of the acquired data will help to better define the extent of the two prospects in preparation for further drilling on the Kingfisher prospect and exploration drilling on the Pelican prospect. Additional 2D seismic data was also acquired in the Southern part of Lake Albert during 2007 with a view of identifying additional prospects in that part of the Exploration Area.

***Exploration Area 3B (Semliki Basin):***

About 400 line kilometres of 2D and 390sq.km of 3D seismic data were acquired on land in this Exploration Area. Interpretation of the seismic data led to the identification of several prospects in the area. Three wells were drilled on the Turaco prospect, one of the prospects mapped in the area. These wells intersected oil and gas bearing intervals. Well testing was undertaken on one of the zones in this prospect. The tested zone flowed natural gas which was significantly contaminated by Carbon dioxide. The other zones

identified to contain hydrocarbons in this well were not tested. The license over this area expired during 2006 and it is currently not licensed. The other prospects in this area have not yet been tested by drilling. The available data have been used to better understand the petroleum potential of the area, and the area has now been subdivided into three Exploration Areas 3B, 3C and 3D which will be promoted to oil companies for relicensing in line with the guidelines of this policy and subsequent legislation.

***Exploration Area 4A (Northern Lakes Edward and George Basin):***

Gravity and Magnetic data, together with surface geological and geochemistry data have been acquired by Government over this area. These data have confirmed the presence of both source and reservoir rocks in the area. Interpretation of the gravity data acquired in the area has also demonstrated the presence of structures with the potential for petroleum accumulation. Several oil companies have expressed interest in acquiring exploration rights over the area, but their applications are awaiting a new licensing policy.

***Exploration Area 4B (Southern Lakes Edward and George Basin):***

The area was licensed to Dominion Petroleum (U) Ltd on July 27, 2007. The company is carrying out studies of the existing data which was acquired earlier by Government in preparation for undertaking a 2D seismic survey over the area.

***Exploration Area 5 (Rhino Camp Basin):***

The area was licensed to Neptune Petroleum (U) Ltd now Tower Resources on 27<sup>th</sup> September, 2005. The company commenced the acquisition of 2D seismic data over the area during November, 2007.

### **3.5 GENERAL PROSPECTIVITY AND FUTURE OULOOK**

The ten deep wells recently drilled on the Turaco, Waraga, Mputa, Nzizi and Kingfisher prospects in the Graben have not only confirmed the presence of a working petroleum system in the area, but have also demonstrated that there is no major risk associated with petroleum exploration in the Albertine Graben. Future plans shall therefore include promoting and licensing the acreage which is not yet licensed, together with fast tracking the appraisal and development of the discoveries made so far, with a view of achieving early production of petroleum in the country and better establishing the country's resource potential.

## **4 THE ISSUES**

Confirmation that Uganda has commercially exploitable quantities of oil and gas raises the following issues:

### **4.1 INSTITUTIONAL DEVELOPMENT**

There is a need to put in place the institutional framework required to manage and regulate this new sector of development. This framework will necessitate the introduction of new legislation and institutions, together with the enhancement of existing ones. Significant training and other capacity building efforts will have to be undertaken in order to enable the established institutions to effectively carry out their different mandates.

### **4.2 SIZE OF RESERVES**

Plans for exploiting the country's oil and gas resources will be based on the size of the reserves. Although the reserves established in the country to-date are already sufficient for small scale production, it is necessary that additional efforts are made to establish the country's oil and gas reserve potential by continuing exploration and appraising the discoveries made so far. This will facilitate establishment of long term development plans for the oil and gas sector in the country.

In addition to the work being undertaken in the Exploration Areas already under license, there will be need to license other areas with the potential for petroleum production in the country. The areas currently under licence but subsequently relinquished will also require to be relicensed. It is therefore necessary for an open, efficient, transparent and effective licensing process to be put in place.

There will be need to safeguard the established oil and gas reserves in the country by avoiding poor extraction practices, such as excessive production from wells without due regard to the impact on the entire reservoir, thereby leading to loss of integrity of the reservoirs. Efficient production will contribute to avoiding poor extraction practices.

### **4.3 OIL AND GAS REVENUE MANAGEMENT**

The development of an oil and gas sector is expected to generate revenues for the country, which will increase with the level of production and could escalate significantly. The earning of significant revenues from oil and gas resources will create a new environment for the country which is currently among the least developed countries in the world and is classified as financially constrained. Managing these revenues in a manner that facilitates sustainable development and avoids distortion and destruction of the economy will require well defined and deliberate efforts. These efforts will need to ensure that the country receives the right revenues and that these revenues are used to achieve equitable, sustainable and value oriented national development for the current generation while also providing for future generations.

### **4.4 IMPACT OF OIL AND GAS ACTIVITIES**

The opportunity to exploit indigenous oil and gas resources means that oil and gas activities are going to become an important sector of development in the country. This sector has the potential to significantly impact the already existing sectors and can be an important engine for poverty reduction and sustainable development. It can also create negative economic and social impacts if not managed properly. Governance, the economy, the environment and subsequently human development will be impacted upon by an emerging oil and gas sector in the country.

Many of the areas with the potential for petroleum production in the country also coincide with areas of important biodiversity like national parks, water bodies, game and forest reserves among others. Due consideration will therefore be necessary so as to ensure harmony between developing the country's oil and gas resources and conserving its rich bio-diversity.

### **4.5 CONTRIBUTION OF OIL AND GAS RESOURCES TO THE ENERGY MIX**

Biomass constitutes over 90% of the country's energy supply while hydropower and imported petroleum products constitute 1% and 6%, respectively. The country is currently experiencing a severe shortage of electricity mainly due to low production of hydropower and increasing electricity demand. Indigenous oil and gas resources can be used to contribute to addressing the current severe shortage of electricity in the country in a more

timely manner through thermal generation of electricity. Achieving generation in a timely manner would necessitate fast tracking the production of oil and gas in the country. In addition to the generation of electricity, the country's oil and gas resources, when processed, shall contribute to substitution of imported petroleum products.

#### **4.6 INVESTMENT PROMOTION**

Significant investments are required to establish the country's oil and gas resource potential and develop the established reserves. Tens of millions of United States Dollars are required for seismic surveys and drilling to establish the resource potential in the different Exploration Areas. Bigger investments ranging in hundreds of millions of United States dollars will be required to appraise and develop any discovered oil and gas fields as well as putting in place the infrastructure necessary for transporting, storing and processing oil and gas. Efforts will therefore need to be made to attract the investment required to undertake these activities through promotion of the investment opportunities in this sector and ensuring that the country is conducive to attracting and sustaining the required levels of investment.

#### **4.7 NATIONAL PARTICIPATION**

Development of an oil and gas sector will lead to receipt of significant investments by the country. Whereas most of these investments will be for the development of the oil and gas sector, others will be for the resulting opportunities in the other sectors of the economy. It is necessary to use these investments to create as much value as possible in the country. National participation through shareholding in licences and provision of goods and services by the country's entrepreneurs shall be some of the key avenues to achieve the desired value creation in the country from these investments.

The extent to which the country's private sector and its entrepreneurs can participate in oil and gas activities is currently limited by their financial capacity, together with their management and technological skills. It is therefore necessary for the country's private sector to acquire and develop the skills necessary to participate in this sector of development, and where possible, for it to be provided with the opportunity to participate.

#### **4.8 PUBLIC ANXIETY AND EXPECTATIONS**

The perceived importance and benefits of oil and gas activities in the country have raised significant expectations in the public, while the poor management of the sector in other countries, especially in Africa, has raised some anxiety. The nature of benefits to be realised from oil and gas activities, the time it will take before these benefits are realised and how any benefits will be shared are concerns being raised by the public. Timely information dissemination will go a long way in addressing these concerns. Constructive dialogue together with respectful and mutually beneficial relationships between the state, oil companies and other stakeholders will also contribute to reducing any anxieties and managing expectations.

