

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

### VI: Vote Overview

This section sets out the Vote Mission, Strategic Objectives, and provides a description of the vote's services

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

Table V1 below summarises the Medium Term Budget allocations for the Vote:

**Table V1.1: Overview of Vote Expenditures (UShs Billion)**

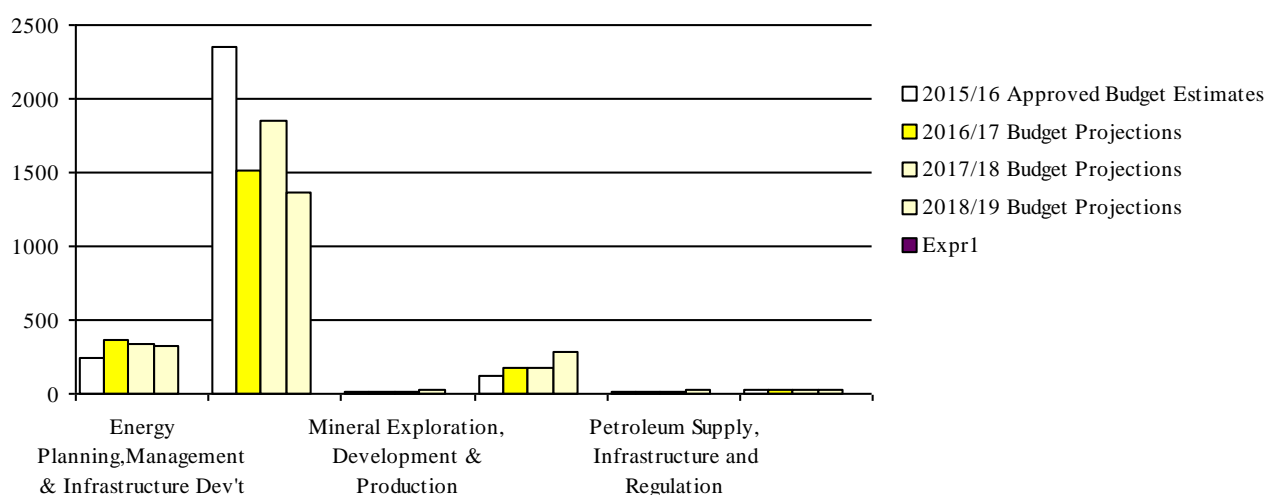
	2014/15 Outturn	2015/16		MTEF Budget Projections		
		Approved Budget	Spent by End Sept	2016/17	2017/18	2018/19
<i>(i) Excluding Arrears, Taxes</i>						
Recurrent						
Wage	2.577	4.063	0.862	4.063	4.266	4.479
Non Wage	3.720	5.348	0.642	4.885	5.813	6.859
Development						
GoU	189.764	307.877	182.869	307.807	369.452	424.870
Ext.Fin	0.000	2,449.826	0.000	1,780.941	2,026.994	1,626.176
<b>GoU Total</b>	<b>174.588</b>	<b>317.288</b>	<b>184.373</b>	<b>316.754</b>	<b>379.531</b>	<b>436.209</b>
<b>Total GoU+Donor (MTEF)</b>	<b>174.588</b>	<b>2,767.115</b>	<b>184.373</b>	<b>2,097.695</b>	<b>2,406.525</b>	<b>2,062.384</b>
<i>(ii) Arrears and Taxes</i>						
Arrears	0.000	0.219	0.046	0.000	N/A	N/A
Taxes**	21.472	0.000	0.000	0.070	N/A	N/A
<b>Total Budget</b>	<b>196.060</b>	<b>2,767.334</b>	<b>184.419</b>	<b>2,097.765</b>	<b>N/A</b>	<b>N/A</b>
<i>(iii) Non Tax Revenue</i>						
<b>Grand Total</b>	<b>196.060</b>	<b>2,767.334</b>	<b>184.419</b>	<b>2,097.765</b>	<b>N/A</b>	<b>N/A</b>
Excluding Taxes, Arrears	174.588	2,767.115	184.373	2,097.695	2,406.525	2,062.384

\* Donor expenditure data unavailable

\*\* Non VAT taxes on capital expenditure

The chart below shows total funding allocations to the Vote by Vote Function over the medium term:

**Chart V1.1: Medium Term Budget Projections by Vote Function (UShs Bn, Excluding Taxes, Arrears)**



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### (ii) Vote Mission Statement

The Vote's Mission Statement is:

#### MANDATE

*The Mandate of the Ministry is to “Establish, Promote the Development, Strategically Manage and Safeguard the Rational and Sustainable Exploitation and Utilisation of Energy and Mineral Resources for Social and Economic Development”.*

