

# Sector: Energy and Mineral Development

## Sector Summary

### S1: Sector Overview

This section provides an overview of Sector Expenditures and sets out the Sector's contribution to the NDP, its policy objectives, and key performance issues.

#### (i) Snapshot of Medium Term Budget Allocations\*

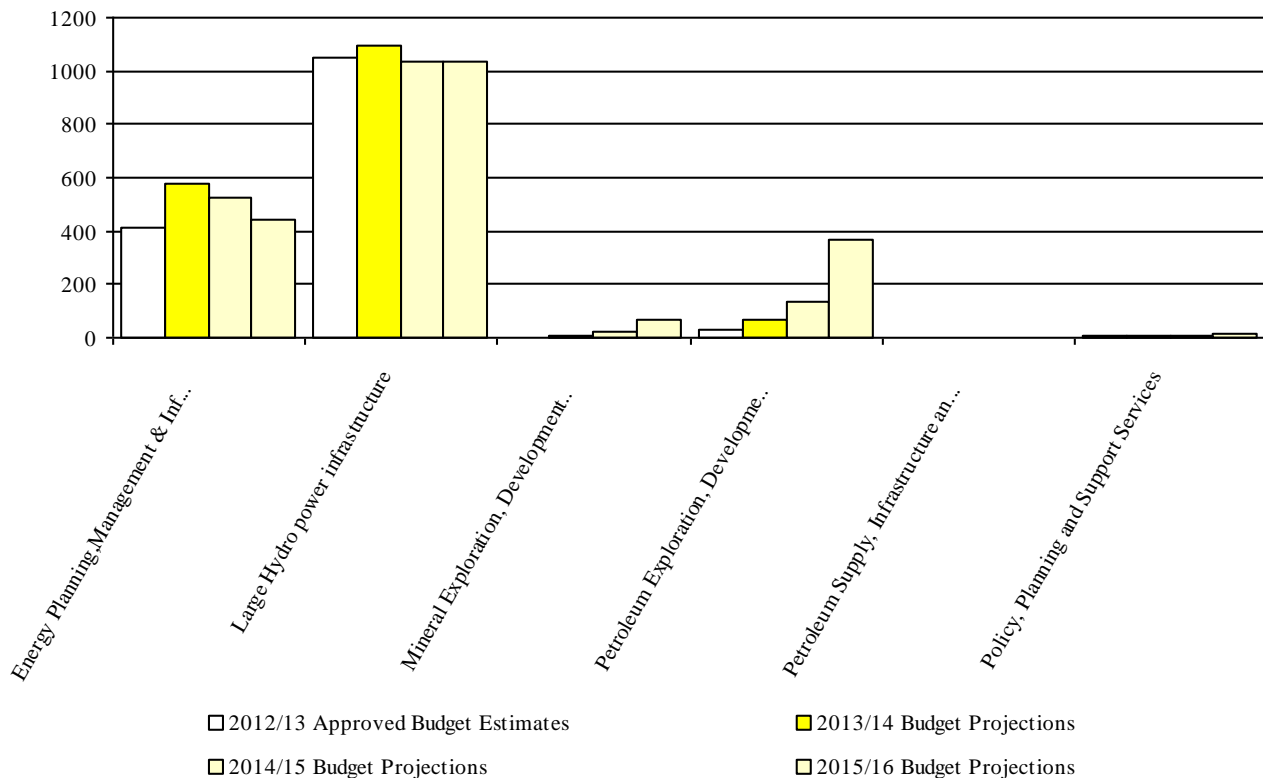
Table S1.1 and Chart S1.1 below summarises the Medium Term Budget allocations for the Sector:

**Table S1.1: Overview of Sector Expenditures (US\$ Billion, excluding taxes and arrears)**

		2011/12 Outturn	2012/13 Approved Budget Spent by End Dec		MTEF Budget Projections		
					2013/14	2014/15	2015/16
Recurrent	Wage	2.146	2.525	1.042	2.525	3.030	3.485
	Non Wage	3.647	4.645	1.325	4.291	4.720	5.192
Development	GoU	988.306	1,246.301	83.367	1,293.623	1,491.388	1,801.299
	Ext. Fin**	86.459	228.363	97.275	461.739	230.490	115.130
<b>GoU Total</b>		<b>994.099</b>	<b>1,253.471</b>	<b>85.734</b>	<b>1,300.440</b>	<b>1,499.139</b>	<b>1,809.977</b>
<b>Total GoU+Donor (MTEF)</b>		<b>1,080.557</b>	<b>1,481.834</b>	<b>183.009</b>	<b>1,762.179</b>	<b>1,729.629</b>	<b>1,925.107</b>
<i>Non Tax Revenue</i>		<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>
<b>Grand Total</b>		<b>1,080.557</b>	<b>1,481.834</b>	<b>183.009</b>	<b>1,762.179</b>	<b>1,729.629</b>	<b>1,925.107</b>

\* Excluding Taxes and Arrears

**Chart S1.1: Medium Term Budget Projections by Vote Function (US\$ Billion)\***



\* Excluding Taxes and Arrears

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### (ii) Sector Contributions to the National Development Plan

The sector will strive to contribute to the following NDP sector objectives:

#### NDP Objective 1:

Increase in power generation capacity to reach 780MW-820 MW from the current 280-330 MW, increase Rural Electrification to 10 percent, promote energy efficiency programmes and renewable energy sources nationwide.

#### NDP Objective 2:

Scale up Oil and Gas exploration, undertake commercial production of Oil and Gas and build subsequent infrastructure for distribution, operations and management, through: i) enhanced Capacity Building for the oil & gas sector, ii) increased monitoring Upstream petroleum activities and iii) the development and implementation of a communication strategy for oil & gas in the country

#### NDP Objective 3:

Empower artisanal and small scale miners and scale up regulation of the mineral sub sector and increase licensing to generate NTR collections and promote exports.

### (iii) Medium Term Sector Policy Objectives

The sector objectives which guide medium term outputs and resource allocations are:

*(i) to meet the energy needs of Uganda's population for social and economic development in an environmentally sustainable manner*

*(ii) to develop the Petroleum and Mineral sectors for them to contribute significantly to sustainable national economic and social growth; and*

### (iv) Priority Sector Outcomes and Key Outputs Planned to Influence Them

The following table sets out the outcomes which the sector wishes to improve, and the key outputs which are likely to contribute towards those improvements:

**Table S1.2: Sector Outcomes and Key Sector Outputs**

<b>Sector Outcome 1:</b>	<b>Sector Outcome 2:</b>	<b>Sector Outcome 3:</b>
<i>Increased access to affordable modern sources of energy through enhanced generation capacity and distribution</i>	<i>Well managed and safeguarded mineral resources for production and exports</i>	<i>A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>		
<b>Vote Function: 03 01 Energy Planning, Management &amp; Infrastructure Dev't</b>		
<b>Key Outputs Contributing to Outcome 1:</b>	<b>Key Outputs Contributing to Outcome 2:</b>	<b>Key Outputs Contributing to Outcome 3:</b>
<i>Outputs Provided</i>	None	None
030102 Energy Efficiency Promotion		
030103 Renewable Energy Promotion		
030104 Increased Rural Electrification		
<i>Outputs Funded</i>		
030152 Thermal and Small Hydro Power Generation (UETCL)		
<b>Vote Function: 03 02 Large Hydro power infrastructure</b>		
<b>Key Outputs Contributing to Outcome 1:</b>	<b>Key Outputs Contributing to Outcome 2:</b>	<b>Key Outputs Contributing to Outcome 3:</b>

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<b>Sector Outcome 1:</b> <i>Increased access to affordable modern sources of energy through enhanced generation capacity and distribution</i>	<b>Sector Outcome 2:</b> <i>Well managed and safeguarded mineral resources for production and exports</i>	<b>Sector Outcome 3:</b> <i>A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>
<i>Outputs Funded</i> 030251 Increased power generation - Largescale Hydro-electric <i>Capital Purchases</i> 030280 Large Hydro Power Infrastructure	None	None
<b>Vote Function: 03 03 Petroleum Exploration, Development &amp; Production</b>		
<b>Key Outputs Contributing to Outcome 1:</b>	<b>Key Outputs Contributing to Outcome 2:</b>	<b>Key Outputs Contributing to Outcome 3:</b>
None	None	<i>Outputs Provided</i> 030303 Capacity Building for the oil & gas sector 030304 Monitoring Upstream petroleum activities 030305 Develop and implement a communication strategy for oil & gas in the country <i>Capital Purchases</i> 030380 Oil Refinery Construction
<b>Vote Function: 03 04 Petroleum Supply, Infrastructure and Regulation</b>		
<b>Key Outputs Contributing to Outcome 1:</b>	<b>Key Outputs Contributing to Outcome 2:</b>	<b>Key Outputs Contributing to Outcome 3:</b>
None	None	<i>Outputs Provided</i> 030402 Management and Monitoring of petroleum supply Industry 030405 Development of Petroleum Refinery and Processing 030406 Kenya - Uganda - Rwanda Oil pipelines
<b>Vote Function: 03 05 Mineral Exploration, Development &amp; Production</b>		
<b>Key Outputs Contributing to Outcome 1:</b>	<b>Key Outputs Contributing to Outcome 2:</b>	<b>Key Outputs Contributing to Outcome 3:</b>
None	<i>Outputs Provided</i> 030502 Institutional capacity for the mineral sector 030503 Mineral Exploration, development, production and value-addition promoted 030505 Licencing and inspection	None

## S2: Past Sector Performance and Medium Term Plans

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*This section describes past and future performance, in terms of sector outcomes, key sector outputs, costs and plans to address key sector performance issues.*

### (i) Outcome 1: Increased access to affordable modern sources of energy through enhanced generation capacity and distribution

*Status of Sector Outcome*

Progress on large hydro power projects: electricity generation capacity is currently at 603MW (Thermal and Hydro)

(i) Construction works for the Bujagali Hydropower dam, power house and the associated transmission line has been completed and commissioning occurred in October 2012

(ii) Karuma Hydropower Project (600MW): A detailed feasibility study and engineering designs have been concluded. The procurement process to acquire a contractor to undertake construction was undertaken, however, significant project delays have since occurred due to complaints on the evaluation process. Project start has been severely delayed by these events.

(iii) Isimba Hydropower Project (100 MW): A detailed feasibility study and engineering designs was completed and the feasibility results submitted to the Government of India for solicitation of a USD 450 million line of credit from the India EXIM Bank.

(iv) Ayago Hydropower Project (600MW): The pre-feasibility studies were completed and a detailed feasibility study and engineering designs are being undertaken with the support of JICA.

Renewable Energy Projects: Development of a number of small hydropower projects like Buseruka (9MW), Nyagak I (3.5MW), Kisizi (0.26MW), Bugoye (13MW), Mpanga (18MW), and Ishasha (6.5MW) have been completed and commissioned. Renewables are currently supplying 68.5MW of power to the national grid.

Rural Electrification: As a result of implementing the rural electrification programme access to electricity has increased from 1% to 6% with the national coverage rising to 12%. Rural Electrification schemes are at various stages of construction (about 1800km)

Energy Efficiency (EE): The major activities undertaken include the distribution of 800,000 energy saving lamps that resulted in a saving of 30MW during peak hours; and over 750,000 household and 800 institutional improved energy saving stoves have been disseminated leading to reduction in fuel wood use, thus preserving the environment.

**Table S2.1 Outcome 1: Sector Outcome Indicators**

<i>Outcome 1: Increased access to affordable modern sources of energy through enhanced generation capacity and distribution</i>			
<b>Outcome and Outcome Indicator</b>	<b>Baseline</b>	<b>2013/14 Target</b>	<b>Medium Term Forecast</b>
Percentage of the population accessing other sources of energy (eg solar energy)	0.44 (2009)	0.5	1 (2015)
Percentage of the population accessing other sources of energy (biomass, solar)	500MW (2008)		800MW (2011)
Percentage of the population accessing electricity	10 (2009)	12	14 (2015)
Average number of MW Load Shedded at peak hours per Quarterly	20 (2009)	0	0 (2015)

*2011/12 Performance*

#### i) Electricity Generation Programmes

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### a) Large power generation projects

**Thermal Power Projects:** Additional 20MW was procured and installed by the private sector in Tororo. The plant started generating at the beginning of 2010. This brings the total installed thermal power capacity to 170 MW - (50 MW at Kiira power plant in Jinja; 50 MW at Mutundwe in Kampala; 50 MW at Namanve in Kampala). Construction of another 50 MW Heavy Fuel Oil thermal power plant in Jinja by Invespro is underway. Once complete, this plant will replace the thermal power plant at Kiira which uses expensive diesel.

**Hydropower Projects:** Development of the Bujagali Hydropower Project 250 MW: Construction works for the dam and powerhouse progressed well. The power plant is expected to commence production in 2011. Civil Works were at 65 percent complete while the left embankment was at 95 percent complete and Draft tube cones installed, and the Power house walls are being raised. Concrete Apron is 25 percent complete, works on the central embankment is also in progress. At the Substations, the gantry is up, embedded parts for four units are on site and work at the switch yard was 30% complete .

**Karuma Hydropower Project (500 - 700MW):** Government is studying the various options for optimising capacity in the range of 500 MW to 700 MW, and carry out a detailed feasibility study, engineering design and bid preparation. Construction to start in the FY2011/12 using the Energy Investment Fund.

**Isimba Hydropower Project 100 MW:** This project is located 25 km downstream of Kalagala Falls and is estimated to produce 100 MW of power. A feasibility study for this project was on-going. Construction of this site is expected to start in 2012.

**Ayago (North & South) Hydropower Project:** A pre-feasibility study commenced, to be followed by full feasibility studies in 2011. The plant is slated for development in 2013.

**Hydropower Development Master Plan:** Government is carrying out a Hydropower Development Master Plan study. The study is targeting sites above 50MW mainly along the River Nile. The objective of the Study is to prepare a Hydropower Development Master Plan that is in line with the long term power and transmission development plan. It aims to prioritize potential hydropower sites basing on technical, environmental, economical and financial aspects; to prepare preliminary designs thereof; and to build government capacity in this field. The Plan will be accomplished in June 2011.

### b) Renewable Energy Projects

During the FY 2009/10, construction of Bugoye mini-hydro power plant (13 MW) in Kasese was completed and commissioned in October 2009. This brings the total to four (4) renewable energy generation projects completed since the implementation of the Rural Electrification and Renewable Energy Strategy in 2001. The others are: Kakira (22MW), Kinyara (7.5MW), and Kisiizi (0.3MW). The Plants now sells power to the grid.

There are four (4) more small hydropower projects under construction, namely: - Mpanga (18 MW) to be commissioned in August 2010, Buseruka (9 MW) to be commissioned in December 2010, Ishasha (5 MW) to be commissioned in December 2010, and Nyagak (3.5 MW) to be commissioned in February 2011. The construction of other projects like Kikagati (10 MW), Olewa, Mvepi I, Mvepi II and rehabilitation of Maziba (1 MW) and Muzizi (20 MW) will commence after studies and other modalities have been finalized.

### ii) Grid Expansion Transmission Programmes:

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**Bujagali Interconnection project:** Construction works for the Bujagali Interconnection project commenced and are progressing according to schedule. The Project consists of a 220 kV transmission line from Bujagali to Kawanda and a 220/132 kV substation at Kawanda. The transmission line will evacuate power from the proposed Bujagali Hydropower Project to the national grid. Construction works are expected to be finalised in December 2010.

**Karuma Interconnection Project:** The feasibility study for the Karuma Interconnection Project commenced in November 2009 and is expected to be finalised in September 2010. This project consists of a 400kV transmission line from Karuma to Kawanda (about 264km); a 132kV transmission line from Karuma to Lira (about 80km); and a 132 kV transmission line from Karuma to Olwiyo (about 60km). Implementation of the Resettlement Action Plan (wayleaves acquisition) will commence during the second half of the 2010/11 financial year.

**Isimba Interconnection Project:** The feasibility study for Isimba - Bujagali 132kV transmission line commenced in May 2010. It is expected to be completed in April 2011.

**Nkenda - Fort Portal - Hoima 132kV Project (originally Mputa Interconnection Project):** The update of the feasibility study to take into account the new location of the Mputa thermal power plant is planned to commence in the first quarter of the financial year 2010/11. Compensation of the project affected persons is underway.