## **5 THE POLICY FRAMEWORK**

### **5.1 GUIDING PRINCIPLES**

This policy is to be guided by the following principles:

#### **5.1.1 Using Finite Resources to Create Lasting Benefits to Society**

Oil and gas are non-renewable finite resources and therefore the benefits accruing from them may end with exhaustion and depletion of the fields. This policy promotes the safeguarding of these resources and managing them in a manner that will create lasting benefits to society. Creation of lasting benefits shall include the use of these resources to develop durable and competitive competencies through education, infrastructure development, together with financial and social capital which are useful beyond the life of the oil and gas. The activities of the current generation shall not put a burden on future generations especially with regard to the depletion of non-renewable resources. These resources shall, therefore, also be used to provide for intergenerational equity. Sustainable resource management, as opposed to accelerated revenue generation will, among other things, contribute to creating lasting benefits to society.

#### **5.1.2 Efficient Resource Management**

Oil and gas activities should be most efficient and effective so as to maximize their returns. This policy strives to ensure that oil and gas resources are managed efficiently through reducing costs of operations and maintaining optimal levels of production. It also promotes effective revenue management by striving to ensure that petroleum revenues are used to boost balanced growth and sustainable development. Revenues accruing from oil and gas resources shall not be used for consumer purposes, but for durable investments like infrastructure development and other activities which will contribute to lowering the cost of doing business in the country.

### **5. 1.3 Transparency and Accountability.**

Openness and access to information are fundamental rights in activities that may positively or negatively impact individuals, communities and states. It is important that information that will enable stakeholders to assess how their interests are being affected is disclosed.

This policy recognises the important roles different stakeholders have to play in order to achieve transparency and accountability in the oil and gas activities.

The policy shall therefore promote high standards of transparency and accountability in licensing, procurement, exploration, development and production operations as well as management of revenues from oil and gas. The policy will also support disclosure of payments and revenues from oil and gas using simple and easily understood principles in line with accepted national and international financial reporting standards.

### **5. 1.4 Competitiveness and Productivity.**

It is through competition among licensees, operators, and suppliers, that cost effective choices can be achieved. Competition enables selection of the most capable operators, the most efficient, the best quality, and the most reliable suppliers thereby ensuring high levels of productivity. It is this that justifies the principle of open bidding. In the private sector, it is vital for managers to maximize returns to investors and shareholders. In the public sector the same principle applies to maximize returns to society both for the current and the future generations. This policy shall support fair competition with a view of improving efficiency and productivity in oil and gas operations.

### **5. 1.5 Protection of the Environment and Conservation of Biodiversity**

The environment, human development and biodiversity should be neatly balanced for mutual benefit and survival. Many actors engage in development initiatives and interventions focusing on expected benefits and often end up by doing harm. This policy shall contribute to and promote this balance to ensure sustainable development. It is the responsibility of licensed oil companies to protect the environment where they work or any areas in the country impacted by their operations while Government shall legislate, regulate and monitor compliance.



## **5.1.6 Spirit of Co-operation**

The relationships between government, oil companies, and other stakeholders should be conducted and maintained in a spirit of mutual respect, co-operation and trust. Mutual understanding shall be promoted by adequate two-way communication and constructive dialogue. This system of co-operation will be extended to communities in the oil and gas producing regions and any pipeline corridors. The interests of local communities in areas where oil and gas production is undertaken shall be taken into account by, among other things, sharing of royalties in line with the Constitution and any relevant laws passed by Parliament. All efforts shall be made to avoid the development of conflicts and emphasize peaceful resolution of disputes. Where oil and gas activities or their impacts extend to neighbouring countries, this spirit shall be exercised in accordance with the principles grounded in the country's foreign policy.

## **5.1.7 Capacity and Institution Building**

National capacity building is an essential ingredient in enabling the country to participate in, and benefit from, oil and gas activities. The oil and gas sector shall contribute to the development of sustainability, endurance and prosperity through institutional capacity building. Institutional capacity building shall entail development of the necessary regulatory framework, infrastructure and manpower. This policy promotes capacity building for both the authorities and national entrepreneurs. The oil companies operating in the country shall be expected to contribute to this effort and in the transfer of technology.

## **5.2 GOAL**

The goal of this policy is to use the country's oil and gas resources to contribute to early achievement of poverty eradication and create lasting value to society.

## **5.3 OBJECTIVES**

The objectives of the National Oil and Gas Policy are;

- 5.3.1 To ensure efficiency in licensing areas with the potential for oil and gas production in the country.
- 5.3.2 To establish and efficiently manage the country's oil and gas resource potential.
- 5.3.3 To efficiently produce the country's oil and gas resources.

- 5.3.4 To promote valuable utilization of the country's oil and gas resources.
- 5.3.5 To promote the development of suitable transport and storage solutions which give good value to the country's oil and gas resources.
- 5.3.6 To ensure collection of the right revenues and use them to create lasting value for the entire nation.
- 5.3.7 To ensure optimum national participation in oil and gas activities.
- 5.3.8 To support the development and maintenance of national skills and expertise.
- 5.3.9 To ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity.
- 5.3.10 To ensure mutually beneficial relationships between all stakeholders in the development of a desirable oil and gas sector for the country.

## **5.4 STRATEGIES AND ACTIONS TO ACHIEVE THE OBJECTIVES**

**Objective 1: To ensure efficiency in licensing areas with the potential for oil and gas production in the country.**

### **Strategies:**

- (a) Promote the country's oil and gas potential with the view of attracting oil companies to invest in the country.
- (b) Evaluate the merits of gradual licensing vis-a-vis licensing all the areas at once. Gradual licensing will optimize the license terms by attaining good work programmes and improved fiscal terms for the country. It will also enable the country to develop the required skills in tandem with the growth of the sector thereby facilitating better management of the resources
- (c) Use open and transparent bidding as a basis for licensing and only consider other licensing options where necessary.
- (d) Carry out due diligence on oil companies applying for licenses in the country with regard to their technical and financial capabilities together with their environmental standards. This may be undertaken with a view of pre-qualifying applicants.

- (e) Avoid the undesirable situation of a monopoly by licensing and maintaining several oil companies in the country, so as to benefit from variety and competition in the way petroleum operations are implemented in the country.
- (f) Review and update the existing model PSA to take into account the country's oil and gas potential.

**Actions:**

- (i) Put in place appropriate petroleum legislation.
- (ii) Acquire and prepare data for licensing.
- (iii) Carry out promotional efforts.
- (iv) Prepare procedures and criteria for competitive licensing.
- (v) Undertake open and transparent licensing rounds.

**Objective 2: To establish and effectively manage the country's oil and gas resource potential.**

**Strategies:**

- (a) Put in place an appropriate institutional framework for promoting and regulating petroleum exploration programmes.
- (b) Set exploration parameters and targets for oil companies to accomplish.
- (c) Optimize the integration and use of all available data in a license area for interpretation with a view to identifying all existing prospects therein.
- (d) Rank the petroleum prospects identified in a licence area and test-drill the worthy ones in order of priority.
- (e) Continuously update the country's oil and gas resource database.

**Actions:**

- (i) Enact legislation for petroleum exploration in the country.
- (ii) Carry out petroleum exploration in the country by undertaking seismic surveys and exploration drilling among others
- (iii) Establish and develop institutions to promote, monitor, regulate and carry out petroleum exploration operations.
- (iv) Establish and maintain a National Oil and Gas Resource Data Bank.

**Objective 3: To efficiently produce the country's oil and gas resources.**

**Strategies:**

- (a) Keep in dialogue with oil companies during the preparation of development plans with a view of understanding the assumptions or approaches made by the companies.
- (b) Undertake independent evaluations where necessary with a view of identifying any points of divergence from the plans presented by oil companies.
- (c) Ensure that the country's oil and gas resources are produced optimally through cost effectiveness and where necessary, enhanced recovery.
- (d) Hold timely consultations with licensees regarding tail-end production with a view of considering any necessary incentives for continued production after the cut off point.

**Actions:**

- (i) Establish an institution to monitor and regulate field development and production programmes.
- (ii) Put in place the necessary regulatory framework for field development and production.
- (iii) Plan and implement field development and production.
- (iv) Plan and implement tail end production.

**Objective 4: To promote valuable utilization of the country's oil and gas resources.**

**Strategies:**

- (a) Use oil and gas resources to contribute to the country's energy mix with a view of ensuring adequate energy supply.
- (b) Optimise the use of the country's oil resources.
- (c) Promote the use of natural gas especially in strategic areas like generation of electricity, production of steel and production of inputs for other industries.
- (d) Prohibit venting and restrict flaring of natural gas.