#### VISION

*“A Model of Excellence in Sustainable Management and Utilisation of Energy and Mineral Resources”.*

#### MISSION

*“To ensure reliable, adequate and sustainable exploitation, management and utilisation of energy and mineral resources”.*

#### ROLES AND FUNCTIONS

- (i) Provide policy guidance in the development and exploitation of the Energy, Mineral, Oil and Gas resources.
- (ii) Create an enabling environment in order to attract investment in the development, provision and utilisation of energy and mineral resources.
- (iii) Acquire process and interpret technical data in order to establish the energy and mineral resource potential of the country.
- (iv) Inspect, regulate, monitor and evaluate activities of private companies in energy and mineral sectors so that the resources are developed, exploited and used on a rational and sustainable basis.

### (iii) Vote Outputs which Contribute to Priority Sector Outcomes

The table below sets out the vote functions and outputs delivered by the vote which the sector considers as contributing most to priority sector outcomes.

**Table V1.2: Sector Outcomes, Vote Functions and Key Outputs**

Sector Outcome 1:	Sector Outcome 2:	Sector Outcome 3:
<i>Increased access to affordable and efficient sources of energy</i>	<i>Sustainable management of mineral resources for development</i>	<i>Sustainable management of the country's Oil and Gas resources</i>
<b>Vote Function: 03 01 Energy Planning, Management &amp; Infrastructure Dev't</b>		
<b>Outputs Contributing to Outcome 1:</b>	<b>Outputs Contributing to Outcome 2:</b>	<b>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>Outputs Contributing to Outcome 1:</b>	<b>Outputs Contributing to Outcome 2:</b>	<b>Outputs Contributing to Outcome 3:</b>

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Sector Outcome 1:	Sector Outcome 2:	Sector Outcome 3:
<i>Increased access to affordable and efficient sources of energy</i>	<i>Sustainable management of mineral resources for development</i>	<i>Sustainable management of the country's Oil and Gas resources</i>
<i>Outputs Funded</i>	None	None
030251 Increased power generation - Largescale Hydro-electric		
<i>Capital Purchases</i>		
030280 Large Hydro Power Infrastructure		
<b>Vote Function: 03 03 Petroleum Exploration, Development &amp; Production</b>		
<i>Outputs Contributing to Outcome 1:</i>	<i>Outputs Contributing to Outcome 2:</i>	<i>Outputs Contributing to Outcome 3:</i>
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>		
<i>Outputs Contributing to Outcome 1:</i>	<i>Outputs Contributing to Outcome 2:</i>	<i>Outputs Contributing to Outcome 3:</i>
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>		
<i>Outputs Contributing to Outcome 1:</i>	<i>Outputs Contributing to Outcome 2:</i>	<i>Outputs Contributing to Outcome 3:</i>
None	<i>Outputs Provided</i>	None
	030502 Institutional capacity for the mineral sector	
	030503 Mineral Exploration, development, production and value-addition promoted	
	030505 Licencing and inspection	

## V2: Past Vote Performance and Medium Term Plans

This section describes past and future vote performance, in terms of key vote outputs and plans to address sector policy implementation issues.

### (i) Past and Future Planned Vote Outputs

2014/15 Performance

#### ENERGY PLANNING MANAGEMENT AND INFRASTRUCTURE DEVELOPMENT

Government is committed to improving electricity generation and supply to support industrialization as well as ensuring universal access to affordable, reliable and modern energy services. Already Government has

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made commitments at regional and international level to improve electricity generation and sharing among partner states through the Eastern Africa Power Pool (EAPP) in a bid to rationalize the generation and use of modern energy sources.

#### PROGRESS IN INCREASING POWER GENERATION INFRASTRUCTURE

##### (i) Legal framework

**Biofuels Bill:** The draft Biofuels Bill to regulate the production blending and utilization of biofuels was developed and reviewed by key stakeholders. The Bill has now been submitted to Cabinet for approval.

**National Biomass Energy Strategy (NBEST):** Government has developed the NBEST whose vision is “To secure a stable supply of biomass energy for long-term social and economic development of Uganda including poverty reduction”. NBEST aims at balancing the supply and demand of biomass energy by suggesting interventions that will ensure biomass utilization without negative social, economic and environmental consequences. Therefore, it provides a comprehensive analysis of the current supply and demand for biomass energy resources and makes forecasts of up to 2040. The Strategy is anchored on six (6) pillars namely: Specially targeted awareness creation; Creation of a Biomass Resource Information System; Enhanced institutional capacity to implement NBEST; Biomass demand interventions; Biomass supply interventions; and Cross cutting issues (Innovative financing). The Strategy was launched officially to the public in November, 2014 during the Biomass Dialogue event held in 2014.