**Mbarara - Nkenda 132kV transmission line:** Construction works on this transmission line will commence in the course of the financial year 2010/11.

**Kawanda - Masaka 220kV transmission line:** This transmission line will form part of the proposed ring around Lake Victoria. Updating of the feasibility study will commence in November 2010.

**Opuyo - Moroto 132kV transmission line** will extend national grid to the Karamoja region to supply the proposed Moroto Cement factory, Moroto town, Katikekile and its environs. The feasibility study for this line is being finalised after which implementation of the Resettlement Action Plan will commence.

**Mutundwe - Entebbe 132kV transmission line:** This project is intended to extend the transmission grid in Entebbe to cope with the load growth in this area. The feasibility study commenced in May 2009 and will be completed in January 2011.

**Mirama – Kabale 132kV transmission line:** this project is intended to provide transmission capacity to evacuate power generated from Kabale peat plant. The feasibility for the project will commence in March 2011.

**Hoima - Kafu 132kV transmission line:** This project will provide an interconnection between the 132kV grid from Hoima to the proposed Kafu 400/132kV sub-station. The feasibility study for the line will commence in April 2011.

**Lira - Gulu - Nebbi - Arua 132kV transmission line:** This project is intended to provide stable power supply to that part of Northern Uganda. The feasibility study is expected to commence during 2011.

The following regional interconnection projects were packaged for implementation: -

**Bujagali - Tororo - Lessos 220kV transmission line:** The Resettlement Action Plan study for this project is underway and a consultant is being procured to update the feasibility study.

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Mbarara - Mirama - Birembo 220kV transmission line: The Resettlement Action Plan study for this project will be completed in November 2010 and a consultant for supervision of construction works is under procurement.

Masaka - Mwanza 220kV transmission line: The feasibility study for this project commenced in January 2010 and is expected to be completed in January 2011.

Nkenda - Beni - Bunia 220kV transmission line: The Joint Technical Committee (Uganda - DR Congo) is finalising implementation modalities of this project, after which the feasibility study will commence.

### iii) Rural Electrification:

Rural access to electricity now stands at 6 percent, up from 1 percent in 2001. New districts connected to electricity include: Sembabule, Kibaale, Kanungu, Oyam, Kaberamaido, Bundibugyo, Kyenjojo, Pader, Abim, Kiryandongo, Isingiro, and Rakai. The inter-district connections included Arua - Nebbi; Lira - Apach - Kiryandongo - Masindi, and Kaseses - Bwera - Mpondwe. New diesel generators have been installed in Moyo, Adjumani, Moroto, and Kalangala.

To support the Plan for Modernisation of Agriculture, six (6) tea factories - (Muzizi, Kayonza, Rugyeyo, Mukwano and two in Buhweju); five (5) fish factories/landing sites - (mjanji, Bukakata, Kasensero, Wakawaka and Bukungu); two (2) mines - (Namekhalavermiculte and Tiira Gold Mines); and several agro and diary processing industries and small and medium enterprises have been served.

A total of 426 grid extension projects countrywide have been implemented arising out of pledges made in Manifesto programmes, as well as projects on a cost sharing basis, to support social and economic programmes in communities and institutions for rural transformation. In addition, 22 schemes are in advanced stages of implementation under the same category and several solar projects have been implemented in schools, health centres, water supplies and communities.

The following schemes have been accomplished and energized during the FY2009/10: Corner Kilak – Patongo – Adilang – Abim – Kiru with Tee – offs to Pader and Kalongo; Iceme – Oyam district Headquarters and environs; Gulu youths centre; Restoration of Soroti – Kalaki – Lwala power line; Kapchorwa – Kaprooni – Kelle Farm Institution; Restoration of Kidongole – Bukedea; Masanda in Mbale; Bumbeire in Bushenyi; Atari and environs in Apac; Buwekula – Musika – Kanyogoga in Jinja; Kiyunga – Mbulamuti in Kamuli; Kamuli girls in Kamuli; and Kirewa Subcounty and environs.

Construction works for the Low Voltage Networks for Iganga – Nabitende – Itanda; and Bugiri – Iwemba – Bugeru power lines was completed and are due for commissioning in June 2010.

During the first half of the FY2009/10, Government commenced the feasibility studies for three lines, Gulu – Adjumani – Moyo, Parak Mission – Awere (90km) and Lira – Adwari – Abim-Kotido and Apala – Aloji – Abako – Bata – Dokolo, (360km). It is envisaged that this work will be completed by Mid – August 2010. Studies for three more distribution lines - Mubende-Kyenjojo (100km), Kabale – Kisoro including tee-off to Kanungu, (190km) and Rakai – Kabingo, Lumbugu – Lyantonde-Kaliro-Buyaga-Ssembabule – Ntusi – Lwemiyaga, (280km) are due to commence once the ongoing studies on the three lines is completed. Government embarked on a verification exercise for community schemes to guide the selection process for the next lot of projects to be implemented.

The Feasibility Study for the Rehabilitation of Maziba Hydropower Plant and the development of the distribution networks in West Nile was completed. The feasibility study provides three options and government selected the optimizing rehabilitation of the available structures and equipment since it was the

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most viable option.

A total of 42 schemes have been surveyed, costed and are being tendered; 192 medium and small schemes have been surveyed and costed for implementation; 57 schemes are being screened for survey and 19 schemes have been proposed for funding by the development partners.

New rural electrification projects are to be built with different levels of prioritisation based on pledges made by the President in the districts and productive areas, the need to connect renewable energy generation projects to the main grid, projects appraised by development partners for development, and completion of schemes earlier started. Schemes to be undertaken include: Sironko-Nakapiripirit-Amudat; Katakwi-Moroto; Ibanda-Kabujogera-Kamwenge; Kakumiro-Birembo-Narweyo; Lwala-Kaberamaido, Dokolo, Amolatar; Bukwira-Kyankwanzi; Lira-Aloi; Kitgum-Palabek; Kayunga-Busana; Muhanga-Kamwezi; Muhanga-Rwamucucu-Kashambya-Rugyeyo/Kyempene; Myanzi-Kiganda-Mubende; Soroti-Katakwi-Amuria; Ayer-Kamdin-Minakulu-Bobi; Ibanda-Kazo-Rushere (including Ruhoko-Nyarukiika; Gulu-Acholibur, Paicho-Patiko-Paloro; Opeto-Achokora, Iceme-Otwal; Masindi/Hoima-Waki small hydro, including Buliisa; Kazo-Rwemikoma-Bulembe-Rukunyu, including Rushere-Mugole-Kijuma; Hoima-Buseruka small hydro plant, Ruhiira Millenium Village; Ntenjeru-Baale-Mpenja; Arua-Maracha-Koboko; Nyapea-Zombo-Zeu-Warr-Vurra; and Nebbi-Nyarurur-Packwach-Panymur with tee-off to Parombo.

### Iv) Energy Efficiency Programmes:

Two major activities have been undertaken under this measure:-

Energy Auditing, to establish areas of energy efficiency improvements in a number of public institutions including: 24 Hospitals, 105 Schools & Colleges, 10 Industries, 20 Public Buildings, 10 Police Barracks, 6 Public Universities Facilities and 10 National Water and Sewerage Corporation Facilities and Kampala Street Lighting. From the findings of the energy audits investments, Government will provide the investments to reduce energy waste in these institutions. This measure is expected to reduce energy demand by about 10MW.

Dissemination of improved household stoves: To date over 700,000 household stoves and 700 institutional stoves have been disseminated in the districts of Bushenyi, Rakai, Kayunga, Wakiso, Mukono, Tororo, Mbale, Kabale, Moyo, Yumbe, Arua, Lira, Apac, Kiruhura, Kamwenge and Kamuli, leading to reduction in fuel wood use, a measure intended to preserve the environment. In addition, a number of private initiatives in stove dissemination have been carried out by private individuals.

*Performance for the first half of the 2012/13 financial year*

## ENERGY PLANNING, MANAGEMENT & INFRASTRUCTURE DEVELOPMENT

### PROGRESS ON INCREASING POWER GENERATION CAPACITY

Development of the Bujagali Hydropower Project: Construction works for the dam, power house and associated transmission line have been completed and commissioned. This has totally closed the power supply deficit in the country.

Karuma Hydropower Project (600MW): The procurement process for the Engineering, Procurement and Construction (EPC) contract is on-going. The hydropower plant will be constructed as a Public project using resources from the Energy Investment Fund. The target is to start construction within the fourth quarter of this financial year.

Isimba Hydropower Project (180 MW): This project is being fast tracked for development. It has an estimated capacity of 180 MW. The final feasibility study report for the Power Plant and Transmission line



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was submitted in October 2012. Government has planned to package and develop this project as an Independent Power Producer (IPP) with support of the development partners. The process of securing financing and a contractor is underway.

**Ayago Hydropower Project (600MW):** This project is the fourth project to be developed soon. With the support of the Japanese Government, the prefeasibility studies were completed and a detailed feasibility study are now being undertaken before project development commences. It is expected that the feasibility study will be completed in July 2014. The first phase of the project (100MW) is expected to be developed as a public project.

**Renewable Energy Projects:** Development of a number of small hydropower projects like Buseruka (9MW), Nyagak I (3.5MW), Kisizi (0.26MW), Bugoye (13MW), Mpanga (18MW), and Ishasha (6.5MW) have been completed and commissioned. Renewables are currently supplying 68.5MW of power to the national grid. Following the completion of the feasibility studies for Kikagati (16 MW), the private developer, Tronder Power is negotiating a Power Purchase Agreement (PPA) with Uganda Electricity Transmission Company Limited (UETCL) and a Power Sharing and Sales Agreement with UETCL and Tanzania Electric Supply Company Limited (TANESCO) to facilitate electricity sale to Tanzania. Construction of Kikagati will commence by November 2012. Detailed feasibility studies for Mitano (2.9MW), Ndugutu (0.5MW), Esia (0.11MW), Nengo Bridge (7.5MW), Nyamwamba (14MW), Lubilia (5.4MW), Nyagak III (3MW), Siti (2.2MW) and Waki (5.4ME) have been completed. In order to determine the most suitable design, additional works on Maziba (1MW) were agreed upon and are being finalised. Procurement of an Engineering Procurement Construction (EPC) contractor for Maziba is planned to start in August. In addition, feasibility studies for Nshungyezi (22MW), Ntono (2.5 MW), and Musizi (20 MW) are in their final stages, while studies on Kakaka (7.2MW), Muyembe (10MW), and Kyambura (8.3MW) will commence this financial year.

### Grid Expansion Programmes – Transmission infrastructure

**Bujagali Interconnection Project:** Construction of the Bujagali Interconnection Project was completed and commissioned in May 2012. The Project consists of a 220 kV transmission line from Bujagali to Kawanda and a 220/132 kV substation at Kawanda, a 132 kV Transmission line from Kawanda to Mutundwe, and a 132 kV transmission line from Bujagali to Nalubaale. The line transmits power from the Bujagali Hydropower Project to the national grid.

Construction of Kahungye (132/33kV) and Kawaala (132/11kV) Substations were completed in 2011. The two projects are meant to receive power from Mpanga hydro power plant and to strengthen power stability in Kampala respectively.

Construction of Mbarara-Nkenda 132kV (160km), Tororo-Opuyo-Lira 132kV (260km), Kawanda – Masaka 220kV (142km), Bujagali - Tororo - Lessos 220kV (127km-Uganda's part), Mbarara-Mirama-Birembo 220kV (66km-Uganda's part), Nkenda –Hoima 220kV (226km) will commence this financial year 2012/13.

Feasibility Studies were completed for the following transmission lines: Karuma Interconnection (Karuma to Kawanda 400kV (265km), Karuma to Olwiyo 132kV (60km) and Karuma to Lira 132kV (80km). Technical feasibility studies were completed for the Mutundwe to Entebbe 132kV line (35km). In addition, feasibility studies for the following projects were updated: Masaka to Mwanza 220kV (510km), and Nkenda to Fort Portal-Hoima 220kV(226km), Kawanda to Masaka 220kV (137km).

Feasibility Studies are on-going for the following transmission lines: Isimba Interconnection Project, Opuyo to Moroto 132kV (160km), Mirama Hill to Kabale 132kV (76km), Bujagali to Tororo (Uganda) to Lessos (Kenya) 220kV EIA/RAP, and Mbarara-Mirama (Uganda) to Birembo (Rwanda) 220 kV EIA/RAP (66km)

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. Feasibility studies for Hoima to Kafu 220kV (70km), Namanve to Namanve south 132kV (10km) and associated substations and Lira to Gulu to Nebbi 132kV (350km) are expected to commence this financial year 2012/13.

### Rural Electrification

By the end of the FY 2011/12, about 2500 km of Medium Voltage (33kV and 11kV) of electricity lines were completed and commissioned. These are Sironko-Nakapiripirit-Amudat (in the districts of Sironko, Bulambuli, Kween, Nakapiripirit, and Amudat); Kobwin (Ngora District); Namawanga-Musese-Nabweyo (Mbale district); Nalondo-Namaloko (Manafwa district); Sibanga-Bugobera (Manafwa district); Busaamaga-Bukonde-Bufumbo (Mbale district); Mayanja-Kelege-Nyanja (Wakiso district); Kapeka-Wakinoni (Nakaseke district); Wakisi-Dekabusa (Buikwe district); Kikubamutwe-Nakwanga (Buikwe); Kisoga-Kiyola-Katete (Mukono district); Nyantungo-Kidudu-Nyarukoma (Kyenjojo District); Murro, and Isagara (Masindi district); Nyabeya TC (Masindi district); Katooke-Muhororo (Kyenjojo and Kibale districts); Kalubulu-Mitete-Lwebitakuli (Sembabule district); Kyanamuka-Kyesiga-Dimo Landing Site (Masaka district); Kibuuku-Rwebisengo (Bundibugyo district), Bukwiri-Kyankwanzi (Kyankwanzi); Kayunga-Busana (Kayunga district); Myanzi-Kiganda (Mityana); Muhanga-Kisiizi - Rugyeyo / Kyempene; (Kabale, Rukungiri, Kanungu and Ntungamo Districts); Katugo-Ngoma (Nakasongola and Nakaseke Districts), Katakwi-Moroto with t-offs to Matany and Lorengedwat (Katakwi, Napak, Moroto Districts); Lwala-Kaberaimaido-Amolatar, Kelle Port-Lwala-Otuboi-Acinip, Lwala-Dokolo (in the districts of Kaberaimaido, Amolatar, and Dokolo); Kitgum-Palabek (in the district of Kitgum and Lamwo); Lira-Apala-Aloi (Albtong district); Ibanda-Kabujogera-Kamwenge (Kamwenge district); Muhanga-Kamwezi (Kabale district); Kakumiro-Birembo-Nalweyo (Kibale district); Masafu-Bushiko-Buhasaba-Nahayeka-Buhehe (Busia district); Butiru-Bumbo-Lwakhakha (Manafwa district); Serere-Apapai-Bugondo (Serere district); Kanginima-Namiyembe-Kabelai (Pallisa district); Okona Bukedea-Malera-Atatur Hospital (Bukedea district); Mailo 8-Iyolwa-Fungwe (Tororo district); Namutumba - Bugobi Trading Centre (Namutumba district); Migyera – Nyakitoma (Nakasongola district).