**Actions:**

- (i) Evaluate and document options for utilising the country's oil resources.
- (ii) Evaluate and document the opportunities for utilising the country's gas resources.
- (iii) Support the utilisation of Natural Gas.
- (iv) Put in place the necessary regulatory framework for prohibiting venting and restricting flaring in order to avoid wastage of the resources and safeguarding the environment.
- (v) Plan and Implement an Early Production Scheme (EPS) with a view of contributing to addressing the country's electricity needs.
- (vi) Plan and implement a petroleum refining strategy with a view of supplying the national and regional petroleum products demand.

**Objective 5:** To promote the development of suitable transport and storage solutions which give good value to the country's oil and gas resources.

**Strategies:**

- (a) Establish the potential destinations for the country's oil and gas resources.
- (b) Promote efficient development and utilization of transport corridors and storage facilities.
- (c) Prioritize the transport methods giving due recognition to cost, efficiency together with health, safety and environment considerations.

**Actions:**

- (i) Evaluate the existing transport systems and storage facilities with a view of establishing their importance to oil and gas transportation and storage together with identifying any additional requirements.
- (ii) Put in place the necessary regulatory framework for the utilization of transport corridors and tariff setting for oil and gas transportation.
- (iii) Support development of the necessary transport and storage infrastructure for oil and gas.

**Objective 6: To ensure collection of the right revenues and use them to create lasting value for the entire nation.**

**Strategies:**

- (a) Identify and document the different sources of revenue in oil and gas activities.
- (b) Ensure collection of the right revenues due to Government taking into consideration that these revenues include both tax and non-tax components.
- (c) Publish the revenues received from oil and gas activities regularly.
- (d) Ensure equity, fairness and transparency in the use of oil and gas revenues.
- (e) Utilise petroleum revenues for supporting strategic areas of the national economy like education and research, development of infrastructure and other activities which contribute to lowering the cost of doing business in the country.
- (f) Put in place a sustainable asset in form of a petroleum fund to store revenues not used in the national economy and creation of a permanent source of wealth as a provision for intergenerational equity.
- (g) Evaluate spending criteria for the revenues used to support the national economy based on absorptive capacity and forecast rates of return.
- (h) Take into account the interests of local governments and stakeholders during the development of oil and gas resources and sharing of royalties in accordance with the Constitution.

**Actions:**

- (i) Put in place a law to regulate the payment, sharing, use and management of revenues accruing from oil and gas activities.
- (ii) Put in place the necessary institutional framework for collection and management of oil and gas revenues.
- (iii) Participate in the processes of the Extractive Industries and Transparency Initiative (EITI).

**Objective 7: To ensure optimum national participation in oil and gas activities.**

**Strategies:**

- (a) Promote state participation in Production Sharing Agreements with a view of providing better opportunities for the state to understand the basis for decisions

in exploration, development and production, together with acquiring the skills necessary for commercial management of the sector.

- (b) Promote use of the country's materials, goods and services in oil and gas sector activities.
- (c) Promote participation of the country's entrepreneurs in providing goods and services to the sub-sector as a way of optimizing the contribution of oil and gas activities to the overall development of the country.
- (d) Promote public private partnerships whose benefits outweigh their cost, and whose costs and benefits are mutually and fairly shared by the partners.
- (e) Encourage civil society to participate in the building of a productive, vibrant and transparent oil and gas sector.
- (f) Promote employment of Ugandans in the oil and gas sector.
- (g) Promote transfer of skills and technology to the country.

**Actions:**

- (i) Put in place the necessary regulatory framework for state participation and implementation of national content.
- (ii) Put in place an institution to undertake state participation in oil and gas activities.
- (iii) Identify the opportunities for national content in oil and gas activities and plan for its implementation.

**Objective 8: To support the development and maintenance of national expertise.**

**Strategies:**

- (a) Identify the training skills required for the sector and plan for their development through both formal and industrial training.
- (b) Utilise oil and gas activities in the country to support provision of the necessary training.
- (c) Promote provision of goods and services to the sector by national enterprises and entrepreneurs as a way of building national expertise.
- (d) Provide appropriate training to Government personnel in the relevant fields as one of the ways to facilitate professional dialogue with oil companies.

- (e) Broaden the national education curricula to prepare the necessary workforce for the growing oil and gas sector in the country.
- (f) Promote the development of skills during the implementation of oil and gas activities.

**Actions:**

- (i) Train Government personnel in monitoring oil and gas exploration, development and production.
- (ii) Review and expand the education curricula in the country with a view of producing the workforce required for oil and gas activities nationally.
- (iii) Support the development of skills and competitive competencies necessary for the country's entrepreneurs to participate in the delivery of goods and services for the oil and gas sector.
- (iv) Require licensed oil companies and their subcontractors to provide training to Ugandans.

**Objective 9: To ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity.**

**Strategies**

- (a) Ensure availability of the necessary institutional and regulatory framework to address environment and biodiversity issues relevant to oil and gas activities.
- (b) Ensure presence of the necessary capacity and facilities to monitor the impact of oil and gas activities on the environment and biodiversity.
- (c) Require oil companies and their contractors/subcontractors to use self regulation and best practices in ensuring environmental protection and biodiversity conservation.
- (d) Require oil companies and any other operators to make the necessary efforts to return all sites on which oil and gas activities are undertaken to their original condition as an environmental obligation.

**Actions:**

- (i) Upgrade the relevant Environment and Biodiversity legislation to address oil and gas activities.



- (ii) Strengthen the institutions with a mandate to manage the impact of oil and gas activities on the environment and biodiversity.
- (iii) Develop physical master plans, environmental sensitivity maps and oil spill contingency plans for the oil and gas producing region and any transport corridors.

**Objective 10: To ensure mutually beneficial relationships between all stakeholders in the development of a desirable oil and gas sector for the country.**

**Strategies:**

- (a) Recognise and promote the different roles of the state, oil companies and other stakeholders.
- (b) Ensure that the PSA's entered into have clear obligations with regard to work programmes and fiscal obligations.
- (c) Provide for clear procedures for any framework adjustments, arbitration, and exit points.
- (d) Require good and established self regulation and monitoring mechanism by oil companies.
- (e) Ensure that oil companies and their contractors/subcontractors implement the necessary guidelines regarding health and safety at work including provision of protective equipment where necessary.
- (f) Encourage the implementation of corporate social responsibility by oil companies.
- (g) Provide for availability of information that may be required by stakeholders.

**Actions:**

- (i) Monitor and evaluate the performance of institutions participating in the development of the oil and gas sector in the country.
- (ii) Periodically review the regulatory framework with a view of making any necessary changes.
- (iii) Put in place an efficient communication strategy for the oil and gas sector.
- (iv) Carry out adequate consultations with stakeholders especially in the oil and gas producing areas.

## **6 CROSSCUTTING ISSUES**

This policy recognises issues in sectors other than the oil and gas sector, which will impact together with those which will be impacted upon by oil and gas activities. The potential impact of oil and gas activities on the different sectors together with the desired outcome of the impact are presented herebelow. This policy does not define the strategies and actions required to achieve the desirable outcomes in the other sectors because they are best articulated in the respective sector policies. The policy shall promote positive impacts of oil and gas activities on the other sectors and mitigate against any negative impacts on them.

The most direct impacts of oil and gas activities will be the addition of indigenous fossil fuels to the country's energy mix and the generation of additional revenues for the country. The policy also recognises that if the country's petroleum resources and revenues are not well managed, the petroleum sector has the potential to have the most negative impact on society that is "The Oil Curse" or the paradox of plenty. The oil curse is the negative effect of oil and gas resource utilization leading to economic stagnation, environment degradation and increased poverty. The oil curse can and should be avoided.

### **6.1 IMPACT ON THE NATIONAL ECONOMY**

This policy shall, in collaboration with other relevant national policies, promote the use of oil and gas activities to have a positive impact on the economy. These activities will lead to the generation of revenues for investment in the non oil and gas sectors resulting in higher growth rates of the economy, expansion of the country's gross domestic product and higher per capita incomes.