##### (ii) Large Hydro Power Generation Projects

(a) **Development of Karuma Hydropower Project (600MW):** Construction of the dam is on-going and progress achieved was as follows:

Construction of the Main Access Tunnel, Tail race Tunnel, the Adits and the Escape Ventilation Tunnel. The Intake ground surface clearing and leveling, together with the diversion channel and open excavations in soil and rock, support on the slope and the construction of sub-cofferdam has been completed. Excavation on the right bank of the river for the diversion channel also started. Construction works of a temporary camp and workers’ camp is complete. The project completion time is estimated to be the end of 2018.

(b) **Isimba Hydropower Project (183 MW):** Progress on the development of this dam is as follows:

Works commenced and the construction of the cofferdam and one dyke upstream of the river has been closed. The Contract for the Implementation and completion time of the dam was estimated to be completed at the end of 2017. The Resettlement Action Plan for both the dam area and the transmission line is ongoing with progress at 72%.

- The initial development phase which included construction of camps, access roads, provision of electricity to the construction area, and the engineering designs was at the final stage of completion.

(c) **Ayago Hydropower Project (840MW):** Progress has been achieved as follows:

The Government signed a Memorandum of Understanding (MoU) with M/s China Gezhouba Group Company for the construction of the plant and the Transmission Line under an Engineering Procurement Construction Arrangement. M/s China Gezhouba Group completed and submitted the feasibility study that

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was reviewed by the key stakeholders. Procurement of the supervising Consultant to assist in the review of the feasibility study report and in the supervision of the construction of the plant was completed where M/s WAPCOS Ltd in Association with M/s Acquagreen Engineering Management Pvt Ltd was procured. Construction was expected to commence in 2016 and will be completed in 2022.

(ii) Medium size hydropower projects (128MW) and Minihydros (64MW):

(a) Achwa hydropower projects (83MW): This project to be developed by a consortium of PAC SPA and Berkerly Energy Fund

- The feasibility for the associated transmission line, financed by Government of Uganda was completed in June 2015.
- The firm licensed to develop the site is finalizing negotiations of the Power Purchase Agreement (PPA) with Uganda Electricity Transmission Company Limited (UETCL) and is also negotiating an implementation agreement with the Ministry of Energy and Mineral Development.

(b) Muzizi hydropower projects (44.7MW): The 44.7MW Muzizi hydropower project is at an advanced stage of packaging. The procurement process for the Implementation Contractor is at Bid Evaluation stage.

(c) Small Hydropower Projects (64 MW): Feasibility studies have been completed for small hydropower sites totaling over 64 MW and their construction will commence in the FY2015/16. These include: Nyamwamba (9.2 MW), Rwimi (5.54 MW), Siti 1 (6.1 MW), Nengo Bridge (6.7 MW), Waki (4.8 MW), Muvumbe (6.5 MW), Lubilia (5.4 MW), Nyagak III (4.4MW), and Siti II (15MW).

(iii) Cogeneration:

(a) Kakira Sugar Works (50MW): Kakira Sugar Works was up graded and was generating 50 MW selling 22 MW to the national grid.

(b) Kinyara Sugar factory (5MW): Plans are under way to upgrade the cogeneration from Kinyara Sugar factory to 35 MW selling 25 MW to the national grid.

(c) Sugar and Allied Industries Ltd (6.9 MW): Sugar and Allied Industries Ltd in Kaliro is generating 6.9 MW.

(d) Mayuge Sugar plans to provide 6.3 MW to the national grid.

(iv) Nuclear Power Development

The strategy to develop the nuclear power roadmap has been prepared. The strategy identifies major nuclear power infrastructure and proposes pre-feasibility studies to be undertaken to provide recommendations on how the infrastructure issues will be addressed in the short, medium and long term. The set of these recommendations will therefore constitute the Nuclear Power Roadmap for Uganda. The strategy has been approved by Cabinet.

Studies so far undertaken include: Survey of potential sites for nuclear power development, study on integrating nuclear power into the generation capacity plan 2015 – 2040 and review of policy, legal and institutional framework for nuclear power development. Results of the survey of potential areas indicate the Kyoga Basin as the most suitable area for nuclear power installations while the study on integrating nuclear power into the generation capacity plan 2015 – 2040 recommended that nuclear power should be included in the future energy mix with the earliest year of commissioning being 2026 and latest 2034.