In addition to the above, 160 km of small schemes were completed and commissioned. Ten (10) more district headquarters have been connected to the national grid. These are Alebtong, Ntoroko, Napak, Nakapiripirit, Amudat, Moroto, Kaberaimaido, Dokolo, Amolatar, and Katakwi,

Other rural electrification schemes of about 1000km route length of Medium Voltage lines (33/11 kV) whose work is in progress and will be completed during FY 2012/13 are: Ibanda-Kazo - Rushere and Kyabirukwa-Nyarukika; Soroti -Katakwi-Amuria; Ayer-Kamdingi-Bobi – Minakulu. Mubende-Kyegegwa - Kyenjojo; Rakai- Lyatonde – Sembabule and Isingiro; Kabale-Kisoro; Gulu – Adjumani – Moyo with tee off to Amuru;

Construction of a further 50 km of small schemes is underway and will be commissioned in FY 2012/13. In addition, procurement is underway and construction will commence in FY 2012/13 of the following schemes of route length of about 2000km:- Gulu AcholiBur / Paicho -Patiko-Paloro and Opeto-Achokora/ Iceme Otwal; Buliisa- Waki – Masindi – Mbaraara - Hoima; Nkongwe-Kashozi; Ntenjeru-Bule-Mpenja; Ruhiira Millennium Village; Kapchorwa-Bukwo-Suam; Mayuge-Bwondha Landing Site; Kasambira-Bugulumbya-Bukuutu; Mityana-Lusalira; Lake Victoria free Trade Zone; Apac – Chegere – Alemi; Hoima – Nalweyo; Kitgum – Namokora; Apala – Adwari – Kiiru with tee- off to Morulem; Rackokoko – Awere – Lalogi; Nyapea-Zombo-Zeu-Warr-Vurra; Nebbi-Nyaravurr-Pakwach-Panyimurr with T-off to Parombo; Arua-Maracha-Koboko-Yumbe.

Feasibility studies are on-going for large and small projects worth US \$ 100 Million and total route length of about 3500 km of Medium Voltage. These will include the following large schemes :Bbale – Galilaya and environs (Kayunga District); Bikira – Namirembe and Masaka – Nyabyajjwe (Masaka District); Nabirumba – Bugaya – Kitukiro – Buyende (Buyende District); Katobo – Rwenshama via Bwambara

# Sector: Energy and Mineral Development

## Sector Summary

(Rukungiri District); Gulu – Olwiyo – Packwach ( Gulu and Nwoya Districts); Kiganda – Kyenda – Mile 16 – Mubende (Mubende District); Kaliro – Nawaikole-Iyingo Landing Site and environs (Kaliro and Buyende Districts); Ruhumba – Kashwa and environs (Kiruhura District); Kibaale – Kikalu, Namalembe – Nakalama and Namutumba – Mazuba (Namutumba and Iganga Districts); Mayuge- Namaingo, Lumino – Namaingo – Bumeru, Lutolo – Lufudu, Iganga – Namukubembe – Bulango (Iganga and Namaingo Districts)and Bukakata – Kalangala and environs (Masaka and Kalangala)

For the grid interconnections under the small hydropower projects, progress is as follows: -

(i) Mpanga-Kamwenge-Kahunge-Nkingo: Construction of both the evacuation and distribution lines has been completed and commissioned. Works on the Sub stations and switching station at Mpanga and Kahunge are progressing well.

(ii) Buseruka-Hoima: Construction of the evacuation and distribution lines and eventual commissioning was achieved in January 2013 .

Energy efficiency Programmes: Government undertakes Energy Efficiency improvement programmes with a view of reducing energy wastage in public institutions. For the period under review, awareness campaigns have been undertaken to sensitize consumers on benefits of rational utilization of energy. Dissemination of improved cook stoves was done and over 45,000 stoves were disseminated in the districts of Arua, Bushenyi, Mukono, Kabale, Lyantonde and Rakai.

Since 2006, power losses have been reduced from 34% to 27%. To reduce power losses further, studies were carried out with the aim of putting in place new measures to reduce the level of power losses in the distribution network to acceptable levels. Within the next five years, the target is to reduce distribution losses from the current level of 27% to about 16%. Government will support the power distribution utility companies in achieving this target.

**Table S2.2 Outcome 1: Key 2013/14 Outputs Contributing to the Sector Outcome\***

<i>Outcome 1: Increased access to affordable modern sources of energy through enhanced generation capacity and distribution</i>			
<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>			
<i>Vote Function:0301 Energy Planning,Management &amp; Infrastructure Dev't</i>			
<b>Output:030102</b>	<b>Energy Efficiency Promotion</b>		
<i>Description of Outputs:</i>	Disseminated 40,000 improved household stoves	14,313 Households disseminated with improved stoves.	Disseminated 50,000 improved household stoves
<i>Performance Indicators:</i>			
No. of improved stoves disseminated to households	40000	14313	50000
Percentage of Energy Losses in the distribution network	25	27	23
Percentage of Audited Institutions implementing Energy efficiency recommendations	70	55	100
<i>Output Cost (US\$ bn):</i>	1.761	79.865	3.523
<b>Output:030103</b>	<b>Renewable Energy Promotion</b>		

# Sector: Energy and Mineral Development

## Sector Summary

### Outcome 1: Increased access to affordable modern sources of energy through enhanced generation capacity and distribution

<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<i>Description of Outputs:</i>	Nyagak III and Maziba construction to be undertaken.	Nyagak III is on-going with the sourcing for the Financial Partner. Maziba - detailed feasibility studies were completed. Muzizi ESIA on site geological and geotechnical investigations on-going 403 Households, 21 SMEs and 17 Institutions	Nyagak III and Maziba construction to be undertaken.
	Muzizi feasibility study to be completed.		Muzizi feasibility study to be completed.
	Nyamwamba: IA and PPA construction to commence		Nyamwamba: IA and PPA construction to commence
	Solar PV Systems in 7,000 household installed Solar Energy Packages in 160 Health Centers. 15 Water pump		Solar PV Systems in 7,000 household installed Solar Energy Packages in 160 Health Centers. 15 Water pump
<i>Performance Indicators:</i>			
Status of Kikaagate Energy Project			6. Construction
Status of Ishasha energy project			7. Commissioning
Number of Solar systems installed	7000	973	7000
No. of Renewable Energy projects under development	3	2	4
Status of Nyagak Energy Project			
Status of Buseru Energy Project			
<i>Output Cost (US\$ bn):</i>	4.623	1.527	2.868
<b>Output: 030104</b>	<b>Increased Rural Electrification</b>		
<i>Description of Outputs:</i>	Continued to implement Rural Electrification schemes to extend power to district headquarters and rural growth centres.	- Construction of three grid extension lines (i) Soroti-Katakwi-Amuria, (ii) Ayer-Kamudini & Minakulu-Bobi, (iii) Ibanda-Kazo-Rushere is in advanced stages. Commissioning is projected for December 2012.	Continued to implement Rural Electrification schemes to extend power to district headquarters and rural growth centres.
<i>Performance Indicators:</i>			
Number of District Headquarters electrified	11	8	10
Distance in KM of Rural Electrification schemes covered with Government support	1000	420	1200
<i>Output Cost (US\$ bn):</i>	7.640	11.365	3.608
<b>Output: 030152</b>	<b>Thermal and Small Hydro Power Generation (UETCL)</b>		
<i>Description of Outputs:</i>	Commence construction of the thermal power plant at Kabaale	Works have been delayed due to need to fasttrack Refinery development project	RAP Implementation
<i>Output Cost (US\$ bn):</i>	91.970	34.682	68.000
<i>Vote Function: 0302 Large Hydro power infrastructure</i>			
<b>Output: 030280</b>	<b>Large Hydro Power Infrastructure</b>		

# Sector: Energy and Mineral Development

## Sector Summary

*Outcome 1: Increased access to affordable modern sources of energy through enhanced generation capacity and distribution*

<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<i>Description of Outputs:</i>	100 percent of the claimants compensated for Karuma and 100 percent land freed up for contractors.	90 percent of the claimants compensated for Karuma and now sorting out complaints.	Construction of Karuma Hydropower Plant starts.
<i>Performance Indicators:</i>			
Percentage of land claimants under r Resettlement Action Plan (RAP) paid	70	90	20
<i>Output Cost (US\$ bn):</i>	1,043.600	0.000	1,093.310

\* Excludes taxes and arrears

### 2013/14 Planned Outputs

- (i) Completion of construction and commissioning of the Bujagali Hydro power substation (220kV/132kV/33kV);
- (ii) Commencement of construction of Karuma Hydropower Project (600MW undertaken);
- (iii) Commencement of construction of Isimba hydro power project (100MW) undertaken;
- (iv) Ayago (North & South) Hydropower Project full feasibility studies undertaken;
- (v) One (1) Renewable Energy Projects commissioned;
- (vi) At least 180 schemes under the Rural Electrification Programme completed; and
- (vii) Energy Efficiency (EE) investments in streetlighting undertaken and training in Energy Audits carried out.

**Table S2.3 Outcome 1: Past and Medium Term Key Sector Output Indicators\***

<i>Outcome 1: Increased access to affordable modern sources of energy through enhanced generation capacity and distribution</i>						
<i>Vote Function Key Output Indicators and Costs:</i>	<b>2011/12 Outturn</b>	<b>2012/13 Approved Plan</b>	<b>Outturn by End Dec</b>	<b>MTEF Projections</b>		
				<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>						
<i>Vote Function: 0301 Energy Planning, Management &amp; Infrastructure Dev't</i>						
<b>Output: 030102 Energy Efficiency Promotion</b>						
Percentage of Audited Institutions implementing Energy efficiency recommendations	60	70	55	100	100	
Percentage of Energy Losses in the distribution network	27	25	27	23	21	
No. of improved stoves disseminated to households	41000	40000	14313	50000	50000	
<b>Output: 030103 Renewable Energy Promotion</b>						

# Sector: Energy and Mineral Development

## Sector Summary

No. of Renewable Energy projects under development	5	3	2	4	
Number of Solar systems installed	1155	7000	973	7000	
Status of Ishasha energy project	6. Constructio			7. Commissioning	
Status of Kikaagate Energy Project	5. Selection o			6. Construction	6. Construction
Status of Buseru Energy Project	Constructiion				
Status of Nyagak Energy Project	6. Constructio				
<b>Output: 030104 Increased Rural Electrification</b>					
Distance in KM of Rural Electrification schemes covered with Government support	150	1000	420	1200	1200
Number of District Headquarters electrified	7	11	8	10	5
<b>Output: 030152 Thermal and Small Hydro Power Generation (UETCL)</b>					
<i>Vote Function: 0302 Large Hydro power infrastructure</i>					
<b>Output: 030280 Large Hydro Power Infrastructure</b>					
Percentage of land claimants under r Resettlement Action Plan (RAP) paid	25	70	90	20	40 60

### Medium Term Plans

- (i) Construction of Karuma Hydropower Project (600MW) completed;
- (ii) Construction of Isimba hydro power project (100MW) completed;
- (iii) Commence the construction of Ayago (North & South) Hydropower Project;
- (iv) Hydropower Development Master Plan under implementation; and
- (v) implement at least 400 schemes under Rural Electrification Programme.

### Actions to Improve Outcome Performance

Government will continue implementing key priority projects in the Energy Sector specifically increasing the generation capacity and transmission infrastructure; and also increase/improve access to modern energy services through Rural Electrification and Renewable Energy development.

**Table S2.4 Outcome 1: Actions and Medium Term Strategy to Improve Sector Outcome**

<i>Sector Outcome 1: Increased access to affordable modern sources of energy through enhanced generation capacity and distribution</i>			
2012/13 Planned Actions:	2012/13 Actions by Dec:	2013/14 Planned Actions:	MT Strategy:
<b>Vote: 017 Ministry of Energy and Mineral Development</b>			
<i>Vote Function: 03 01 Energy Planning, Management &amp; Infrastructure Dev't</i>			
Refurbishment of the transmission and distribution infrastructure (i.e line, transformer and substaion upgrade)	Refurbishment of the transmission and distribution infrastructure (i.e line, transformer and substaion upgrade)	Continue the refurbishment of the transmission and distribution infrastructure (i.e line, transformer and substaion upgrade)	Refurbishment of the transmission and distribution infrastructure (i.e line, transformer and substaion upgrade)
Develop more cheaper sources of power and increase their mix in power generation	Develop more cheaper sources of power and increase their mix in power generation	Commence the development of Karuma and Isimba hydro power projects	Develop more cheaper sources of power and increase their mix in power generation
<i>Vote Function: 03 02 Large Hydro power infrastructure</i>			
50 percent of the claimants compensated and 50 percent land freed up for contractors.	90 percent of the claimants compensated and now sorting out issues related to complaints.	Construction of Karuma Hydropower Plant progresses	50 percent of the claimants compensated and 50 percent land freed up for contractors.

# Sector: Energy and Mineral Development

## Sector Summary

### (ii) Outcome 2: Well managed and safeguarded mineral resources for production and exports

#### *Status of Sector Outcome*

Geological mapping and mineral assessment of the area south of 1 degree was completed. These include Kigezi, Ankole, South Buganda, Busoga, Bukedi and Tooro regions. Preliminary geological maps of the area north of 1 degree were produced. Based on existing maps and reports combined with remote sensing, interpretation has been compiled at 1:500,000, 1:250,000 and 1:100,000 scales. They include Acholi, Lango, West Nile, Bunyoro and North Buganda region. The survey is expected to be concluded by June 2012. The sector acquired airborne geophysical survey data acquired through aerial survey. These are available to exploration companies. This is in addition to available reading materials packaged and exhibited as promotional brochures / flyers.

The target areas identified for detailed mineral commodity assessments for their potentials are: Kafunzo for Nickel-Copper-Cobalt in Ntungamo; Mayuge iron ores, Mayuge; Bukusu carbonatite complex for rare earth elements, Mt. Elgon zone; Murchison Project for nickel bearing ultramafic intrusion; Iganga circular magnetic anomalies for Nickel-Copper-Platinum-Chromium in mafic intrusions; Kitaka, gold and base metals in Kamwenge; Kaliro-Kamuli-Ivukulu, confirm Archaean greenstone belt extension for gold, Busoga region; Aloi-Aboke for gold and base metals, Lango region; Kamuli-Iganga, possible potential for kimberlite intrusions (diamond) in the Archaean craton, Busoga region; Nyabushenyi for Lithium, Ntungamo; Limestone potential of the Crater Lakes area, Bushenyi; Pakwach for diatomite, Nebbi; and Dimension stone in Mubende.

A total 609 licenses and certificates were operational as at 31st December, 2010. Of these, 104 Prospecting Licenses (PL), 395 Exploration Licenses (EL), 59 Location Licenses (LL), 23 Mining Leases, and 28 Mineral Dealers' License (MDL).

The generated non-tax revenue amounted to Ushs 3.631 billion accrued from royalties, mineral license fees and sale of publication and geophysical data. Royalties contributed to Ushs 2.795 billion.

**Table S2.1 Outcome 2: Sector Outcome Indicators**

<i>Outcome 2: Well managed and safeguarded mineral resources for production and exports</i>			
<b>Outcome and Outcome Indicator</b>	<b>Baseline</b>	<b>2013/14 Target</b>	<b>Medium Term Forecast</b>
Value of Non Tax Revenue (NTR) earned per year in mineral production and exportation (Ushs bn)	3.62 (2009)	5.0	6.0 (2015)
% coverage of Geo scientific data for the whole country acquired (Geological and Geophysical mapping)	90 (2009)	99	100 (2015)

#### *2011/12 Performance*

In the Mineral Sector, government focused on the acquisition of geophysical data and geologic mapping which are to be used for promoting investment in the mining industry, capacity building, licensing and regulating mineral exploration and mining.

#### Progress made to date and Plans on Geological Data Infrastructure:

The airborne geophysical survey which started in December 2006 was completed in June 2009. The survey aimed at understanding rock formations and identification of mineral targets. Out of the survey, 630,622 line km of magnetic and radiometric data as well as 22,360 line km of electromagnetic data was acquired. Interpretation of this data will be completed by the end of this year. The obtained data raised anxiety among exploration companies and to date over 34 firms have obtained the raw data for own interpretation.

In 2009, government also carried out geological mapping, geochemical surveys and mineral assessments in the area south of 1°North. As a result, regional geological maps at scales of 1:250,000 and 1:100,000 have

# Sector: Energy and Mineral Development

## Sector Summary

been produced. The same work commenced in January this year in area 1° North and is expected to be accomplished by December 2010. Overall, about 80% area of Uganda is to be covered by this activity. The generated data will be made available to investors and the general public to enhance mineral exploration and infrastructure development.

The establishment of a Geographical Information System (GIS) based Geological and Mineral Information System and Internet/intranet and data capture through scanning & digitizing of maps is progressing well. A geodata portal has been established to host various digital geo-information. A website [www.Uganda-mining.go.ug](http://www.Uganda-mining.go.ug) was launched to facilitate real-time dissemination of data. The design of a computerized mining cadastre and environment framework information systems are ongoing and expected to be accomplished this year. The computerized mining cadastre will provide for on-line and transparent licensing, based on 'first come first serve' principle.