Uganda's economic policy focuses on promoting private-sector led economic growth in such a way that growth leads to a reduction of absolute poverty in the country to levels below 10% by the year 2015. The development of an oil and gas sector in the country will contribute significantly to the early achievement of this goal by enhancing the country's capacity to invest in productive sectors of the economy, economic and social infrastructure, development of new industries and businesses, creation of new jobs and

boosting of national and household incomes. This development shall be undertaken in line with the country's PEAP.

This policy recognises that there may be need to review the country's policy on "Guide to Macro-economic Stability" to accommodate the challenges of dealing with oil and gas activities with the view of avoiding negative impacts on the economy like the "Dutch Disease".

The extent to which oil and gas activities are used to develop the non-oil sectors of the economy shall provide a good measure of how beneficial these activities are to the economy in particular and the country at large.

### **6.1.1 Impact on Land Ownership and Use**

Implementation of oil and gas activities will affect, and be affected by existing land policies, laws, regulations and practices. Petroleum exploration, development, production, processing and transportation shall impact land ownership and use. During the phase of petroleum exploration, land is used for carrying out surveys and temporary accommodation and this use is for a limited period of time. The other phases of the petroleum value chain require land to be acquired and held on a long-term basis. Article 237 of the Constitution, the Land Act 16 of 1998, the National Land Use Policy 2004 together with the Land Sector Strategic Plan 2001 – 2011 define the existing policies and regulations for land ownership and use in the country.

It will be essential for oil companies and/or Government to acquire land for the different aspects of the petroleum value chain like provision of transportation corridors, i.e. pipelines, roads together with that for infrastructure such as wellheads, oil and gas processing facilities and refineries. Agreements will have to be entered into with landowners to cover aspects like compensation for their land surface interests. Government shall where necessary and in accordance with the Constitution, acquire land in the public interest to support implementation of oil and gas activities.

Article 204 of the constitution provides for the decentralisation of the administration of land to District Land Boards. These boards, in accordance with laws made by Parliament, hold and allocate land, facilitate the registration and transfer of interests in land together with other matters connected with land in the respective districts. Capacity building

programmes for Land Boards, in the areas with the potential for petroleum production or in areas where transport corridors will be constructed, shall be undertaken with a view of enabling them to make decisions which promote effective and efficient development of oil and gas activities.

Article 244 of the Constitution vests the control of petroleum in its natural condition in or upon any land or waters in Uganda in the Government on behalf of the Republic of Uganda. The responsibility to lease out rights to explore and exploit petroleum resources is therefore solely the responsibility of Government. The constitution also provides for the making of laws by Parliament to regulate the exploration and exploitation of petroleum resources together with the sharing of royalties arising from the exploitation.

This policy shall promote the implementation of oil and gas activities in accordance with the existing laws and regulations on land ownership and use in the country.

### **6.1.2 Impact on Physical Planning**

Urban centres resulting from the development of oil and gas activities need to be well planned to meet the challenges of urbanization. This policy, in collaboration with other relevant national policies, shall endeavour to ensure organised urbanisation in and around the Albertine Graben. In order to achieve this objective, consideration will be made to declare the areas where oil and gas activities will be concentrated special planning areas so as to pave way for their physical planning. This entails the identification of potential urban and growth centres around the Graben and the proactive planning for these centres with the oil and gas activities in mind. Planning for these areas could be phased in line with the progress of these activities. It will be necessary to support efforts to design and implement physical planning in pace with, or preferably prior to, the development phases of oil and gas activities. Community participation should be ensured in both planning and implementation. All infrastructure and other spatial developments shall be phased in accordance with prepared structure and detailed plans. In addition to the areas around the Albertine Graben, improved and timely physical planning shall be encouraged in the other parts of the country with a view of maintaining balanced infrastructure across the country. These measures will contribute to avoiding any undesirable population migration.

This policy promotes effective physical planning and urban development of the ring of towns that exist, and those that will develop within and at the periphery of the oil and gas producing regions.

### **6.1.3 Impact on Fiscal and Monetary Policy**

This policy recognises the important relationship between fiscal and monetary policy and the country's oil and gas extraction policies and shall promote their harmony. It further recognises the need to enhance fiscal discipline over any revenues generated from oil and gas activities. The policy shall support the priorities of reducing the fiscal deficit and prioritising spending that promotes increases in productivity and competitiveness of other sectors in the economy. It discourages the use of oil and gas resources to increase public spending in areas that do not add value to the economy.

### **6.1.4 Impact on the Balance of Payments**

This policy shall, in collaboration with other relevant national policies, encourages a positive impact on the country's balance of payments by oil and gas activities. Depending on the volumes of oil and gas reserves in the country, the levels of commerciality of the different fields and the management of the revenues accruing there-from, oil and gas should significantly contribute to growth in the country's balance of payments. Currently, the cost of importing petroleum products into the country is in excess of US\$400 million per annum constituting over 15 percent of the country's import bill. The extent to which Uganda reduces being a net importer of petroleum products on account of domestic oil production and processing will largely determine the improvement in the balance of payments. Any export of the country's petroleum or its products will provide additional opportunities for the country to have a significant positive balance of payments. Additional import substitution arising from the country's use of goods and services, primarily developed to support the oil and gas industry, shall also contribute to a positive impact on the country's balance of payments. It is recognised that as the country becomes wealthier and the citizens become richer, there is a potential for increased importation of consumer goods, among others. Measures to ensure that the additional importation does not completely offset the contribution of oil and gas resources to the country's balance of payments will have to be put in place.

### **6.1.5 Impact on National Industry**

Oil and gas activities provide opportunities for both forward and backward linkages in the country's drive to industrialisation. On one hand, oil and gas activities provide raw materials which can be used as inputs during manufacturing processes. On the other hand, oil and gas activities act as a market for industrial products, both directly and indirectly.

These activities also provide an opportunity for the country to develop a petrochemical industry. This includes industries like oil refining, the off shoot industries utilising the refinery by-products, together with industries arising from the utilisation of natural gas. Refinery by-products can be processed to produce inputs for soap, plastics, pesticides, paints, medicine, asphalt, petrochemicals and polymers among others. Industries arising from the utilisation of natural gas include mineral processing industries, like smelting of iron ore, agro-processing, natural gas conversion to liquids (GTL), manufacture of fertilizers, production of Condensed Natural Gas (CNG), production of carbon black used in tyre manufacturing and others. This policy shall promote the development of appropriate and efficient hydrocarbon related industry in the country, including the participation of private sector investment in these developments. Industrial development will also provide an opportunity for the development of national content, especially through the development and strengthening of industries in the country which can provide goods and services to the oil industry.

### **6.1.6 Impact on Agriculture and Rural Activities**

This policy shall, in collaboration with other relevant national policies, support significant and positive impact of oil and gas activities on the country's agricultural sector in line with the objectives of the country's Plan for Modernization of Agriculture (PMA). This could be achieved through enhancement of specific areas with higher multiplier effect, like provision of energy services and infrastructure for rural agro-processing industries, together with the increased use of modern and mechanised agriculture through provision of more affordable inputs like fuels and fertilizers. On the other hand, the policy will promote mitigation measures against people abandoning agricultural activities and migrating to the oil and gas sector. Mitigation measures could include using oil and gas activities to support agricultural zoning, agro-processing, agro-marketing, agro-inputs and pro-poor agro-biotechnologies.

### **6.1.7 Impact on Fisheries**

Oil and gas exploitation may have some effects on the aquatic environment especially in the fisheries of lakes surrounding the areas where oil and gas activities are undertaken. Hydrocarbon gases, if released within water may rapidly penetrate into fish especially through the gills and disturb their main functional systems. Increasing temperature and reduced levels of oxygen will affect fish metabolism resulting in a reduction of their resistance to many organic and inorganic contaminants.

On the other hand, oil and gas activities have and continue to lead to improved accessibility to fishing communities resulting in improved marketing opportunities of fish for the fishermen.

It is therefore recognised that whereas some of the effects of oil and gas activities on fisheries will be positive others may be negative. This policy will promote the positive impacts and ensure that efforts are made to mitigate the negative effects.

## **6.2 THE SOCIAL IMPACT**

### **6.2.1 Impact on Population Distribution**

Uganda's population is estimated at 28.2 million people (2006). Out of these, 12% live in urban areas with a very high rate of urbanization to escape rural poverty in the belief that cities, municipalities, and towns offer greater opportunities to improve their social and economic livelihoods. Small holder agriculture mainly in the rural areas supplies the food upon which the urban populations depend.

Experience from some countries shows that oil and gas producing regions may attract labour and threaten other sources of productivity thus leading to the abandonment and collapse of other sectors of the economy. It is therefore possible that large numbers of people may move to the Albertine Graben where oil and gas activities are likely to be concentrated despite the area being largely a wildlife and biodiversity protected area.

This policy recognizes the need to guide population movements and settlements triggered by oil and gas activities. Local industries supplying the oil and gas activities should, as far as possible, be spread throughout the country to avoid concentration around typically oil and gas centres of activity. This policy will support enforcement of regulations restricting

population movements and settlements in the protected wildlife and biodiversity areas. Only a minimum of required infrastructure like access roads and installations together with the required work force shall be allowed into the protected areas.

### **6.2.2 Impact on Energy Availability**

The main sources of energy in Uganda are: 93% biomass, 6% petroleum products and 1% electricity. The petroleum products used in the country are: gas oil (diesel), petrol, aviation fuel, fuel oil, kerosene, lubricants and bitumen. All are imported thereby exposing the country's economy to fluctuating and exorbitant prices together with a significant level of uncertainty with regard to their availability.

In order to reduce the impact of oil price shocks and the erratic supply of imported petroleum products on the economy, this policy shall support use of the country's oil and gas resources to meet domestic demand, export the surplus within the region and subsequently overseas. Use of the country's oil and gas resources to substitute imported products will facilitate value addition to these resources, import substitution of petroleum products, and improved security of supply for petroleum products in the country. Pricing of petroleum products refined from the country's oil and gas resources shall not distort the value of the country's resources through subsidies.

Oil and gas resources can be used to support the energy mix. A critical impact on energy availability will be their utilization to generate electricity, with a view of addressing the severe electricity shortage in the country resulting from limited hydropower generating capacity, climatic changes and the increasing demand. This policy will support the use of best lessons and practices in utilizing oil and gas resources to enhance the availability of energy. Efforts shall be made to achieve early oil and gas production with a view of addressing the country's energy needs.

### **6.2.3 Impact on Employment Opportunities and Patterns**

Oil and gas activities tend to be capital intensive and mainly generate direct employment for science and engineering professionals and technicians, among others. These activities are not labour intensive and therefore the number of people directly employed on a sustainable basis may not be large. However, the industry provides significant



employment opportunities through chain or multiplier effect. Businesses that come into being to provide goods and services to the oil and gas sector will provide employment opportunities. Expansion of other sectors of the economy as a result of the development of an oil and gas sector will also lead to induced growth of employment opportunities. This policy shall promote employment of nationals in the oil industry and in the resulting employment created by the industry's chain or multiplier effect.

Transportation and storage of any oil and/or gas produced within the country may lead to the construction of pipelines, roads, rail lines and storage facilities. This construction part of which may be in the countryside will create a large demand for semi-skilled and unskilled labour which should be recruited from the local communities. Significant amounts of cash may also come from compensation claims. This policy promotes the development of appropriate procedures for compensation and provision of employment to local communities. Efforts shall be made to put in place micro-development projects in these areas with a view to support poverty reduction and sustainable development. These efforts will also contribute to the generation of new employment opportunities.

#### **6.2.4 Impact on the Environment**

Oil and gas activities in the country can impact the environment from several angles. They may affect human beings, wildlife and biodiversity, together with the associated tourism. Transboundary water resources and the economy of the Albertine Graben ecosystem where production is anticipated may also be affected. Furthermore, the corridor in which any pipelines or other transport systems will pass will also be affected.

This policy considers environmental protection to include both the physical and social aspects and seeks to mitigate typical forms of environmental damage and hazards associated with oil and gas exploration, development and production. The policy supports gas utilization rather than wastage and will therefore promote prohibiting the venting of gas and discourage flaring of oil and gas except in situations of emergency where the alternatives may result into greater risk. This will lead to avoiding environment degradation, like increased green house effects arising from venting and flaring. Utilization of natural gas especially in homesteads will contribute to reduction in the use of biomass energy which results in indoor house air pollution with undesirable effects on human

health. Reduction in the use of biomass energy resulting from the increased use of natural gas will also have a significant impact of reducing the degradation of the environment through felling of trees.

Access roads will be kept at a minimum in wildlife areas and other areas of sensitive biodiversity, and efforts will be made to construct and maintain these roads in a manner that conserves the environment.

This policy, in collaboration with other relevant policies, will support control measures against the release of hazardous gases, chemical wastes and spills into the atmosphere, water bodies, aquifers and soils which will ensure that water remains safe for animals, fish and human consumption.

The policy will support the relevant institutions to put in place disaster preparedness and response mechanisms for any oil spills in the Albertine Graben, storage facilities and any transportation corridors. Putting in place these mechanisms together with their implementation shall be the responsibility of the Licensees. This policy endorses the principal of "polluter pays". Government will therefore design a mechanism of levying penalties for environmental pollution and/or degradation.

### **6.2.5 Impact on Health**

This policy recognizes several potential causes of negative impacts on human health from oil and gas activities. Oil spills can contaminate water sources leading to sickness and disease. Gas blowouts result in fires that destroy property and may lead to loss of human lives. Gas flares and dust result in air contamination leading to sickness. This policy shall promote the setting up of best international practices for prevention and rapid emergency response mechanisms designed to mitigate against air and water pollution. Licensees will be required to put in place response mechanisms in all aspects of their operations. Efforts to construct roads in a manner that reduces or prevents dust pollution will be promoted.

This policy recognizes that drilling in settled communities and water bodies used by the population can be hazardous. Where deviation/directional drilling can minimize these hazards and achieve the desired results of the drilling objective in an efficient manner, deviation drilling shall be promoted.

This policy recognizes that health hazards do not occur in isolation of each other. While pollutants and toxins are directly inhaled by humans causing disease, they also invade the food chain entering fish, animals and vegetables. Thus the quality of water and food needs to be monitored and tested for unacceptable levels of pollutants and toxins such as lead and mercury. This policy shall, in collaboration with other relevant policies, support the review, updating and implementation of waste disposal standards together with the establishment and enforcement of the necessary monitoring, evaluation and control mechanisms. Considerations shall be made where possible for the use of alternatives to toxic chemicals.

The policy realizes that population movements and increased income may result in the increase of communicable diseases including HIV infection. The policy shall support measures to mitigate the spread of these diseases.

### **6.3 IMPACT ON EDUCATION AND RESEARCH PLANS**

Development of the oil and gas sector will create a demand for skills currently not supplied by the country's education and training institutions. This policy recognises that under the Universities and Other Tertiary Institutions Act 2001, The National Council for Higher Education (NCHE) has the mandate to support implementation of this policy through development and training of requisite national expertise and to promote relevant research in the oil and gas sector. This policy will promote the establishment of human resources requirements for oil and gas activities and their projected estimates for the short, medium and long term and use these requirements to support the training necessary to meet the demand with Ugandan nationals. Educational and training institutions in the country will be induced to orient some of their training courses to meet human resource requirements of the oil and gas sector.

In some countries the oil and gas sector attracted teachers and students to drop out of the education system leading to negative impacts on the education sector. This policy will promote measures to mitigate such negative effects on the education sector.

Effective management of the oil and gas sector depends on research and studies that generate new information on successes and failure and promote the learning of new innovative approaches and processes. This policy proposes the establishment of an

energy centre that would, among other institutions, meet the need for research in this sector. It would generate information on socio-economic impacts and scientific innovations which would, among other things, facilitate monitoring and evaluation of the oil and gas sector. Creation of the centre may not commence immediately in which case its embryo could start in the Ministry responsible for oil and gas. In setting up this centre, consideration shall be made on its potential to become a nucleus for future research in energy for the region.