Community Development and Assistance to Small-Scale Miners: Intensive capacity building and sensitization awareness campaigns were undertaken and over 1,000 persons benefited, most of whom were miners, local leaders and key local government officers in 17 mining sub-counties. The outputs include formation of networking and association of artisanal and small-scale miners. To enhance sustainable production of minerals a handbook for small scale mining was produced and availed to operators. Government has also finalized the process of extending small grants to the established mining groups and associations. This grant is expected to reach all beneficiaries by the end of this year. The fund is expected to improve productivity and livelihood in the mining areas.

### Licensing of exploration and mining

During 2009, a total of 123 Prospecting Licenses, 119 Exploration Licenses 11 Location License, 2 Retention License, 20 Mining Leases (ML), 33 Mineral Dealers' Licenses (MDL), 2 Blasters Certificates (BL) and 2 Goldsmith's Licenses (GL) were granted. This is attributed to the dissemination of the results of the airborne geophysical survey.

### Non-Tax Revenue (NTR)

Government subsequently realized revenue to the tune of UGX 2.436 billion, as NTR accruing from royalties, mineral license fees and sale of publications. Royalties alone contributed UGX 2.036 billion and 1.701 billion of the total revenue generated shared or to be shared at a rate of 80% for Central Government, 17% for Local Governments of mining districts and 3% to the lawful landowner. It is worthwhile noting that the major contributors to the revenue earned in 2009 were Tororo Cement Ltd, Hima Cement Ltd and Kasese Cobalt Company Ltd.

*Performance for the first half of the 2012/13 financial year*

### MINERAL EXPLORATION, DEVELOPMENT & PRODUCTION

#### Mineral Exploration and Licensing Strategy

In the Mineral Sector, following acquisition of airborne geophysical, geological and mineral data covering 80% of the country, geological maps at scales of 1:250,000, 1:100,000 and 1:50,000 have been produced. Sixteen (16) target areas for possible mineralization for gold, copper, nickel, chromium, iron ore, uranium, and zinc have been identified for further investigations. The acquired data has led to increase in investor interest in the mineral sector. This is reflected in increasing licensing from 515 in 2009, 611 in 2010 and 733 in 2011. The licensing status as at end of first half of 2012 is as follows: 55 for Prospecting, 544 Exploration, 2 Retention, 39 Location, 27 Mining Lease and 55 Mineral Dealers, totalling 722.



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# Sector: Energy and Mineral Development

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## Sector Summary

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The large volume of geoscience data acquired by government has registered increased investment in the mineral sector. The government is now reviewing the licensing strategy with the view to creating competitive acquisition of mineral rights and enhancing monitoring of prospecting and exploration work programmes.

Government continued to evaluate geothermal resource potential in the country. The geothermal studies have identified four (4) potential areas, namely Katwe-Kikorongo, Burnaga, Kibiro and Panymur for further development out of 23 geothermal sites that need further studies. So far, three (3) companies have been granted exploration rights in Katwe (2) and Buranga (1) in the western rift valley. If found viable the energy generated will be fed to the national grid.

### Mineral Investment Promotion

To ensure mineral investment promotion, a website on [www.uganda-mining.go.ug](http://www.uganda-mining.go.ug) has been setup. That will facilitate real-time dissemination of geodata about the mineral sector. In addition, the government put in place a Geological and Mineral Information System to provide a one Stop Centre for all geological and mineral information country wide. The government is now implementing a computerized mining cadastre and registry system, the system that will expedite licensing process, timely generation of revenues and provide transparency and accountability in the management of mineral rights.

The concluded Sustainable Management of Mineral Resources Project did not cover Karamoja because of security concerns at the time. The ministry has now embarked on a comprehensive pre-feasibility study and sensitization of the community in the region. The objective is to prepare the ground and solicit financing to carryout airborne geophysical surveys and ground geological mapping.

### Earthquake Monitoring

Earthquake detection and monitoring of other geological hazards continues to be an area of high priority to the government. The ministry monitors earthquakes and collects seismological data from the three (3) stations at Kilembe, Hoima, and Kyahi near Mbarara. Construction of two (2) additional seismological stations at Butologo site, Mubende district and Jjungo-Nakawuka site, Wakiso district was done in 2011. Installation of the earthquake detection equipment at both sites is in the process and will be completed in the new financial year. Extension of earthquake network coverage remains an issue of national importance in the long term.

Non-Tax Revenue (NTR) and associated mining activity: In the FY2011/12 Government had so far realized revenue to the tune of UGX 9.23 billion, as NTR accruing from royalties and mineral license fees. Royalties alone has so far contributed UGX 7.94 billion of the total revenue generated shared and to be shared at a rate of 80% for central government, 17% for local governments of mining districts and 3% to the land owner. It is worthwhile noting that the major contributors to the revenue earned in FY2011/12 were Tororo Cement Limited, Hima Cement Limited and Kasese Cobalt Company Limited.

### Training, Capacity Building and Rehabilitation of infrastructures

During FY2011/12 so far a total of 600 mineral artisans were trained on legal and regulatory framework, health and safety in mining best practices.

Civil works and major rehabilitation of Geological Survey and Mines Department was completed in December 2011. The building has well-furnished offices, with modern Documentation Centre, Laboratories; where equipment are being installed, and a well-spaced Board Room.

The flag bearer projects in the mineral sector are:

# Sector: Energy and Mineral Development

## Sector Summary

The Sukuru Phosphate Project: The area is licensed to Nilefos Minerals Limited. Progress to develop the deposit in to a mine has been delayed by the local community denying the developer access to the area. A court injunction was subsequently filed to bar the developer from accessing the area. To address this problem, government has intensified sensitization of the local communities with a hope that in the coming financial year the matter will be resolved. The company will be encouraged to adhere to the provision in the Mining Act and secure surface right over the project area.

The Muko Iron Ore: The iron ores are located in Kabale and Kisoro districts. So far two (2) Mining Leases have been granted to Ugandan investors. However, the issue of securing surface rights has posed problems and none of the two lease holders has commenced mine development. Six (6) companies were granted exploration rights and activities are progressing. For the case of small scale mining, four (4) location licenses were granted and iron ore are being sold to Hima Cement Industry as additive in the manufacture of cement and to Steel Rolling Mills for production of sponge iron. Steel rolling Mills is establishing a sponge iron plant.

**Table S2.2 Outcome 2: Key 2013/14 Outputs Contributing to the Sector Outcome\***

<i>Outcome 2: Well managed and safeguarded mineral resources for production and exports</i>			
<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>			
<i>Vote Function: 0305 Mineral Exploration, Development &amp; Production</i>			
<b>Output: 030502</b>	<b>Institutional capacity for the mineral sector</b>		
<i>Description of Outputs:</i>	One (1) workshop to review legal framework drafting new laws in the subsector. Train of Two staff in legal and management best practices Two (2) staff participate in sector investment promotion.	One (1) consultative workshop on the current legal framework in the sector at Hotel Serena. One (1) report on workshop proceedings  One (1) consultative workshop on the current legal framework in the sector at Hotel Serena. One (1) report on workshop	Undertake regular mineral market research on mineral prices. Two (2) workshops to review legal framework and improve mining laws in the subsector. Train of Two staff in legal and management best practices Two (6) staff participate in sector investme
<i>Performance Indicators:</i>			
Number of MEMD staff trained in the geosciences fields	20	35	40
Number of mineral artisans and small scale miners trained	300	128	600
<i>Output Cost (US\$ bn):</i>	0.130	0.043	0.352
<b>Output: 030503</b>	<b>Mineral Exploration, development, production and value-addition promoted</b>		

# Sector: Energy and Mineral Development

## Sector Summary

### Outcome 2: Well managed and safeguarded mineral resources for production and exports

<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<i>Description of Outputs:</i>	Geological, geophysical, geochemical surveys of Sheet Kawoko (79/1) and Lukaya (79/2) and follow up 16 mineral targets. Promotion of Karamoja Airborne surveys. And Geothermal development, upgrading installation of earthquake monitoring network.	Sukuru still on hold; Target for Muko has been achieved Three (3) geochemical surveys in Panyimur, Kibiro, Ntoroko, Three (3) geophysical surveys Panyimur, Kibiro, Ntoroko, Three (3) geological Surveys Panyimur, Kibiro, Ntoroko, Revised historical data o	Muko iron ore is being mined to feed domestic iron and steel industry and Sukulu need Ug.shs135bn for RAP of 2, 500 families. Detailed Geological, geophysical, geochemical surveys of key strategic minerals relevant for domestic industrialization. And
<i>Performance Indicators:</i>			
Number of geological maps produced and disseminated	250	250	250
Status of exploration and mining on Muko Iron ore project	50	50	55
Status of development of Sukulu phosphates project	25	25	25
<i>Output Cost (US\$ bn):</i>	0.256	0.073	1.521
<b>Output: 030505</b>	<b>Licencing and inspection</b>		
<i>Description of Outputs:</i>	Twelve (12) inspections to mining areas. Mineral exploration and mining areas monitored 300 mineral rights issued and NTR collected.	by end of Q2, licencing status stood at 634 licences. These include 556 Exploration License (EL), 40 Location Licenses Two Retention Licences, 20 Mining Leases, 4 Special Mining Leases.	Undertake administrative reviews of all mineral rights (licenses). Monitor exploration and mining operations. Twelve (12) inspections to mining areas (3 inspections per quarter) Mineral exploration and mining areas monitored 500 mineral rights issue
<i>Performance Indicators:</i>			
Number of mining site inspections conducted	12	8	12
Number of mineral licenses granted	300	190	500
<i>Output Cost (US\$ bn):</i>	0.161	0.053	0.240

\* Excludes taxes and arrears

### 2013/14 Planned Outputs

Mineral Exploration, Development & Production: The following outputs will be undertaken:-

- (i) Provide basic geo-scientific information for the development of the mineral sector.
- (ii) Promote optimal use of minerals and mineral trade for social improvement of the people.
- (iii) Provide technical services in the field of geosciences to guide national planning and development.
- (iv) Ensure best mining practices and accountability.
- (v) Promote mineral value addition and trade to increase revenues.
- (vi) Promote the gazetting of geosites and geoparks.
- (vii) Put in place an earthquake administration policy, expand the network of operation centres, design an earthquake disaster management plan, and equipping the research laboratories
- (viii) Institutional Capacity for the Mineral sector.

# Sector: Energy and Mineral Development

## Sector Summary

**Table S2.3 Outcome 2: Past and Medium Term Key Sector Output Indicators\***

<i>Outcome 2: Well managed and safeguarded mineral resources for production and exports</i>						
<i>Vote Function Key Output Indicators and Costs:</i>	<b>2011/12 Outturn</b>	<b>2012/13 Approved Plan</b>	<b>2012/13 Outturn by End Dec</b>	<b>MTEF Projections</b>		
				<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>						
<i>Vote Function: 0305 Mineral Exploration, Development &amp; Production</i>						
<b>Output: 030502</b>	<b>Institutional capacity for the mineral sector</b>					
Number of mineral artisans and small scale miners trained	500	300	128	600	800	
Number of MEMD staff trained in the geosciences fields	20	20	35	40	50	
<b>Output: 030503</b>	<b>Mineral Exploration, development, production and value-addition promoted</b>					
Status of development of Sukulu phosphates project	2	25	25	25	30	40
Status of exploration and mining on Muko Iron ore project	5	50	50	55	65	
Number of geological maps produced and disseminated	100	250	250	250	300	
<b>Output: 030505</b>	<b>Licencing and inspection</b>					
Number of mineral licenses granted	200	300	190	500	450	
Number of mining site inspections conducted	6	12	8	12	12	

### Medium Term Plans

- (i) Provide basic geo-scientific information for the development of the mineral sector.
- (ii) Promote optimal use of minerals and mineral trade for social improvement of the people.
- (iii) Provide technical services in the field of geosciences to guide national planning and development.
- (iv) Ensure best mining practices and accountability.
- (v) Promote mineral value addition and trade to increase revenues.
- (vi) Promote the gazettement of geosites and geoparks.
- (vii) Put in place an earthquake administration policy, expand the network of operation centres, design an earthquake disaster management plan, and equipping the research laboratories
- (viii) Institutional Capacity for the Mineral sector.

### Actions to Improve Outcome Performance

Government will continue to acquire, process and disseminate geo-information as well as aggressively sensitize the public on the key area of sustainable mineral exploitation. Establishment of reliable information systems to process, analyze, preserve, and retrieve real-time dissemination of the geo-information is also essential. The use of internet/intranet and dissemination of geo-information via web is the way to go. In addition, establishment of regional offices and staffing will be implemented so as services are brought nearer to the people. More training of staff to Masters Degree level will continue.

The sector has requested MoFPED to put in place Appropriation-in-Aid to boost Non Tax Revenue collection.

**Table S2.4 Outcome 2: Actions and Medium Term Strategy to Improve Sector Outcome**

<i>Sector Outcome 2: Well managed and safeguarded mineral resources for production and exports</i>			
<b>2012/13 Planned Actions:</b>	<b>2012/13 Actions by Dec:</b>	<b>2013/14 Planned Actions:</b>	<b>MT Strategy:</b>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>			
<i>Vote Function: 03 05 Mineral Exploration, Development &amp; Production</i>			

# Sector: Energy and Mineral Development

## Sector Summary

### *Sector Outcome 2: Well managed and safeguarded mineral resources for production and exports*

2012/13 Planned Actions:	2012/13 Actions by Dec:	2013/14 Planned Actions:	MT Strategy:
Involving the private sector developers, local leaders and land owners in a dialogue to ease access	Involving higher government authorities	A formal request is to be submitted to MoFPED in regard to the RAP Sukulu Phosphates project amounting to UGX135bn.	On completion of RAP, the project will take off to phosphates fertilizer production.
Retain 30% of NTR from mineral sector as appropriation in aid to fund the shortfall	Held interministerial meeting to address the issue of funding to the department to improve inspection of mining activities	Requested MoFPED for AIA to support the Mineral Sub-sector recurrent budget from NTR to meet the funding gap in mineral exploration, mine inspections and monitoring.	Identify sustainable sources of revenue through packaging of development projects. To allow the use of NTR at Source to cater for Appropriation in Aid (AIA).

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# Sector: Energy and Mineral Development

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## Sector Summary

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### **(iii) Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development**

#### *Status of Sector Outcome*

Capacity Building: Significant effort to build capacity in the sector through formal and industrial training has been registered. Government has to date retained and trained about 27 staff in Petroleum Exploration and Production Department (PEPD) to Masters Degree and 26 staff to diploma and postgraduate diploma level in petroleum fields. A significant number of staff is undergoing training in specialized petroleum courses in reputable universities abroad.

Government started training of specialized programs in the oil and gas industry through establishment of training institutions. About 103 students are admitted to Makerere University to undertake a Bachelors degree in Petroleum Geosciences which started in 2009. Kigumba Petroleum Institute which was commissioned in 2010 to develop the necessary technical skills in the sector is offering certificates and diplomas to 28 Ugandans.

In order for Government to participate in and monitor development and production phases it has, under the support from the Norwegian Supported Project to Strengthen the State Petroleum Administration, held a number of workshops in the areas of data management, regulatory framework formulation, development and refining.

Government procured for the sector highly specialized Information Technology (IT) hardware and software and other goods and services to enhance delivery of results. These include Geographical Information System (GIS) for map production, and Geosoft, Geographix & Petrel software to facilitate in the resource assessment.

Licensing and Exploration: Due to systematic effort on promotion in the sector, five out of the 10 Exploration Areas (EA) in the Albertine Graben have been licensed to international oil companies, to date. These are: EA1, 2, 3A, 4B&5. The remaining unlicensed areas are receiving remarkable interest from the oil companies. Licensing in the country is currently suspended pending enactment of a new law which will provide for a competitive bidding mechanism for acreages.