This policy proposes the establishment of new institutions to manage the oil and gas sector. The national staff in these institutions will require training to expose them to the different aspects of the oil and gas industry. This training will contribute to developing the human capacity required to work with oil companies on a mutually responsible basis.

#### **6.4 IMPACT ON RELATIONS WITH NEIGHBOURING COUNTRIES**

The Albertine Graben which is the principal area with the potential for petroleum production in the country is shared between Uganda and the Democratic Republic of Congo. An "Agreement of Cooperation for the Exploration of Hydrocarbons and Exploitation of Common Fields" was signed between the Government of the Republic of Uganda and The Executive Council of the Republic of then Zaire in 1990.

This policy recognises among other things, that unitization, a method used in determining how oil and gas fields falling across borders or boundaries are shared, is well established internationally and used in several parts of the world. This policy shall support the implementation of the Agreement of Cooperation, and the application of unitisation as a basis for sharing any oil and gas fields falling across any borders. The policy also supports a review of the agreement of cooperation with a view of bringing it in line with the current and future requirements of the oil and gas sector.

In addition, the policy will promote transboundary cooperation based on existing foreign policy principles and agreements, and complements the programmes, projects and protocols formulated under the International Conference on the Great Lakes Region aimed

at transforming the region from tensions, hostilities and underdevelopment to security, stability and prosperity.

There will be need for consultations with neighbouring countries for access where transport corridors like pipelines may need to cross borders. In addition, sales of the country's oil and gas may also require discussions or entry into agreements with foreign countries. This policy will where necessary support enhancement of the existing foreign policy principles with a view to facilitate harmonious implementation of these activities.

## **7 INSTITUTIONAL FRAMEWORK**

### **7.1 GENERAL**

This policy recognizes the need to enhance the current institutional framework which was set up to facilitate the promotion and exploration for oil and gas. There is need to enhance this framework with a view of enabling it to handle the continuing exploration effort together with the development and production of oil and gas.

In addition, there is need to put in place an institutional framework to handle the refining of oil, conversion of gas to valuable products like ammonia, together with the transportation and storage of oil, gas and their by products.

Establishment of an appropriate framework has to take into consideration the different roles of the state and those of the oil companies in the implementation of oil and gas activities. The policy recognizes the following roles for the state and oil companies respectively:

#### **7.1.1 The Roles of the State**

- (a) Establishing and implementing oil and gas policy.
- (b) Establishing and developing legislation.
- (c) Organising the state's petroleum administration.
- (d) Planning and implementing licensing.
- (e) Monitoring operations and administering compliance.
- (f) Managing data from petroleum operations.
- (g) Ensuring the right national participation in petroleum operations.
- (h) Managing the impact of oil and gas activities on the economy, environment and social life.
- (i) Using petroleum revenues to build durable capacity through education, development of infrastructure and a competitive economy in line with the goal of this policy.
- (j) Adjusting institutional framework conditions to meet any changes.

#### **7.1.2 The Roles of Oil Companies**

The role of oil companies will be to efficiently explore, develop and produce the country's oil and gas resources so as to maximize Net Present Value (NPV). In order to achieve this, the companies require highly competent staff, financial strength, ability to manage risk

and ability to work with Government. The companies shall be good corporate citizens by among others, abiding by the policies and laws existing in the country as well as managing emergencies that may arise out of the oil and gas activities.

## **7.2 REGULATORY BEST PRACTICE**

This policy recognizes Regulatory Best Practice (RBP) as the cornerstone for Government's institutional reform policy. RBP which has been practiced in the country for over 15 years is based on the principle that a regulatory agency should be separate and independent from the entities being regulated, in this case oil companies. A policy-making body should be separate from the regulatory agency and the competing producers and suppliers of the goods and services.

This policy endorses this model by recommending setting up of the following three separate institutions; an oil and gas policy making and monitoring body (a Directorate of Petroleum in the Ministry responsible for oil and gas), a regulatory agency (Petroleum Authority of Uganda) and a separate commercial entity (the Uganda National Oil Company). The specific roles of these institutions are defined under section 7.2.3, 7.2.4 and 7.2.5 below. The following sections indicate the different institutions and their proposed roles in the implementation of oil and gas activities in the country.

### **7.2.1 The Roles of Parliament**

- (a) Enacting petroleum legislation.
- (b) Enacting the proposed legislation for the management of petroleum revenues.
- (c) Monitoring performance in the petroleum sector through policy statements and annual budgets.

### **7.2.2 The Roles of Cabinet**

- (a) Putting in place a National Oil and Gas Policy
- (b) Authorising drafting and approving submission of the required legislation to Parliament.
- (c) Approving petroleum administration.
- (d) Consenting to Production Sharing Agreements.

### 7.2.3 Roles of the Ministry Responsible for Oil and Gas

The main roles of Government in managing petroleum resources can be classified into policy making and implementation, regulation of the sub-sector and managing the commercial/business aspects. Currently all these roles are being played by the Ministry of Energy and Mineral Development (MEMD) and the technical arm of the ministry PEPD. Although this has enabled successful promotion, licensing and exploration, separation of these roles will facilitate a more efficient management of the sub-sector especially as it expands into development and production.

It is important to strengthen the Ministry responsible for oil and gas to effectively carry out the increasing roles of policy making, monitoring and evaluation for the sector. The Ministry will therefore require a Directorate of Petroleum within it to effectively carry out these roles. The Directorate will coordinate development of the oil and gas sector in the country through three separate departments responsible for the upstream, midstream and downstream petroleum sub sectors respectively. The Directorate will also be responsible for coordinating national capacity building for the oil and gas sector. The institutions providing support services within the Ministry shall be strengthened to provide the necessary support to the Directorate.

The specific roles of the Ministry through the Directorate shall include:

- (a) Undertaking licensing
- (b) Undertaking promotion of the country's petroleum potential to investors together with data acquisition
- (c) Initiating, developing and implementing oil and gas policy.
- (d) Submitting draft legislation to Parliament.
- (e) Issuing Petroleum Regulations.
- (f) Proposing Petroleum Administration
- (g) Negotiating, endorsing and administering PSA's.
- (h) Approving Plans for Field Development.
- (i) Participating in the formulation of a law to regulate the collection, use and management of oil and gas revenues.
- (j) Promoting and sustaining transparency in the oil and gas sector.
- (k) Approving data management systems.



- (l) Recommending the option to exercise state participation in development and production of oil and gas.
- (m) Ensuring dissemination of information on oil and gas activities.

#### **7.2.4 Roles of the Petroleum Authority of Uganda (PAU)**

An authority shall be put in place to regulate the different players in the sub-sector. The specific roles of this regulatory body will include:

- (a) Monitoring and regulating Petroleum Operations including reserve estimation and measurement of the produced oil and gas.
- (b) Proposing and implementing Regulations.
- (c) Monitoring expenditure on licences.
- (d) Managing petroleum data.
- (e) Assisting in proposing and implementing petroleum legislation
- (f) Assisting in proposing and implementing oil and gas policy.
- (g) Assisting in negotiating and administering PSAs.
- (h) Assessing Plans for Field Development.
- (i) Assessing tail-end production and abandonment.
- (j) Assisting in the measurement, estimation/ assessment of Royalties and Profit Oil due to the state.
- (k) Ascertaining the Cost Oil due to Licensees.
- (l) Ensuring that licensees uphold laws, regulations, rules and contract terms.
- (m) Ensuring Health, Safety and Environmental standards in oil and gas operations.
- (n) Ensuring optimal levels of resource exploitation.
- (o) Promoting planned, well executed and cost-efficient operations.
- (p) Ensuring optimal utilization of existing and planned infrastructure.
- (q) Contributing to national (Budgetary) Planning and control.
- (r) Providing information relevant to the collection of taxes and fees from oil and gas activities.
- (s) Ensuring appropriate implementation of petroleum legislation.
- (t) Assisting in the acquisition of data for use in promoting unlicensed areas.