In Exploration Area 4B, Dominion Petroleum completed the drilling of Ngaji-1, the first exploration well in Lake Edward. The well was not a discovery and it was plugged and abandoned. The company is evaluating the findings in the Ngaji-1 well plus the earlier acquired seismic data, in preparation to acquire more seismic data in the area. Drilling Operations: Seven (7) appraisal wells Ngiri-2, Mpyo-1, Kigogole-2, Kigogole-4, Kigogole-5, Nsoga-5 and one (1) exploration well Ngaji-1 were drilled all these wells except for Ngaji-1 encountered hydrocarbons. A cumulative total of 48 wells have so far been drilled in the country and 44 out of these have encountered hydrocarbons, hence maintaining a very high (91%) technical success rate.

Approximately 8000 Kms of Two-dimension (2D) and 1500 Sq Kms of Three-dimension (3D) seismic data have been acquired by licensed oil companies in their effort to understand the hydrocarbon potential of the Albertine Graben.

A total of 51 exploration and appraisal wells have so far been drilled in the country to date. Out of these, 46 wells have encountered oil and/ or gas.

Through the appraisal of the discoveries made in about 35% of the prospective area, 2.5 billion barrels of oil equivalent is estimated to be in place in the country with a recovery factor estimated to be more than 25%. This resource base, can support production and refining of over 120,000 barrels of oil per day (bopd).

# Sector: Energy and Mineral Development

## Sector Summary

Legal and Regulatory Framework: Government, through a consultative process, formulated the National Oil and Gas Policy for Uganda in February 2008. The policy goal is to use the country's oil and gas resources to contribute to early achievement of poverty eradication and creating lasting value to society. In its implementation, Government is drafting legislations for Resource, Revenue and Environmental management, implementing a communication strategy to bridge the information gap between the sector and general public, developing the national content to ensure optimal participation in the sector, among others. In line with the policy, an appropriate institutional framework is being developed with a view to create institutions each responsible for Policy Setting, Regulation and Business interests.

**Table S2.1 Outcome 3: Sector Outcome Indicators**

<i>Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>			
<b>Outcome and Outcome Indicator</b>	<b>Baseline</b>	<b>2013/14 Target</b>	<b>Medium Term Forecast</b>
Oil and Gas Production (Number of barrels per day).	0 (2009)	4000	4000 (2011)
Number of oil wells successfully drilled and appraised.	10 (2009)	14	5 (2011)
Amount of oil and gas discovered(barrels of oil equivalent)	2.0 (2009)	2.2	2.5 (2015)
Amount of oil and gas discovered	()		()

### 2011/12 Performance

#### PETROLEUM EXPLORATION, DEVELOPMENT AND PRODUCTION

Investment in this sector by December 2009 was in the order of US\$ 900 million and is expected to increase when the development and production phases commence. To date, five out of the ten Exploration Areas in the Albertine Graben are licensed to various companies.

i) Seismic Operations: Tullow oil, the Licensee of Exploration Area 2 (EA2) continued to appraise fields discovered in EA2, with a view of properly defining the nature and extent of the oil fields in this area and also aid in the planning the Field Development Plan.

In Exploration Area 5, Neptune Petroleum (U) Ltd completed the re-evaluation, processing and interpretation of 2D seismic data from the Rhino camp basin and acquired more gravity data in preparation to drill a second well, Avivi-1 well in the area.

In Exploration Area 4B, Dominion Petroleum completed the interpretation of 530 line kilometres of 2-D seismic data, in preparations to drill the first well Ngagi-1 well near Rwenshama, Rukungiri district.

ii) Drilling Operations: Nine (9) wells were drilled: Ngassa-2, Mputa-5, Nsoga-1, Karuka-2, Kigogole-3, Wairindi-1, Awaka-1, Ngara-1 and Iti-1 and all encountered hydrocarbons. A cumulative total of 37 wells have so far been drilled in the country and 34 out of these have encountered hydrocarbons, hence maintaining a very high (over 90%) technical success rate.

iii) Plans for Oil Production: The sector continued with the implementation of both the short term and medium / long term strategy for oil production and utilization. In the short term, gas produced from the Nzizi field backed by test crude from Extended Well Testing of the oil fields will be used to generate electricity. In that regard, engineering designs of the power plant and the transmission line to evacuate power as well as land surveying and valuation to acquire wayleaves progressed well.

For the medium term, government will promote development of a refinery and in that case a feasibility study for establishment of refinery commenced. This feasibility study which will recommend the type, size and other aspects of the facility is expected to be concluded by mid-2010. The refinery project will take 4 –

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# Sector: Energy and Mineral Development

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## Sector Summary

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5 years to develop.

iv) Capitalization of the oil and gas sector: During the year, the licencees in Exploration Areas 1, 2 and 3A (Heritage Oil and Gas; and Tullow Oil) sought to farm-out and farm-down their interest in licenses respectively in order to attract heavy capital that is required to move the oil and gas sector to the development phase. The farm-out / farm-in venture has shown very high levels of success as it has attracted major oil companies like Total and China National Offshore Oil Corporation in Uganda's petroleum industry at a high premium and consideration.

V) Monitoring / Regulation: Government continues to monitor the petroleum exploration operations and plans for development and production. These activities are monitored to ensure compliance with the relevant Laws of Uganda, Production Sharing Agreements and Environmental Impact Assessment reports as well as ensuring that costs from the company expenditures are genuine since they will be recovered in future.

### PETROLEUM SUPPLY, INFRASTRUCTURE AND REGULATION

The Petroleum sector went through a relatively smooth year in 2009 as Crude oil prices fluctuated between US\$35 and US\$78 per barrel; and there were no serious petroleum shortages experienced in the country. Consumption henceforth increased by 13% from 985 million litres in 2008 to 1,114 million litres.

Licensing: In line with Government Policy of promoting small and indigenous investors into the sector, a number of investors were attracted into the industry - five (5) new companies were issued with petroleum operating licenses during 2009. This brought the total number of oil companies licensed to operate in Uganda to 75.

Strategic Fuel Reserves: The Jinja Storage Tanks (JST) with a capacity of 30 million litres exists to hold national strategic fuel reserves. During the period under review, the necessary documentation to refurbish, restock and manage the facility under Public -Private Partnership arrangement was prepared. Procurement of the private partner is underway. A study to integrate oil storage facilities with the planned pipeline and refinery infrastructure was also initiated during the financial year.

Kenya-Uganda Oil Pipeline Extension: On the pipeline project, the process for demarcation of the persons affected by land acquisition was accomplished. The pipeline was redesigned to take into account the reverse flow to accommodate oil production in Uganda in the medium term. A final investment decision was however not taken by the investor because both Governments required to review the increased costs of the project as a result of land acquisition and review the design. These issues are now being addressed to pave way for construction.

Quality and Standards Monitoring: In November 2009 Government re-launched the fuel marking programme. The program promotes quality assurance and protects the market by ensuring that smuggled and transit products are not sold in the country. Monitoring is regularly carried out to ensure that petroleum products sold in Uganda meet the required standard.

During the same period Government issued the Petroleum Supply (General) Regulations which are a guide to the issuance of construction permits for petroleum facilities and operation licenses. This is in addition to the promotion of Health, Safety and Environmental Protection in the sector.

*Performance for the first half of the 2012/13 financial year*

### PETROLEUM EXPLORATION, PRODUCTION & DEVELOPMENT



# Sector: Energy and Mineral Development

## Sector Summary

The industry is moving steadily into the development phase of the petroleum value chain. There have been continuous Government efforts to promote the establishment of the country's petroleum resource base and to achieve sustainable exploitation. These efforts have included building national expertise in the field of petroleum exploration, development and production; attraction of oil companies into the subsector; and emplacement of an appropriate policy and legal framework.

### Legal Framework

Petroleum exploration and production operations are currently governed by: i) The Petroleum (Exploration and Production) Act (PEPA), Cap 150, Laws of Uganda 2000); ii) The Petroleum (Exploration and Production) (Conduct of Exploration Operations) Regulations, 1993; and iii) The Production Sharing Agreements (PSAs). These have worked well during the promotion and exploration phases but, as the country enters the development and production phases, two new petroleum laws to operationalise the National Oil and Gas Policy are being put in place.

**The Petroleum Resource Management Law:** The Petroleum Resource Management Law covers the upstream petroleum operations which are oil and gas exploration, development and production. The Law will create new institutions like the Petroleum Authority and the National Oil Company to regulate and enforce compliance in the sector; and manage the State commercial interest respectively. The law spells out terms and conditions for award of petroleum rights in a competitive manner, conducting petroleum operations based on international best practice, it provides for technology transfer, national participation, stipulates standards for health, safety and environment protection and decommissioning. The Bill was tabled in parliament on 13th February, 2012 and was passed by Parliament in December 2012.

**Law on Petroleum (Refining, Gas Processing and Conversion, Transportation and Storage):** Government policy as spelt out in the National Oil and Gas Policy of Uganda provides for value addition of Uganda's oil and gas resources and the promotion of suitable transport and storage solutions. These new areas which have been non-existent in Uganda's oil and gas sector therefore require an appropriate legal and regulatory framework. Consequently a law to facilitate investment and development of oil and gas infrastructure like oil refineries, gas processing plants, crude oil transportation pipelines and storage facilities, and the regulation thereof has been prepared. Essentially, the law provides for an incentive framework and licensing for investors, ensures third party access to common infrastructure, provides for standards to access the infrastructure, national participation and areas of Health Safety and Environment. The Bill was tabled in parliament on 14th February and was passed by Parliament in February 2013.

### Capitalization of the oil and gas sector

The farm-in/farm-out processes of the licensees in Exploration Areas 1, 2 and 3A (Heritage Oil and Gas; and Tullow Oil) of their interest in their respective licenses were concluded. The farm-in/farm-out ventures attracted major oil companies like Total and China National Offshore Oil Corporation (CNOOC) in Uganda's petroleum industry at a high premium and consideration. Tullow, CNOOC and Total E & P are to proceed with the development of oil and gas resources in Exploration Areas 1, 2 and 3A of the Albertine Graben.

### Licensing Status and Investment Promotion

There are therefore four (4) international oil companies that hold exploration licenses in four out of thirteen Exploration Areas demarcated in the Albertine Graben. These companies are: -

- (i) Tullow Oil Ltd., Total E&P Uganda Ltd and CNOOC Uganda Ltd who hold a 33.33% joint venture in Discovery Areas or oil fields of Exploration Area (EA) 1 (Paraa – Wanseko – Pakwach Basin), EA 2

# Sector: Energy and Mineral Development

## Sector Summary

(Northern Lake Albert Basin), and EA 3A (Southern Lake Albert Basin) following the partial sale or farm-down of Tullow Oil Ltd's interest; and

(ii) Dominion Petroleum Ltd. In Exploration Area 4B.

Prior to the discovery of commercial oil and gas resources in 2006, Uganda was generally regarded by the International Oil Companies (IOCs) as a frontier area. Therefore, when active licensing of acreage was started in 1997, licensing was conducted on an open door policy of first come, first served. However, since 2006 there has been a halt on licensing in order to pave the way for establishing a new licensing regime. That notwithstanding, the country has experienced a lot of interest from oil companies to acquire acreage since the geological risk of finding commercial oil and gas resources has been substantially reduced.

The new licensing strategy is to use open and transparent bidding as a basis for licensing and only consider other licensing options where it is necessary with clear benefits for the country. Competitive bidding will ensure that the country gets the best Oil Company and also have multiple contractors within the Exploration Areas unless circumstances dictate otherwise.

Previously, acreage offered was large in thousands of square kilometres with some areas more than 6,000 square kilometres. However, the nature and extent of the Albertine is that a relatively small geographical area can contain significant hydrocarbon resources. As a matter of strategy, therefore, the Exploration Areas are being re-demarcated to allow for smaller and hence more Exploration Areas.

### Status of Exploration

To date, a total of sixty nine (69) exploration and appraisal wells have been drilled in the country, out of which sixty four (64) wells have encountered oil and/or gas in the subsurface. This represents a success rate of over 91%, one of the highest success rates globally. The discoveries made in the Albertine Graben, include Turaco, Mputa, Waraga, Nzizi, Kajubirizi, Kasamene, Ngege, Nsoga, Ngiri, Jobi, Ngassa, Taitai, Karuka, Wairindi, Kigogole, Ngara, Mpyo, Jobi-East, Gunya and Rii. The reserves in place have grown steadily from 300 million barrels in 2006 to the current estimate of over 2.5 billion barrels of oil in place and are expected to be even more with more investment since only 30% of the prospective area has been explored.

If more reserves are discovered the country would be placed in the category of Sudan (6.4bbol), above Gabon (2bbol), Chad (1.8bbol) and Equatorial Guinea (1.1bbol).

### Commercialization strategies

The discoveries made to date are sufficient to implement a large scale commercialization project in the country. Commercialization options at the disposal of the country include: (i) direct provision of electricity as a source of energy; (ii) refining of crude oil to produce white petroleum products, heavy fuel oil and other by-products from the refinery as raw materials for other industries; (iii) gas processing and gas conversion; and (iv) export of crude oil as a bulk commodity by pipeline to the coast. In the short-term some few selected oil fields will be put into production to provide gas and crude oil for power generation. In the medium term, government plan is to develop refinery to produce white petroleum products for the domestic and regional market. A detailed feasibility study for development of the refinery was completed in 2010 and project development including land acquisition and investment has been embarked on.

Refinery Development Programme: Government will pursue the development of the oils refinery given the benefits the infrastructure will deliver to the economy and the country as a whole. The refinery will be developed on a Private – Public Partnership basis through a joint venture company. The shareholding participation will be 60% (sixty percent) by the private sector and 40% (forty percent) by the public sector. This arrangement is designed to provide confidence for the investors, who are expected to not only provide

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# Sector: Energy and Mineral Development

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## Sector Summary

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most of the funding, but also operate the industry. It is also proposed that the East African Community Partner States will participate with 10% of the public shares. Consultations with Partner States have commenced to determine the best arrangement for participation in the Refinery Development.

Government is now in the process of hiring a Transaction Advisor who will guide in the following key aspects: structure of the refinery; develop a feasible project financing structure; plan and secure appropriate investment partners; advise on the best contractual arrangements; advise on the pricing framework of crude oil and refined products; and guide the process of formation of the Joint Venture Refining Company and attaining financial closure.

Land acquisition for the Refinery: The process of acquiring of 29 square kilometres of land is on-going having got the clearance of Hoima District Land Board in 2011. Besides the refinery, the land will accommodate an airfield, waste management facilities, future energy based and other associated industries such as petrochemicals, staff quarters, among others. Subsequently, the land will be gazetted.

Resettlement Action Plan study commenced in March 2012 and is expected to take five (5) months. This will be followed by implementation of the study findings.

Improved access to information on oil and gas activities:

Government and Oil companies have continued to educate communities through various for a. In addition, information is available at the recently established Oil Information Centers in the districts of Hoima, Buliisa and Arua. Through the implementation of the National Communication Strategy for the Oil and Gas sector, several talk-shows and media engagements have been held both within and out the Albertine Graben.

## PETROLEUM SUPPLY, INFRASTRUCTURE & REGULATION

Petroleum Product Marketing: The Petroleum products prices were relatively unstable in 2011. This trend is attributed to political unrest in Libya. Crude oil prices fluctuated between \$92 and \$117 per barrel; while the local pump prices fluctuated between shs. 3,100 and shs. 3,880 for petrol, shs. 2,150 and shs. 2,890 for kerosene and shs. 2,500 and shs. 3,500 for diesel respectively. No serious petroleum shortages were experienced in the country.

Licensing: In line with the Petroleum Supply (General) Regulations, 2009 which aim at streamlining the downstream petroleum sub-sector, the Ministry relicensed all industry players. A total of 87 companies were issued with petroleum operating licenses and twenty (20) Petroleum Construction Permits were issued.

### Strategic Storage Tanks

Jinja Storage Tanks: The Jinja Storage Tanks (JST) with a capacity of 30 million litres exist to hold national strategic fuel reserves. The procurement process of a Private Partner to operate Jinja Storage Facilities was completed under a Private Public Partnership. The facility will be refurbished and operations reopen within eight (8) months from now. The private operator will refurbish, stock and operate the depot but the facility remains the property of the Government of Uganda.

Nakasongola depot: Government is packaging Nakasongola Storage tank site for revamping and completion to enhance National Petroleum Strategic Reserve capacity. The Nakasongola facility when completed will have capacity of 40 million litres. Government has decided that the required additional capital investment for completion of the remaining work/refurbishment and management of the reserves be sought from the private sector under a Public-Private Partnership (PPP) arrangement. The private operator will provide

# Sector: Energy and Mineral Development

## Sector Summary

capital and play a leading role in the completing of the remaining work, stocking, operation, maintenance and management of the Nakasongola depot under a Concession.

Distribution and Storage Feasibility Study: Preparations for the feasibility study on development of Distribution and Storage Facilities of Petroleum Products in view of the proposed inland refinery were completed. This study will consider the existing and proposed storage and the location of the refinery and come up with the most optimal distribution and storage infrastructure in Uganda and beyond.

Promotion of the Alternative Supply Route: At the moment, the country imports over 90% of its products through Kenya and less than 10% through Tanzania. The southern route through Tanzania is not competitive due to the long distance and at the same time the Kenyan route is over congested. This subjects the country to sporadic supply shortages. In view of the above, government authorised an incentive structure through a tax-rebate system to encourage oil marketing companies to use the southern route.

Quality and Standards Monitoring: The Government continued with the fuel marking and quality monitoring program. The program promotes quality assurance and protects the market by ensuring that smuggled and transit products are not sold in the country. The non-compliance level has reduced from 29.1% in 2010 to 4.2% in 2011. In addition, the products specifications/standards for Petrol, Diesel, Kerosene and ethanol for blending have been developed.

**Table S2.2 Outcome 3: Key 2013/14 Outputs Contributing to the Sector Outcome\***

<i>Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>			
<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>			
<i>Vote Function: 0303 Petroleum Exploration, Development &amp; Production</i>			
<b>Output: 030303</b>	<b>Capacity Building for the oil &amp; gas sector</b>		
<i>Description of Outputs:</i>	Six (6) members of staff will commenced MSc. Studies in Petroleum Geoscience, Engineering and Refinery Design.	One (1) staff member continued M.Sc. In Petroleum Law and Policy;  One (1) staff member continued M.Sc. In Environmental Management;  One (1) staff member continued M.Sc. In Petroleum Law and Policy;  Three (3) staff members continued M.Sc. St	Train eight (8) members of staff in Petroleum Geoscience, Engineering and Refinery Design.  Increase national participation from the current approx 10% to 20%
<i>Performance Indicators:</i>			
Status on creation of the Petroleum Directorate, the Petroleum Authority and National Oil Company	100	0	100
Number of staff trained	6	7	8
<i>Output Cost (US\$ bn):</i>	4.275	1.836	9.063
<b>Output: 030304</b>	<b>Monitoring Upstream petroleum activities</b>		

# Sector: Energy and Mineral Development

## Sector Summary

<i>Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>			
<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<i>Description of Outputs:</i>	Monitoring drilling of exploration wells in EA4B and EA5. Monitor drilling of appraisal and development wells in EA1, EA2 and EA3A. Monitor acquisition of more seismic data in EA4B. Commence government's participation in petroleum production.	Five exploration wells and four appraisal wells drilled in EA1;  Acquisition of 60 line-km of 2D Engineering seismic data in EA1, completed;  Four appraisal wells drilled in EA2;  CNOOC continued with the restoration of Kanyatwaba-1 well site in EA	Monitor drilling of 30 wells in three (3) EAs in the Albertine Graben .  Monitor testing of at least 10 wells in the Graben.  Monitor of ten (10) campaigns of seismic and other Geological and Geophysical (G&G) activities.
<i>Performance Indicators:</i>			
Number of line (km) of seismic data acquired.	1000	60	800
% of petroleum exploration programmes monitored	100	50	100
Number of wells drilled	14	13	30
<i>Output Cost (US\$ bn):</i>	1.977	0.419	1.978
<b>Output: 030305</b>	<b>Develop and implement a communication strategy for oil &amp; gas in the country</b>		
<i>Description of Outputs:</i>	A website on Petroleum Exploration Development and Production operations to be maintained. Twelve (12) radio talk shows to be held in Kila and towns within the Albertine Graben. Continue to dialogue with CSOs, the media and other stakeholders.	Eight radio talk shows in the Albertine Graben; three talk shows in Northern Uganda ; and four talk shows in Kampala/Central region;  A field visit to the Albertine Graben by 17 editors and 4 journalists, undertaken;  Two meetings held with Civil society	<input type="checkbox"/> Public awareness in the oil and gas sector undertaken.  <input type="checkbox"/> Involvement of the public and other stakeholders in the oil and gas activities achieved.  Departmental website maintained.
<i>Performance Indicators:</i>			
Number of Exploration Areas and people visited and sensitized on petroleum exploration and production activities	5	4	5
% of stakeholder communities consulted	50	40	70
Number of workshops, radio talk shows, and publications undertaken	30	17	20
<i>Output Cost (US\$ bn):</i>	0.921	0.034	1.472
<b>Output: 030380</b>	<b>Oil Refinery Construction</b>		

# Sector: Energy and Mineral Development

## Sector Summary

<i>Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>			
<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<i>Description of Outputs:</i>	<ul style="list-style-type: none"> <li>- Pre Front End Engineering design</li> <li>- Communication Plan for the development of an oil refinery.</li> <li>- Aerodrome location technical studies.</li> <li>- Refinery foundation strenght and hydrological studies.</li> <li>- Environmental Impact Assessment</li> </ul>	Completed the Resettlement Action Plan Study and the following reports were submitted: <ul style="list-style-type: none"> <li>-Valuation report</li> <li>-Socio-economic report</li> <li>-Cadastral survey report</li> </ul> The valuation report has been approved by the Chief Government Valuer. The bids for the Transa	Land for the refinery and supporting infrastructure acquired.  Continued implementation of Logistics study recommendations.  Transaction Advisor's assigned duties for Refinery development undertaken.  Pre - Front End Engineering Design (FEED) for re
<i>Performance Indicators:</i>			
Status of land acquisition for oil refinery infrastructure			4. RAP Implementation
Status of 1 oil refinery development			5.Procument of developers
Status of compensation for land claimants under Resettlement Action Plan (RAP)			4. RAP Implementation
Status of Environmental Impact Assesment completed	100	60	30
<i>Output Cost (US\$ bn):</i>	12.440	6.087	39.386
<i>Vote Function:0304 Petroleum Supply, Infrastructure and Regulation</i>			
<b>Output: 030402</b>	<b>Management and Monitoring of petroleum supply Industry</b>		
<i>Description of Outputs:</i>	<ul style="list-style-type: none"> <li>- Petroleum supply market operations monitored.</li> <li>- Petroleum standards enforced,</li> <li>- Compliance with applications for new applicants evalauted.</li> </ul>	Enforcement of standards in central region conducted <ul style="list-style-type: none"> <li>-Monitoring in South- Western Uganda conducted for 110 service stations</li> <li>-JST refurbishment monitored</li> <li>-TOR for Nakasongola Site completed</li> </ul>	-Petroleum supply market operations monitored for compliance to Petroleum Supply Act, 2003. Petroleum standards enforced; Compliance with applications for new licenses evalauted
<i>Performance Indicators:</i>			
% of petroleum facilities monitored conforming to standards	10	30	15
Herfindahl Index (HI) of market Competitiveness	0.06	0.08	0.07
<i>Output Cost (US\$ bn):</i>	0.410	0.183	0.362
<b>Output: 030405</b>	<b>Development of Petroleum Refinery and Processing</b>		
<i>Description of Outputs:</i>		Salaries paid in time	
<i>Output Cost (US\$ bn):</i>	0.013	0.002	0.012
<b>Output: 030406</b>	<b>Kenya - Uganda - Rwanda Oil pipelines</b>		

# Sector: Energy and Mineral Development

## Sector Summary

<i>Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>			
<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2012/13 Spending and Outputs Achieved by End Dec</b>	<b>2013/14 Proposed Budget and Planned Outputs</b>
<i>Description of Outputs:</i>		One JCC meeting held - Kenya-Uganda Oil Pipeline re- designed - Expression of Interest and request for proposals advertised in newspapers	
<i>Output Cost (US\$ bn):</i>	0.057	0.012	0.057

\* Excludes taxes and arrears

### 2013/14 Planned Outputs

The sector will continue to implement the National Oil and Gas Policy by undertaking the following activities: -

- (i) Promote the Country's petroleum potential and prepare a licensing round;
- (ii) Coordinate the formulation of a new petroleum bill;
- (iii) Build Capacity of the Oil and Gas sector through formal and informal training;
- (iv) Monitor the exploration for oil and gas together with appraisal of the discovered oil and gas fields;
- (v) Define and implement the National Content in the Oil and Gas Sector;
- (vi) Development and Implementation of a Communication strategy for the Oil and Gas Sector; and
- (vii) Participate in Regional initiatives.

Petroleum Supply, Infrastructure & Regulation: The following outputs will be undertaken:-

- (i) Develop Petroleum facility standards and product specification;
- (ii) Monitor the petroleum supply Industry;
- (iii) Maintain the National Petroleum Information System;
- (iv) Enforce Operational Standards and carry out laboratory testing of petroleum products;
- (v) Coordinate the development of Petroleum Refinery and Processing; and
- (vi) Commence the construction of the Kenya - Uganda oil pipeline and undertake the feasibility study for the Uganda - Rwanda Oil pipeline.

**Table S2.3 Outcome 3: Past and Medium Term Key Sector Output Indicators\***

<i>Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>						
<i>Vote Function Key Output Indicators and Costs:</i>	<b>2011/12 Outturn</b>	<b>2012/13 Approved Plan</b>	<b>Outturn by End Dec</b>	<b>MTEF Projections</b>		
				<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
<b>Vote: 017 Ministry of Energy and Mineral Development</b>						
<i>Vote Function: 0303 Petroleum Exploration, Development &amp; Production</i>						
<b>Output: 030303</b>	<b>Capacity Building for the oil &amp; gas sector</b>					
Number of staff trained	5	6	7	8	6	8
Status on creation of the Petroleum Directorate, the Petroleum Authority and National Oil Company	40	100	0	100		
<b>Output: 030304</b>	<b>Monitoring Upstream petroleum activities</b>					

# Sector: Energy and Mineral Development

## Sector Summary

Number of wells drilled	4	14	13	30	40	40
% of petroleum exploration programmes monitored	100	100	50	100	100	100
Number of line (km) of seismic data acquired.	1150	1000	60	800	800	600
<b>Output: 030305 Develop and implement a communication strategy for oil &amp; gas in the country</b>						
Number of workshops, radio talk shows, and publications undertaken	30	30	17	20	20	20
% of stakeholder communities consulted	40	50	40	70	80	90
Number of Exploration Areas and people visited and sensitized on petroleum exploration and production activities		5	4	5	5	10
<b>Output: 030380 Oil Refinery Construction</b>						
Status of Environmental Impact Assessment completed	10	100	60	30	70	100
Status of compensation for land claimants under Resettlement Action Plan (RAP)	3. RAP studies			4. RAP Implementation	4. RAP Implementation	
Status of 1 oil refinery development	3. RAP studies			5. Procurement of developers	6. Front End Engineering Designs (FEED)	7. Engineering Procurement and Construction (EPC)
Status of land acquisition for oil refinery infrastructure	3. RAP studies			4. RAP Implementation	4. RAP Implementation	
<i>Vote Function: 0304 Petroleum Supply, Infrastructure and Regulation</i>						
<b>Output: 030402 Management and Monitoring of petroleum supply Industry</b>						
% of petroleum facilities monitored conforming to standards	100	10	30	15	10	
Herfindahl Index (HI) of market Competitiveness	0.1	0.06	0.08	0.07	0.06	
<b>Output: 030405 Development of Petroleum Refinery and Processing</b>						
<b>Output: 030406 Kenya - Uganda - Rwanda Oil pipelines</b>						

### Medium Term Plans

Petroleum Exploration, Development and Production:

The sector will continue to implement the oil and gas policy over the medium term, this will involve undertaking the following:-

- (i) Promote the Country's petroleum potential and licensing;
- (ii) Coordinate the implementation of the oil and gas regulations in the sector;
- (iii) Build Capacity of the Oil and Gas sector;
- (iv) Monitor the Upstream petroleum activities;
- (v) Develop and Implement a Communication strategy for the Oil and Gas Sector in the country; and
- (vi) Participate in Regional initiatives.

Petroleum Supply, Infrastructure & Regulation

- (i) Update the downstream Petroleum Policy, and Regulation;
- (ii) Monitor the petroleum supply Industry for compliance;
- (iii) Maintenance of National Petroleum Information System;



# Sector: Energy and Mineral Development

## Sector Summary

- (iv) Operational Standards and laboratory testing of petroleum products;
- (v) Development of Petroleum Refinery and Processing;
- (vi) Kenya - Uganda - Rwanda Oil pipelines commissioned; and
- (vii) Strategic National Petroleum Reserves developed.

### Actions to Improve Outcome Performance

The sector commenced fresh registration of all petroleum installations and operations and the response is good. We are now finalizing the procurement process for refurbishing and restocking of Jinja Storage Tanks. The sector has enhanced monitoring the industry under the Fuel Marking and Quality Control Programme. In addition, the sector is enforcing the legal requirement that all Oil Marketing Companies should maintain stocks of 10 days as operating reserve on their part. These have worked well to stabilize the supply of products.

The Oil Pipeline still faces a challenge of acquiring land for wayleaves and we are discussing with the investor, TAMOIL, to have them take over the funding of land acquisition on a carried-interest basis.

**Table S2.4 Outcome 3: Actions and Medium Term Strategy to Improve Sector Outcome**

<i>Sector Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>			
2012/13 Planned Actions:	2012/13 Actions by Dec:	2013/14 Planned Actions:	MT Strategy:
<b>Vote: 017 Ministry of Energy and Mineral Development</b>			
Vote Function: 03 03 Petroleum Exploration, Development & Production			
Six technical staff commence MSc. Programs in Petroleum Studies and other strategic training programs undertaken.	Six Masters (in Petroleum Geosciences, Law and Environment), commenced.  Three in-house training workshops were held in the areas of IT, GIS and Data management	Train five (5) members of staff at Postgraduate Level in Petroleum related studies.  Continue the implementation of local content strategy and plan.  In-house training and field excursions, including Stratigraphic scheme.	Continued strengthening of the institutional capacity
The two Bills enacted by Parliament.  Development of the attendant regulations and guidelines.  Revision of the Model Production Sharing Agreement (PSA).	Inter-ministerial consultations to harmonize the Petroleum Bills undertaken.Two workshops and two preparatory meetings with Hon. Members of Parliament and some Ministries of were held to discuss the bills.  The Petroleum Exploration, Development and Production Bill (2012) was passed by Parliament.  The midstream Bill is being considered by Parliament.	New Regulations and guidelines for the upstream activities developed;  Model PSA reviewed and updated  Monitoring and Evaluation (M & E) strategy for the National Oil and Gas Policy (NOGP) formulated.	Continue the implementation of the oil and gas policy and legislations.
Vote Function: 03 04 Petroleum Supply, Infrastructure and Regulation			
- Follow up implementation of a tax rebate to promote the southern route.	Follow up with MoFPED on the implementation of a tax rebate to promote the southern route	-Feasibility study for Hoima-Kampala pipeline done; Definational stage for Kenya-Uganda Oil Pipeline completed	- Follow up implementation of a tax rebate to promote the southern route

# Sector: Energy and Mineral Development

## Sector Summary

<i>Sector Outcome 3: A well managed and safe guarded petroleum, Oil and gas resource chain for sustainable development</i>			
2012/13 Planned Actions:	2012/13 Actions by Dec:	2013/14 Planned Actions:	MT Strategy:
Capacity building	Refurbishment of the Jinja National Strategic Reserves on going	- Tendering for Nakasongola fuel depot under PPP; Restocking of JST completed and JST made a bondedware house	Development of more fuel reserves Re-open operations at Jinja national strategic reserves

### (iv) Efficiency of Sector Budget Allocations

**Table S2.5: Allocations to Key Sector and Service Delivery Outputs over the Medium Term**

Billion Uganda Shillings	(i) Allocation (Shs Bn)				(ii) % Sector Budget			
	2012/13	2013/14	2014/15	2015/16	2012/13	2013/14	2014/15	2015/16
Key Sector	1,170.2	<b>1,225.8</b>	1,261.8	1,461.9	79.0%	<b>69.7%</b>	73.2%	76.1%
Service Delivery	114.2	<b>93.1</b>	125.3	164.4	7.7%	<b>5.3%</b>	7.3%	8.6%