### **7.2.5 Roles of the Uganda National Oil Company (NATOIL)**

In addition to policy and regulation, the State will require an entity to handle its commercial interests in the sub sector, e.g. state participation in the licences and marketing the country's share of oil and gas production received in kind. Although this entity will become more relevant when production begins, the period before production shall be used to build its capacity so that it is able to play its role when production starts. The specific roles of NATOIL shall include:

- (a) Managing the business aspects of state participation.
- (b) Developing in depth expertise in the oil and gas industry.
- (c) Optimising value to its shareholders.
- (d) Administering contracts with co- ventures.
- (e) Participating in Contractor/Operator meetings.
- (f) Investigating and proposing new upstream, midstream and downstream ventures initially locally but later internationally.

Government shall promote the business effectiveness of the NATOIL and enhance its recognition by international oil companies as a partner through the following strategies:

- (i) Keeping NATOIL focused on the State's commercial interests.
- (ii) Insulating NATOIL from bureaucracy and political play.
- (iii) Promoting healthy competition among oil companies.
- (iv) Reaping benefits of diversified expertise and approach.
- (v) Allowing correct bench-marking of the companies' performance.
- (vi) Avoiding power concentration (i.e. a state within a state).
- (vii) Facilitating NATOIL's expansion abroad (with Government's approval).

### **7.2.6 Roles of Other Government Ministries and Agencies**

This policy recognises the roles of other institutions of Government in facilitating the desirable implementation of oil and gas activities. Government stakeholders include Ministries that are responsible for policies relevant to oil and gas, and operational/ managerial agencies dealing with implementation and regulation. This policy recognizes that parent ministries are responsible for guiding and monitoring the work of the

operational/ managerial agencies placed under them. The roles of the ministries and other agencies are identified as follows:

#### **7.2.6.1 Ministry stakeholders**

##### **(a) Ministry Responsible for Justice and Constitutional Affairs**

- (i) Guiding the formulation and drafting of petroleum legislation.
- (ii) Guiding the formulation and drafting of the law on management of petroleum revenues.
- (iii) Participating in oil and gas policy formulation.
- (iv) Participating in petroleum licensing.
- (v) Participating in the negotiation and administration of PSA's.

##### **(b) Ministry Responsible for Finance, Planning and Economic Development**

In general the role of this Ministry is to ensure macroeconomic stability, which includes prudent fiscal management and ensuring appropriate distribution of government funds to provide efficient and effective delivery of services. Specific roles under this policy shall be:

- (i) Ensuring appropriate management of petroleum revenues.
- (ii) Responsibility for administering the collection and utilisation of oil and gas revenues in line with the relevant laws.
- (iii) Promoting and sustaining transparency in the oil and gas sector.
- (iv) Participating in the formulation of the law to regulate the collection, use and management of oil and gas revenues.
- (v) Defining the roles of different institutions with regard to the collection of oil and gas revenues.
- (vi) Monitoring and assessing the impact of oil and gas revenues on the economy.
- (vii) Providing policy guidance in the management of the Petroleum Fund.
- (viii) Participating in petroleum licensing.
- (ix) Ensuring that fiscal and other economic issues are appropriately addressed in the PSA's.
- (x) Participating in oil and gas policy formulation.
- (xi) Participating in the administration of PSA's.
- (xii) Participating in the formulation of petroleum legislation.

(xiii) Providing the necessary funding to support undertaking of the additional responsibilities for the different Ministries and operational/managerial agencies arising out of this policy.

(xiv) Ensuring development and harmonization of accounting standards in oil and gas activities including implementing principles of the Extractive Industries Transparency Initiative (EITI).

**(c) Ministry Responsible for Local Governments**

This policy recognizes that Local Government Authorities undertake development plans, capacity building and infrastructure development, among other activities, in accordance with the Local Government Act, 1997.

In accordance with these activities of the local government authorities, the Ministry responsible for Local Government shall have the following coordinating roles:

- (i) Formulating and monitoring of local government policies which are in harmony with this policy.
- (ii) Guiding local governments to undertake plans and capacity building that take cognisance of oil and gas activities.
- (iii) Implementation of physical plans to avoid the development of slums arising out of oil and gas activities.
- (iv) Integrating oil and gas activities in local governments' plans and programmes.
- (v) Mobilizing local governments to support oil and gas activities including provision where possible of the necessary infrastructure.

**(d) Ministry Responsible for Works and Transport**

- (i) Planning and regulating transport services i.e. road, rail, air and waterways.
- (ii) Providing technical guidance on mechanical engineering aspects of machinery used in oil and gas activities imported into the country.
- (iii) Issuing approvals for movement along Uganda's roads of heavy equipment (above 56 tonnes) on roads in the country.
- (iv) Supporting development of the necessary infrastructure for oil and gas activities.
- (v) Participating in verification of the structural integrity of oil rigs and other production facilities.

**(e) Ministry Responsible for Water and Environment.**

- (i) Ensuring that oil and gas activities conform to the requirements of the policies regarding the protection and utilization of water bodies and aquifers.
- (ii) Management of any potential impact of toxins from oil and gas activities and development of infrastructure like laboratories to handle toxins.
- (iii) Participating in formulating and monitoring policies regarding protection of the environment, oil and gas activities will comply with these policies.
- (iv) Monitoring the impact of oil and gas activities on the quality of ground and surface water bodies, surrounding flora and atmosphere.
- (v) Regulating water use and pollution load into water bodies through issuance of water permits.
- (vi) Ensuring compliance with conditions provided for in the water permits.
- (vii) Ensuring protection of water catchment and drainage areas.
- (viii) Ensuring respect of Uganda's commitments towards cooperative frameworks for basin wide trans-boundary water resource management.
- (ix) Ensuring self monitoring by the oil companies for compliance with wastewater effluent standards together with ground and surface water quality standards.
- (x) Participating in monitoring and management of oil spill emergencies.

**(f) Ministry Responsible for Forests and Wetlands**

- (i) Ensuring that oil and gas policies are in harmony with policies for the development and utilization of forest resources.
- (ii) Ensuring that oil and gas activities are carried out in a manner that preserves and enhances forest reserves and wetlands.

**(g) Ministry Responsible for Tourism and Wildlife**

- (i) Ensuring that oil and gas policies are in harmony with wildlife conservation and tourism development policies.
- (ii) Ensuring that oil and gas activities are in harmony with wildlife conservation and development of infrastructure and services for tourism.

- (iii) In collaboration with relevant stakeholders, monitor the impact of oil and gas activities on wildlife conservation, development of tourist infrastructure and services together with the harmonious coexistence between ecotourism and oil and gas operations.
- (iv) Monitoring the impact of oil and gas activities on antiquities.

**(h) Ministry Responsible for Labour**

- (i) Carrying out regular statutory inspections to ensure health and safety in the oil and gas sector.
- (ii) Ensuring that employment policies in the oil and gas sector are in line with the country's labour policies and guidelines.
- (iii) Issuing certificates of registration of oil and gas activities.
- (iv) Formulating and enforcing guidelines on safety and health in the oil and gas sector.
- (v) Monitoring compensation for occupational injuries and diseases.
- (vi) Mediating labour disputes and participating in conflict resolution.
- (vii) Issuing guidelines on labour unions in the oil and gas sector.
- (viii) Monitoring compliance with the labour standards.
- (ix) Ensuring that the equipment and technologies brought into the country are environmentally friendly and comply with the desired safety and health standards.

**(i) Ministry Responsible for Education**

- (i) Promoting the development of education and training programmes in order to create requisite national manpower expertise for the oil and gas sector on a sustainable basis.
- (ii) Promoting relevant research and studies in collaboration with the Ministry responsible for oil and gas, and any other relevant institutions.
- (iii) Identifying and proposing measures to mitigate any adverse effects of oil and gas activities on the education sector.

**(j) Ministry Responsible for Industry**

- (i) Ensuring that oil and gas policies are in harmony with the country's industrial policy.
- (ii) Promoting guided development of a petrochemical industry in the country.
- (iii) Promoting the use of oil and gas by-products to support industrial development in the country.

**(k) Ministry Responsible for Physical Planning**

- (i) Conducting physical planning for the areas where oil and gas activities are to be undertaken.
- (ii) Approving change of user in provided physical plans for any areas.
- (iii) Monitoring compliance with guidelines to discourage development of slums.