**Table S2.3: Key Unit Costs of Services in the Sector (Shs '000)**

Unit Cost Description	Actual 2011/12	Planned 2012/13	Proposed 2013/14	Costing Assumptions and Reasons for any Changes and Variations from Plan
<b>Vote: 017 Ministry of Energy and Mineral Development</b>				
<i>Vote Function: 0301 Energy Planning, Management &amp; Infrastructure Dev't</i>				
Cost per Mega Watt hour (MWh) of thermal generated electricity		318,827		The cost represents the energy price per MW generated at Aggreko Mutundwe Plant priced at USD 160.78 per MWh, calculated at a base price of 1US = 1980UShs (Feb 2009 prices)
Cost per kilo Watt hour (kWh) sold by the system operator UETCL to the energy distributors		235		The cost represents the peak hour cost of electricity transmitted by UETCL
<i>Vote Function: 0302 Large Hydro power infrastructure</i>				
Cost per Mega Watt of electricity produced per hour by a large hydro power station	25,617	25,000		Approved energy tariff for the power generated at the Nalubaale - Kiira operated by a concessionaire
<i>Vote Function: 0305 Mineral Exploration, Development &amp; Production</i>				
Cost per line kilometre of airborne geophysical data		17,500	17,500	Total survey cost under the Sustainable Management of Mineral Resources Project 2004 - 2011 of USD 5.005 million for 632,681 line kilometres covered; averaged USD 7.911 per line kilometre

**Table S2.6: Allocations to Capital Investment over the Medium Term**

Billion Uganda Shillings	(i) Allocation (Shs Bn)				(ii) % Sector Budget			
	2012/13	2013/14	2014/15	2015/16	2012/13	2013/14	2014/15	2015/16
Consumption Expenditure (Outputs Provided)	37.0	<b>40.8</b>	107.1	139.1	2.5%	<b>2.3%</b>	6.2%	7.2%
Grants and Subsidies (Outputs Funded)	125.1	<b>77.5</b>	35.5	110.3	8.4%	<b>4.4%</b>	2.1%	5.7%
Investment (Capital Purchases)	1,319.8	<b>1,643.9</b>	1,581.2	1,672.8	89.1%	<b>93.3%</b>	91.7%	87.0%
<b>Grand Total</b>	<b>1,481.8</b>	<b>1,762.2</b>	<b>1,723.8</b>	<b>1,922.1</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

### (v) Sector Investment Plans

**Table S2.7: Major Capital Investments**

Project	2012/13		2013/14
Vote Function Output <i>UShs Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote: 017 Ministry of Energy and Mineral Development</b>			
<b>Vote Function: 0301 Energy Planning, Management &amp; Infrastructure Dev't</b>			
<i>Project 0331 Rural Electrification</i>			
<b>030179 Acquisition of Other Capital Assets</b>	<ul style="list-style-type: none"> <li>- Twelve (12) District Headquarters Electrified.</li> <li>- Five (5) NORAD Funded RE Project Completed.</li> <li>- Construction Works and Commissioning Tests of RE Lines and Schemes completed.</li> <li>- Complete Buseruka-Hoima 33kV line.</li> <li>- Feasibility studies for Muzizi Hydropower Site (20MW) Completed.</li> <li>- Feasibility Study for Nyagak II Completed</li> <li>- Carry out site identification and preliminary studies for 10 mini-hydropower sites.</li> </ul>	<ul style="list-style-type: none"> <li>- Construction works were completed for Mubende Kyenjojo, Ibanda-Kazo, Kyabirukwa -Nyarukika. Technical commissioning tests in progress.</li> <li>-Buseruka-Hoima 33kV line: Works for HV line completed, commissioned and energised in November 2012.</li> <li>-Muzizi Hydropower Site (20MW): Feasibility studies are in progress, inception report was received and cleared.</li> </ul>	<ul style="list-style-type: none"> <li>- Twelve (12) District Headquarters Electrified.</li> <li>- Five (5) NORAD Funded RE Project Completed.</li> <li>- Construction Works and Commissioning Tests of RE Lines and Schemes completed</li> <li>-Rural Electrification Monitoring and Supervision Reports in Place.</li> <li>-Grid Extended in West Nile Region. Project Reports in Place.</li> <li>-Sensitisation and Awareness of Projects under Development in Project Affected Areas carried out and Reports Generated.</li> </ul>
<b>Total</b>	<b>50,696,000</b>	<b>1,425,567</b>	<b>24,250,039</b>
<i>GoU Development</i>	<i>17,126,000</i>	<i>1,425,567</i>	<i>16,976,000</i>
<i>Donor Development</i>	<i>33,570,000</i>	<i>0</i>	<i>7,274,039</i>
<i>Project 1025 Karuma Interconnection Project</i>			
<b>030179 Acquisition of Other Capital Assets</b>	<ul style="list-style-type: none"> <li>-Consultant for Supervision of Works</li> <li>- EPC Contractor Procured.</li> <li>-Implementation of RAP for the Karuma Interconnection Line</li> </ul>	<ul style="list-style-type: none"> <li>- RAP sensitization is on going</li> <li>Others include: <ul style="list-style-type: none"> <li>- Tender documents complete</li> <li>-Sourcing for financing for construction of the Karuma Interconnection On-going.</li> <li>-RAP study was completed.</li> <li>-Team has been put in place by UETCL for the implementation of the RAP, and implementation commenced.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Construction of Karuma-Kawanda, Karuma- Lira, and Karuma - Olwiyo transmission lines and associated substations</li> <li>- Rap Implimentation</li> </ul>
<b>Total</b>	<b>3,000,000</b>	<b>0</b>	<b>1,920,000</b>
<i>GoU Development</i>	<i>3,000,000</i>	<i>0</i>	<i>1,920,000</i>
<i>Donor Development</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Project 1026 Mputa Interconnection Project</i>			

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0301 Energy Planning, Management &amp; Infrastructure Dev't</b>			
<b>030179 Acquisition of Other Capital Assets</b>	<ul style="list-style-type: none"> <li>_ EPC engineering works for the Nkenda - Hoima transmission line</li> <li>- EPC engineering works for the substation extension at Nkenda, Fort Portal and Hoima</li> </ul>	<ul style="list-style-type: none"> <li>- Procurement of Consultant for supervision of works of Nkenda-Hoima is ongoing; the RFP was approved by both the Embassy and AFD</li> <li>Others include:               <ul style="list-style-type: none"> <li>- RAP Implementation for the project is on-going; overall clearance is at 65%</li> <li>- Construction of resettlement houses for Project Displaced Persons (PDPs) is on-going;</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Construction of Nkenda-Hoima 220kV transmission line and associated substations.</li> <li>- RAP Implementation</li> </ul>
<b>Total</b>	<b>34,452,000</b>	<b>0</b>	<b>1,500,000</b>
<i>GoU Development</i>	<i>2,000,000</i>	<i>0</i>	<i>1,500,000</i>
<i>Donor Development</i>	<i>32,452,000</i>	<i>0</i>	<i>0</i>
<b>Project 1137 Mbarara-Nkenda/Tororo-Lira Transmission Lines</b>			
<b>030179 Acquisition of Other Capital Assets</b>	<ul style="list-style-type: none"> <li>- Implementation of RAP for the Tororo - Lira; Mbarara - Nkenda Lines</li> <li>-Procurement of EPC Contractor</li> <li>-Construction works for Mbarara – Nkenda 132kV (160km) and Tororo – Opuyo –Lira 132kV (260km) transmission line</li> </ul>	<ul style="list-style-type: none"> <li>-RAP (Tororo-Opuyo-Lira 132kV and Mbarara - Nkenda 132kV Lines) Implementation is on going.</li> <li>- The EPC contractors were approved by the Board, Solicitor General and the Bank and were signed</li> <li>- Draft technical study report submitted and reviewed</li> <li>- Electricity services affordability study presented and reviewed</li> </ul>	<ul style="list-style-type: none"> <li>- Construction of Mbarara-Nkenda &amp; Tororo-Lira transmission lines and associated substations</li> <li>-RAP implementation</li> </ul>
<b>Total</b>	<b>60,770,000</b>	<b>11,506,143</b>	<b>116,700,000</b>
<i>GoU Development</i>	<i>23,000,000</i>	<i>11,506,143</i>	<i>6,400,000</i>
<i>Donor Development</i>	<i>37,770,000</i>	<i>0</i>	<i>110,300,000</i>
<b>Project 1140 NELSAP</b>			
<b>030179 Acquisition of Other Capital Assets</b>	<ul style="list-style-type: none"> <li>- RAP Implementation</li> <li>- Procurement of EPC Contractor</li> <li>- Construction works for Bujagali – Tororo-Lessos and Mbarara-Mirama-Birembo transmission lines</li> </ul>	<ul style="list-style-type: none"> <li>- The contract for the EPC contractor were approved by the UETCL Board, Solicitor General and the Bank.</li> <li>- The contracts for the project components were signed.</li> <li>- RAP Implementation for the project is on-going</li> </ul>	<ul style="list-style-type: none"> <li>-RAP implementation</li> <li>- Construction works of Bujagali-Tororo-Lessos and Mbarara-Mirama- transmission lines</li> </ul>
<b>Total</b>	<b>32,470,000</b>	<b>2,800,688</b>	<b>162,460,000</b>
<i>GoU Development</i>	<i>8,610,000</i>	<i>2,800,688</i>	<i>3,200,000</i>
<i>Donor Development</i>	<i>23,860,000</i>	<i>0</i>	<i>159,260,000</i>
<b>Project 1144 Hoima - Kafu interconnection</b>			

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0301 Energy Planning, Management &amp; Infrastructure Dev't</b>			
<b>030179 Acquisition of Other Capital Assets</b>	-Consultant to Conduct the Feasibility Study for the Hoima-Kafu Interconnection 220kV Line Procured.  -Feasibility Study for the Hoima-Kafu Interconnection 220kV Line Completed.	-Feasibility study for the Hoima-Kafu Interconnection 220kV Line is in progress - Funded by the Government of the Kingdom of Norway  - Inception report for the Hoima-Kafu Interconnection 220kV Line completed	-Feasibility study for Hoima-Kafu feasibility study concluded - Supervision Consultant  - RAP Implementation
<b>Total</b>	<b>3,000,000</b>	<b>0</b>	<b>12,320,000</b>
<i>GoU Development</i>	<i>0</i>	<i>0</i>	<i>3,000,000</i>
<i>Donor Development</i>	<i>3,000,000</i>	<i>0</i>	<i>9,320,000</i>
<b>Project 1212 Electricity Sector Development Project</b>			
<b>030179 Acquisition of Other Capital Assets</b>	Construction of new Kawanda-Masaka transmission line and related upgrades to substations.  Power Sector Information Center in place  - Compensation for land for the Kawanda-Masaka transmission line (RAP implementation)  -Procurement of supervision Consultant for Kawanda-Masaka transmission lines  -Procurement of EPC Contractor for Kawanda Masaka transmission project  -Procurement of Consultant for feasibility study Lira –Gulu-Nebbi –Arua transmission line project	- The project achieved Credit effectiveness on 23rd October, 2012  - Procurement of Consultant for supervision of works on going; Request for Proposals (RFP) submitted to Bank for 'no objection'  - Procurement of EPC Contractor ongoing;  - Procurement of Consultant for Lira-Gulu-Nebbi feasibility study on-going  - The main RAP report was approved by the CGV.  - RAP Implementation for the project is on-going; overall clearance is at 12%	Construction of new Kawanda-Masaka transmission line and related upgrades to substations.  Power Sector Information Center in place  - Compensation for land for the Kawanda-Masaka transmission line (RAP implementation)  -Procurement of supervision Consultant for Kawanda-Masaka transmission lines  -Procurement of EPC Contractor for Kawanda Masaka transmission project  -Procurement of Consultant for feasibility study Lira –Gulu-Nebbi –Arua transmission line project
<b>Total</b>	<b>44,933,000</b>	<b>12,856,269</b>	<b>108,270,955</b>
<i>GoU Development</i>	<i>26,746,000</i>	<i>12,856,269</i>	<i>3,195,955</i>
<i>Donor Development</i>	<i>18,187,000</i>	<i>0</i>	<i>105,075,000</i>
<b>Project 1221 Opuyo Moroto Interconnection Project Op</b>			
<b>030179 Acquisition of Other Capital Assets</b>	- Way leaves for the transmission line and sub stations acquired	Tender Documents for Procuring Consultant to complete feasibility study, ESIA and RAP study were prepared	- Feasibility study concluded - RAP implementation  - Supervision Consultant and EPC Contractor procured
<b>Total</b>	<b>17,740,000</b>	<b>0</b>	<b>7,000,000</b>
<i>GoU Development</i>	<i>8,910,000</i>	<i>0</i>	<i>7,000,000</i>
<i>Donor Development</i>	<i>8,830,000</i>	<i>0</i>	<i>0</i>
<b>Project 1222 Electrification of Industrial Parks Project</b>			

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0301 Energy Planning, Management &amp; Infrastructure Dev't</b>			
<b>030179 Acquisition of Other Capital Assets</b>	Substations and transmission lines constructed for: -  - Namanve industrial park southern 132/33kV substation  - Mukono industrial park 132/33kV substation - Iganga industrial park 132/33kV substation  - Luzira industrial park 132/33kV substation	- Contract signed with Consultant for feasibility study  - Preliminary line route survey and site location for substations  - Financising arrangements for RAP  - Sourcing for financing for construction	- Feasibility study and supervision of works for Namanve Industrial Park 132/33kV Substation and Transmission Line Project, EIA and RAP study.  - RAP Implementation for Mbale Industrial Park
<b>Total</b>	<b>16,570,000</b>	<b>4,932,506</b>	<b>5,040,000</b>
<i>GoU Development</i>	<i>12,040,000</i>	<i>4,932,506</i>	<i>5,040,000</i>
<i>Donor Development</i>	<i>4,530,000</i>	<i>0</i>	<i>0</i>
<b>Vote Function: 0302 Large Hydro power infrastructure</b>			
<i>Project 1183 Karuma Hydroelectricity Power Project</i>			
<b>030280 Large Hydro Power Infrastructure</b>	-EPC Contract Signed and Contractor for Karuma Hydropower Project on Site.  -Five (5) Sensitisation Workshops for Karuma HP Project affected people and local community held.  -100% of Project Affected Persons for Karuma HPP Compensated/Resettled.  -100% Land Freed Up for Contractors.  -RAP implementing Agency for Evacuation Lines in place.  -100% of the Project Affected Persons for Karuma HPP Power Evacuation Lines Compensated/ Resettled.  -Construction of Karuma HPP Commences. 20% of the Works Covered.	Two Sensitisation Workshops for Karuma HP Project affected people and local community held.  -Compensation/ resettlement for Project Affected Persons for Karuma HPP almost complete.  -UETCL procured the RAP implementing Agency for Evacuation Lines and is on going.  Technical Bid Evaluation for the Procurement for EPC Contractor for Karuma on going due delays in the process	-EPC Contract Signed and Contractor for Karuma Hydropower Project on Site.  -Five (5) Sensitisation Workshops for Karuma HP Project affected people and local community held.  -100% of Project Affected Persons for Karuma HPP Compensated/Resettled.  -100% Land Freed Up for Contractors.  -RAP implementing Agency for Evacuation Lines in place.  -100% of the Project Affected Persons for Karuma HPP Power Evacuation Lines Compensated/ Resettled.  -Construction of Karuma HPP Commences. 20% of the Works Covered.  - Preparatory survey for Ayago
<b>Total</b>	<b>1,043,600,000</b>	<b>0</b>	<b>1,093,310,000</b>
<i>GoU Development</i>	<i>1,043,600,000</i>	<i>0</i>	<i>1,091,900,000</i>
<i>Donor Development</i>	<i>0</i>	<i>0</i>	<i>1,410,000</i>
<b>Vote Function: 0303 Petroleum Exploration, Development &amp; Production</b>			
<i>Project 1142 Management of the Oil and Gas Sector in Uganda</i>			

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0303 Petroleum Exploration, Development &amp; Production</b>			
<b>030377 Purchase of Specialised Machinery &amp; Equipment</b>	Laboratory equipment, chemicals, plus Geophysical equipment procured.  Laboratories well maintained.	Procurement commenced and is ongoing	Laboratory and Geophysical equipment procured and maintained.
<b>Total</b>	<b>486,000</b>	45,000	<b>586,000</b>
<i>GoU Development</i>	386,000	45,000	586,000
<i>Donor Development</i>	100,000	0	0
<b>030376 Purchase of Office and ICT Equipment, including Software</b>	Ten PCs and a set of servers procured.  Five software packages maintained.  Internet subscription paid for 12 months.	Procurement of Office and ICT Equipment and software commenced and is ongoing	Computer hardware and their accessories procured and Computer software licenses renewed.
<b>Total</b>	<b>150,000</b>	11,027	<b>1,421,000</b>
<i>GoU Development</i>	150,000	11,027	921,000
<i>Donor Development</i>	0	0	500,000
<b>030372 Government Buildings and Administrative Infrastructure</b>	Continue Phase II of construction of Oil and Gas Data Centre, Office accommodation, Core store and Laboratory Building.  Office buildings and the surrounding environment well maintained.	Advance payment was made to Pearl Engineering Contractors for Phase II of the Data Centre, Office accommodation, meeting rooms and Core store.  Periodic maintenance of office buildings and the surrounding environment undertaken	Construction of Phase-2 of the new Data Centre completed and Phase-3 commenced; maintenance of existing buildings and related infrastructure undertaken.
<b>Total</b>	<b>6,400,000</b>	4,115,176	<b>6,900,000</b>
<i>GoU Development</i>	6,400,000	4,115,176	6,900,000
<i>Donor Development</i>	0	0	0
<b>Project 1184 Construction of Oil Refinery</b>			

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0303 Petroleum Exploration, Development &amp; Production</b>			
<b>030380 Oil Refinery Construction</b>	<ul style="list-style-type: none"> <li>-Pre Front-End Engineering Design</li> <li>- Communication Plan for the development of an oil refinery</li> <li>- Aerodrome location technical studies</li> <li>- Refinery foundation strength and hydrological studies</li> <li>- Purchase of field vehicles</li> </ul>	<p>Completed the Resettlement Action Plan Study and the following reports were submitted by the consultant:</p> <ul style="list-style-type: none"> <li>-Valuation report</li> <li>-Socio-economic report</li> <li>-Cadastral survey report</li> </ul> <p>The valuation report has been approved by the Chief Government Valuer</p> <p>Conducted one workshop for local leaders in Hoima, District and three sensitization meetings for the Project Affected Persons (PAPs).</p> <p>For Pre FEED, Eight (8) bids were received from interested firms and the Evaluation of the bids was done and all the eight were non-compliant to the eligibility criteria. The assignment will be re-tendered in Q3, 2013.</p> <p>The contract for the procurement of the logistics consultant was still with the Solicitor General's office awaiting clearance.</p> <p>Procured Green Impact Development Services (GIDS) to carry out the Baseline Environmental impact Assessment Survey. A kick off meeting for this consultancy was conducted and the consultant undertook a reconnaissance survey of the refinery land.</p> <p>The bids for the Transaction Advisor were evaluated and Taylor – Dejongh a US based Company emerged as the winner. Negotiations with Taylor – Dejongh commenced in December 2012. It is expected that a contract for this assignment will be approved in January 2013.</p> <p>Two meetings with CAA and other relevant stakeholders were held to agree on how to take forward the different infrastructure for the oil and gas sector including the development of the aerodrome.</p>	<ul style="list-style-type: none"> <li>- Land for the refinery and supporting infrastructure acquired;</li> <li>- Continued implementation and completion of Logistics study</li> <li>- Transaction Advisory services for Refinery development undertaken;</li> <li>- Pre - Front End Engineering Design (FEED) for refinery development completed.</li> <li>- Aviation studies for aerodrome development undertaken</li> <li>- Crude oil pipeline to the refinery and storage facilities study recommendations implemented;</li> <li>- Pre-FEED for refinery products' pipeline from Hoima to Buloba terminal conducted.</li> </ul>



# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0303 Petroleum Exploration, Development &amp; Production</b>			
		Developed TORs for the procuring a refinery process for Consultant	
<b>Total</b>	<b>12,440,000</b>	6,086,911	<b>39,385,500</b>
<i>GoU Development</i>	<i>12,440,000</i>	6,086,911	32,695,500
<i>Donor Development</i>	0	0	6,690,000
<b>Vote Function: 0305 Mineral Exploration, Development &amp; Production</b>			
<i>Project 1200 Airborne Geophysical Survey and Geological Mapping of Karamoja</i>			
<b>030577 Purchase of Specialised Machinery &amp; Equipment</b>	Maintain the Uganda National Seismological Network for earthquake Monitoring	Procurement of fencing and security at Seismological Stations at Nakawuka in Wakiso District and Butologo in Mubende District initiated.	Engineering geology investigations conducted and geo-hazards monitored, active fault mapped
	Collaborate with international Organisations (CTBTO) in Earthquake Monitoring	Specialized equipment and data Server for earthquake data analysis installed.	
		Procurement of specialized software for earthquake data analysis initiated.	
		Earthquake monitoring sensors tested Principles of earthquake administration policy drafted	
		Procurement of accessories for seismic equipment initiated.	
		Seismic data acquisition systems installed	
		Two training workshops on seismic data acquisition and analysis conducted.	
		Seismometers tested and calibrated for field deployment and procurement of more equipment initiated.	
<b>Total</b>	<b>400,000</b>	117,913	<b>950,000</b>
<i>GoU Development</i>	<i>400,000</i>	117,913	950,000
<i>Donor Development</i>	0	0	0

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0305 Mineral Exploration, Development &amp; Production</b>			
<b>030572 Government Buildings and Administrative Infrastructure</b>	Regional Office constructed and equipped.	Acquisition of land for construction in progress. Consultancy for Design and Supervision initiated.  Plots 17 and 19 Rupa Road measuring 100m x 100m are allocated to the MEMD and premium of 20 M is expected to be paid. Further consultation continue.	Karamoja regional training centre and offices constructed.
<b>Total</b>	<b>150,000</b>	<b>40,347</b>	<b>800,000</b>
<i>GoU Development</i>	<i>150,000</i>	<i>40,347</i>	<i>800,000</i>
<i>Donor Development</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Vote Function: 0349 Policy, Planning and Support Services</b>			
<i>Project 1223 Institutional Support to Ministry of Energy and Mineral Development</i>			
<b>034977 Purchase of Specialised Machinery &amp; Equipment</b>	Procure Seismological Equipments	Initiated the procurement of ten (10) permanent Seismological stations.  The seismic network design of the albertine graben for monitoring earthquakes in oil and gas fields accomplished.  Installed data acquisition systems at Entebbe, GSMD for near-real time and on spot earthquake information.  Conducted two (2) training workshops seismic data acquisition, for seismic data analyst.  Seven (7) sites for seismic stations identified.  Five (5) seismometers were tested and calibrated for field deployment and procurement of more equipment for seismic data transmission and dissemination initiated.	Equipping and retooling of the Mineral laboratory  Refurbishment of Downstream petroleum infrastructure
<b>Total</b>	<b>500,000</b>	<b>45,500</b>	<b>2,600,000</b>
<i>GoU Development</i>	<i>500,000</i>	<i>45,500</i>	<i>2,600,000</i>
<i>Donor Development</i>	<i>0</i>	<i>0</i>	<i>0</i>

# Sector: Energy and Mineral Development

## Sector Summary

Project	2012/13		2013/14
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by December (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Vote Function: 0349 Policy, Planning and Support Services</b>			
<b>034979 Acquisition of Other Capital Assets</b>	<ul style="list-style-type: none"> <li>- Feasibility Studies undertaken for Muyembe/Sirimityo Hydro Power Plant</li> <li>- Develop Energy and Mineral Investor Master Plan</li> </ul>	<p>Commenced the procurement of consultant to develop the consolidated Sector Investment Plan with approval of the ToR by the Contracts Committee on 19th December 2012.</p> <p>Terms of Reference for the consultancy for the feasibility studies for Rwami / Hydropower plant finalized.</p> <p>Initiated the Procurement process for the consultancy.</p>	<ul style="list-style-type: none"> <li>- Continue with Feasibility Studies for Rwimi/Nyamba Hydro Power Plant</li> <li>- Complete the development of the Energy and Mineral Investor Master Plan</li> </ul>
<b>Total</b>	<b>2,640,415</b>	<b>1,335,172</b>	<b>3,840,415</b>
<i>GoU Development</i>	<i>2,640,415</i>	<i>1,335,172</i>	<i>3,840,415</i>
<i>Donor Development</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>034976 Purchase of Office and ICT Equipment, including Software</b>	ICT and Resource Centre equiped	<p>Re designing of the LAN for the MEMD - Infrastructure set-up and installation of IT equipment in progress.</p> <p>Installation of the Communication and Intercom equipments - PBAX interchange system and Accessories on-going.</p> <p>Equip the Units with furniture, fixtures and office equipments also ongoing.</p>	<p>ICT and Resource Centre equiped</p> <p>Procure and maintain server system</p> <p>Internet services maintained</p> <p>Probox interchange system</p>
<b>Total</b>	<b>300,000</b>	<b>12,010</b>	<b>900,000</b>
<i>GoU Development</i>	<i>300,000</i>	<i>12,010</i>	<i>900,000</i>
<i>Donor Development</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>034972 Government Buildings and Administrative Infrastructure</b>	<ul style="list-style-type: none"> <li>- Renovation and retooling of Offices at Amber house</li> <li>- Voice and data infrastructure redesign and implementation</li> </ul>	<p>The procurements for rehabilitation of the administrative offices and equipment commenced</p> <p>- Redesigning voice and data infrastructure in progress</p>	<ul style="list-style-type: none"> <li>- Retooling of Offices at Amber house</li> <li>- Complete redesign and implementation Voice and data infrastructure</li> </ul>
<b>Total</b>	<b>2,925,585</b>	<b>1,369,680</b>	<b>725,965</b>
<i>GoU Development</i>	<i>2,925,585</i>	<i>1,369,680</i>	<i>725,965</i>
<i>Donor Development</i>	<i>0</i>	<i>0</i>	<i>0</i>

### (vi) Off-Budget Activities

### (vii) Contributions from other Sectors

## S3 Proposed Budget Allocations for 2013/14 and the Medium Term

# Sector: Energy and Mineral Development

## Sector Summary

This section sets out the proposed sector budget allocations for 2013/14 and the medium term, including major areas of expenditures and any notable changes in allocations.

**Table S3.1: Past Expenditure and Medium Term Projections by Vote Function**

	2011/12 Outturn	2012/13		Medium Term Projections		
		Appr. Budget	Spent by End Dec	2013/14	2014/15	2015/16
<b>Vote: 017 Ministry of Energy and Mineral Development</b>						
0301 Energy Planning, Management & Infrastructure Dev't	411.362	392.701	164.763	579.471	525.182	441.585
0302 Large Hydro power infrastructure	552.163	1,043.600	0.000	1,093.310	1,036.699	1,036.699
0303 Petroleum Exploration, Development & Production	26.987	33.300	13.544	69.414	133.585	366.863
0304 Petroleum Supply, Infrastructure and Regulation	0.813	1.237	0.441	1.245	1.422	1.601
0305 Mineral Exploration, Development & Production	1.489	2.188	0.665	8.038	21.515	66.914
0349 Policy, Planning and Support Services	1.285	8.809	3.598	10.701	11.227	11.445
<b>Total for Vote:</b>	<b>994.099</b>	<b>1,481.834</b>	<b>183.009</b>	<b>1,762.179</b>	<b>1,729.629</b>	<b>1,925.107</b>
<b>Total for Sector:</b>	<b>994.099</b>	<b>1,481.834</b>	<b>183.009</b>	<b>1,762.179</b>	<b>1,729.629</b>	<b>1,925.107</b>

\* Excluding Taxes and Arrears

### (i) The Total Budget over the Medium Term

For the FY 2013/2014, the overall budgetary allocations to the sector is UGX 1,762.18 Bn of which UGX 2.53 Bn is Wage, UGX 4.29 Bn is Non-Wage Recurrent, UGX 1,293.623 Bn for Domestic Development and UGX 461.74 Bn as Donor Funding. For the FY 2014/15, the provisions for wage are UGX 3.03 Bn; Non Wage is UGX 4.720 Bn; Capital Development is UGX 1,491.388 Bn and UGX 230.49 Bn as Donor Contribution. The provision for the FY 2015/16, Wage is UGX 3.485 Bn; Non-Wage is 5.19 Bn; Capital Development is UGX 1,801.30 Bn and Donor contribution is UGX 115.13 Bn.

### (ii) The major expenditure allocations in the sector

In comparison to the FY 2012/13, Karuma Hydro Power Project under the Large Hydro Power Infrastructure will continue to receive an allocation of Ush. 1,091.90 Bn; while 35.0 Bn is earmarked for the acquisition of land for construction of the oil refinery. The Mineral Sector has had an allocation amounting to Ush. 8.04 Bn, largely to commence ground Geophysical Mapping of Karamoja and procurement of equipments for Geothermal Exploration.

### (iii) The major planned changes in resource allocations within the sector

In the Oil and Gas sub-sector, acquisition of land for construction of the oil refinery has an allocation of Ush.35 Bn while the Mineral sub-sector has an allocation amounting to Ush. 7.039 Bn towards the commencement of the ground Geophysical Mapping of Karamoja and the Procurement of Equipments for the Geothermal Exploration.

**Table S3.2: Major Changes in Sector Resource Allocation**

\* Excluding Taxes and Arrears

## S4: Challenges and Unfunded Outputs for 2013/14 and the Medium Term

This section sets out the major challenges the sector faces in 2013/14 and the medium term which the sector has been unable to address in its spending plans.

**High Employee Turnover:** Low pay for professional has affected the mineral sector. MEMD requests for better pay in mineral sector so as to attract a strong pool of talented people including skilled labour, technical personnel, and legal and accounting officers in the mining disciplines. **Infrastructure:** MEMD request for priority financing of the infrastructure like electricity, water and roads in mining areas since they are expensive for investors. This is an important factor in mine economics on which investment decisions are taken. Because of this kind of situation, investors have attempted to set up cement plants in

# Sector: Energy and Mineral Development

## Sector Summary

nearby district of Bukedea and fetch raw materials from Karamoja region that is very far.

Land tenure system: The current land laws hamper the development of the mining industry. MEMD requests for amendment of land laws to create enabling environment for investors to access minerals.

Institutional framework: The current structure makes it in-effective to cope with new challenges and administrative burdens. There is a need to create a Directorate to decongest the mandate and for focus on effective service delivery.

- Insufficient capacity to efficiently manage the country's oil and gas sector
- Donor funding by the Norwegian Government halted due to the issues that arose due to the alleged OPM mismanagement of public funds. Critical activities that were affected were highlighted and a request for a supplementary budget was made.

**Table S4.1: Additional Output Funding Requests**

Additional Requirements for Funding and Outputs in 2013/14	Justification of Requirement for Additional Outputs and Funding
<i>Vote Function:0304 Petroleum Supply, Infrastructure and Regulation</i>	
<b>Output: 0304 04 Operational Standards and laboratory testing of petroleum products</b>	
<b>Funding Requirement (US\$ Bn)</b> 32.200 supervision of the construction of the oil product pipeline	<i>This activity is in line Objective 7 and 8 of NDP under Oil and Gas sector. PSD is newly established Department, new staff have been recruited and need specialized training in downstream related field to handle the activities of the sector effectively.</i>
<i>Vote Function:0305 Mineral Exploration, Development &amp; Production</i>	
<b>Output: 0305 05 Licencing and inspection</b>	
<b>Funding Requirement (US\$ Bn)</b> 3.740	<i>Additional resources are essential to enhanced generation of Non-tax revenue. Additional funds (UGX 135 billion to undertake RAP for 2,500 households on land for Sukulu Phosphates project i.e (15,000-20,000 US\$ per household (50million US\$) to implement RAP and enable the project take off.</i>