**(l) Ministry Responsible for Foreign Affairs**

- (i) Ensure cordial bilateral relations with neighbouring countries.
- (ii) Advocate for joint exploration and exploitation of any oil and gas resources along the country's common border.

**(m) Ministries Responsible for Security**

Securing oil and gas activities and installations against external aggression and from any internal threats.

**(n) Ministry Responsible for Information and Communication Technology**

- (i) Initiating the formulation and implementing information technology laws and regulations that will provide a conducive and secure environment for data transmission and storage for oil and gas activities.
- (ii) Promoting, supporting and guiding the use of ICT in order to among others enhance efficiency and effectiveness in oil and gas operations and transactions.
- (iii) Ensuring that the infrastructure necessary for data and voice communication including telephone, internet and broadcasting are put in place.

**7.2.6.2 Government Agencies**

**(a) Role of the Central Bank**

- (i) Advising Government on the impact of the oil and gas sector on the national economy.
- (ii) Ensuring that oil and gas activities do not impact negatively on monetary policy and macro economic stability.
- (iii) Managing and administering the Petroleum Fund.

**(b) Role of the Uganda Revenue Authority**

- (i) Administering the collection of revenue from oil and gas activities in line with the relevant laws.
- (ii) Assisting in monitoring and assessing the impact of oil and gas revenues on the economy.
- (iii) Participating in the formulation of tax measures to regulate collection of the right revenues from oil and gas activities.

**(c) Role of the National Planning Authority**

- (i) Leading national planning for effective incorporation of oil and gas activities into the national economy.
- (ii) Conducting in depth evaluation of the effectiveness and cost of petroleum related activities.
- (iii) Studying and publishing independent assessments of key economic and social issues and options to increase public understanding and participation in oil and gas activities.
- (iv) Participating in monitoring the relationship between the different agencies of the State's petroleum administration.

**(d) Role of the National Environment Management Authority (NEMA)**

- (i) Co-ordinating the processes of environmental impact assessments for oil and gas activities.
- (ii) Carrying out, alongside other stakeholders, environmental monitoring and audits of oil and gas activities.
- (iii) Ensuring and monitoring compliance of oil and gas activities with environmental guidelines.
- (iv) Issuing guidelines for strategic environmental assessment.
- (v) Harmonizing national performance standards in the oil and gas sector on environmental sustainability with international standards.



**(e) Role of the Uganda Wildlife Authority (UWA)**

- (i) Monitoring compliance of oil and gas activities to regulations governing operations in wildlife protected areas.
- (ii) Harmonizing national and international performance standards on wildlife protected areas
- (iii) Monitoring the impact of oil and gas activities on wildlife protected areas.
- (iv) Participating in evaluation of Environmental Impact Assessments (EIA) and environmental audits for oil and gas activities.
- (v) Issuing consent to undertaking petroleum operations in wildlife protected areas.

**(f) Role of the Auditor General**

- (i) Providing an independent oversight of government petroleum operations through financial and other management audits in accordance with the constitutional provisions and any other relevant legislation.
- (ii) Ensuring adherence to national and international accounting standards in the oil and gas sector.

### **7.3 THE ROLE OF CIVIL SOCIETY AND CULTURAL INSTITUTIONS**

This policy recognizes the role Local Governments, Civil Society Organisations (CSO's) and Cultural Institutions can play through advocacy, mobilization and dialogue with communities. These institutions will contribute to holding the different players accountable with regard to oil and gas issues and participate in getting the voices of the poor into designing, monitoring and implementation of programmes in the oil and gas sector. CSO's may also be contracted in the delivery of various services, especially in the communities where oil and gas activities will be undertaken.

## **8 FINANCING THE POLICY**

Financial Resources will be required for putting in place the proposed institutional and regulatory framework together with the necessary economic and social infrastructure.

The overall cost of implementing this policy over the next ten (10) years is estimated to be US\$ 5.13 billion. This amount is subdivided into US\$ 377 million for the short term (1 - 2 years), about US\$ 2.86 billion in the medium term (3 - 5 years) and US\$ 1.89 billion in the long term (6 - 10 years).

The source of funding to implement the policy is estimated at 94% as investment by the private sector, 2% public sector funding and 4% public private partnership.

### **8.1 FINANCING THE INSTITUTIONAL FRAMEWORK**

#### **8.1.1 Financing the Creation of a Directorate of Petroleum**

The creation and maintenance of the Directorate of Petroleum in the Ministry responsible for oil and gas matters will be financed under the budget of the Ministry responsible for oil and gas.

#### **8.1.2 Financing the creation of the Petroleum Authority of Uganda (PAU)**

Government will provide the Authority with the resources necessary for its creation and execution of its work. In providing for these resources consideration of PAU's capacity to be self-supporting will be emphasized.

In most countries however, financing capacity building has been undertaken through a capacity building grant or credit. This policy proposes the assessment/costing of the resources (human, equipment, infrastructure etc.) required by PAU for a ten year period, and their provision through a capacity building programme.

#### **8.1.3 Financing the National Oil Company (NATOIL)**

The policy recognizes the importance of early entry of the National Oil Company into the business especially since any delays will make the barriers of entry even greater.

Financing of the National Oil Company may be difficult in the initial period of production especially because most of the revenue will be financing Cost Recovery for the companies that invested in the exploration and development phases, NATOIL may therefore not be able to attract share holders. It will be necessary for NATOIL to be supported as an embryonic unit at the beginning. As more funds become available after recovery of the major investment costs by the oil companies, funding for NATOIL can be more easily available from its share of participation.

This policy proposes that the National Oil Company starts with minimal resources and grows steadily by learning from the experienced actors. The state shall provide seed money to start NATOIL and consider floating its shares later.

#### **8.1.4 Financing Additional Roles for the Other Arms of Government**

The policy recognizes that monitoring and implementing oil and gas activities will introduce additional roles to the different Ministries and operational/managerial agencies, outside the Ministry responsible for oil and gas, as highlighted in section 7.2.6 above. The Ministry responsible for Finance, Planning and Economic Development will evaluate the need for additional resources required to carry out these roles and provide the necessary funding as considered appropriate.

### **8.2 FINANCING THE REGULATORY FRAMEWORK**

The policy provides for the upgrading of the Petroleum (Exploration and Production) Act Chapter 150 together with the Environment Act Cap. 150 to better adequately handle the developing oil and gas sector. It also provides for the enactment of a law for the collection, use and management of petroleum revenues. Putting in place these legislation together with their attendant regulations will require that the necessary funding is made available.

### **8.3 FINANCING INFRASTRUCTURE**

The development of an oil and gas sector in the country will require putting in place the necessary infrastructure like refineries, processing plants, pipelines and others. Financing this infrastructure will be undertaken mainly by the private sector. Public Private Partnerships shall also be used to put in place some of the required infrastructure. The private sector will also participate in financing the development of social infrastructure especially in the areas where the oil companies will be undertaking oil and gas operations.

## **9 MONITORING AND EVALUATION OF THE POLICY**

Output and outcome planning, monitoring and evaluation are required at all levels from policy making to implementation. Although some of the issues encountered would be solved administratively, some will need to be taken to the policy level for solutions. This means that the policy level needs its own milestones, performance indicators, especially about impacts and outcomes. Issues like the levels of investment made in the sector per year, assessment of social, economic and environment impacts will require to be monitored at the policy level, thereby necessitating availability of data on a regular basis.

This policy proposes that the system of results and outcomes monitoring and evaluation be adopted at the policy level. This system shall be based on minimal indicators that can be tracked at the policy level but be adequate to give key signals about performance of the oil and gas sector.

Within the Ministry responsible for oil and gas, monitoring of this policy and its evaluation shall be undertaken by the Directorate. The Directorate shall produce regular reports as part of its policy implementation and monitoring role.

At the highest level, it is the responsibility of the Office of the Prime Minister to monitor and evaluate all government policies. This policy recognizes that under the National Integrated Monitoring and Evaluation Strategy (NIMES), the Office of the Prime Minister has developed policy monitoring systems which can be enhanced, where necessary, to incorporate oil and gas monitoring and evaluation systems. These systems shall be used to monitor and evaluate the successes and failures of implementing this policy and its effectiveness in achieving the desired goal and objectives.