Radiation Monitoring of Workers (Dosimetry)

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Government operates and maintains a dosimetry service by ensuring that personal dosimeters are worn by occupationally exposed workers, maintained and provided a reporting service of exposure measurements and provided early or efficacious warning to persons who had been or most likely were subject to over-exposure to ionizing radiations.

#### Emergency Preparedness & Response:

A committee on Emergency Preparedness & Response (EPR) was constituted by the Minister and became functional. It is in the process of developing a National Emergency Preparedness and Response Plan. The EPR committee is coordinated by the Atomic Energy Council.

#### Registration of Sources (Phase 2) in 2014

A total of 16 radiation generators & a total of 47 radioactive sources were registered in the databases that include RAIS & RASOD in the year 2014.

### PROGRESS IN INCREASING POWER TRANSMISSION INFRASTRUCTURE

Construction was ongoing for the following Transmission Lines:-

- Bujagali-Tororo-Lessos (220kV), 127km; Mbarara – Mirama Hill - Birembo (220 kV), 66km; Mbarara – Nkenda (132kV), 160km; Tororo – Opuyo –Lira (132kV), 260km; Kawanda – Masaka (220kV) 142km; Nkenda – Fort Portal – Hoima (220kV) 234km; Isimba Interconnection Project (132kV), 40km; Karuma – Kawanda,; Karuma Lira (400kV, 220kV and 132kV line); 378km; Mutundwe – Entebbe (132kV) 35km and Opuyo-Moroto (132kV) 160km. These projects will expand the transmission infrastructure by about 2,002km.

The following substations are being to be upgraded:

- Lugogo, Mutundwe, Queensway and Bujagali switchyard. Four (4) new substations to boost power supply to the proposed industrial areas are being to be constructed and these are: Namanve South, Luzira, Mukono and Iganga Industrial Parks substations.

Transmission Lines being prepared for implementation:

- Hoima-Kinyara-Kafu (220kV), Nkenda – Mpondwe – Beni (220kV), Ayago Interconnection project, Opuyo-Moroto (132kV); Mirama –Kabale (132kV); Bulambuli (Atari) - Mbale Industrial Parks (132kV); Lira – Gulu – Agago (132kV).

### ENERGY MANAGEMENT PROGRAMMES

#### Energy Efficiency Standards and Labels program

- The Ugandan energy label has been finalized and has been gazetted by UNBS.
- Commenced the implementation of the Energy Efficiency Standards and Labels program to promote the use of efficient electrical appliances.
- By end of June 2015, this intervention realised savings of about 1.0 MVA making the cumulative audited and verified total of approximately 7.03 MVA from 21 industries.

### RENEWABLE ENERGY PROMOTION

- The development of the National Biomass Energy Strategy (NBEST) was finalised during 2014.
- The Ministry has now embarked on the process of developing Biogas standards to regulate the subsector.

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### (i) Biogas Technology

- Under the Uganda Domestic Biogas Program (UDBP), by end of June 2015, a total of 10,000 household biogas systems (domestic units) and 20 bio latrines had been installed.
- A second phase of the project is underway which will be implemented over a 4-year period. The second phase has set a target of 13,600 biogas units.

### (ii) Construction of Biolatrines in schools

The Ministry completed the construction of ten (10) bio latrine systems in ten schools to demonstrate the management of human wastes by generating bio gas from the systems to partly substitute the fire wood for cooking especially of light meals, lighting as well as provide a clean renewable gas for use in laboratories during experiments. The ten (10) beneficiary schools are: Asinge Senior Secondary School in Tororo district; Hamdan Girls' Senior Secondary School in Mbale district; St. Paul's Senior Secondary School in Mbale district; Teso College Aloet – Eastern Campus in Soroti district; Kitagobwa Senior Secondary School in Butambala district; Riness Senior School in Wakiso district; St. Thereza Girls' Primary School in Wakiso district; Mbarara High School in Mbarara district; and Ntare School in Mbarara district.

### (iii) Promotion of Gasification

- The Ministry carried out repairs on the 82.5 kVA gasfier at Nyabyeya forest college test runs were run on the gasfier, where there was leakage of carbon monoxide gas.
- A mini power evacuation line has been set from the gasfier house to the generator house. The college is now utilizing the power from the bio mass.
- Ministry signed a Memorandum of Understanding with Pamoja Clean Tech AB operating a 40kW gasifier system in Tiribogo village, Muduuma Sub County, Mpigi district which supplies more than 50 households with electricity for six (6) hours daily using maize cobs. Under this cooperation, 3 gasification technicians have been trained in operation and maintenance of biomass gasification systems.

### (iv) Wind Energy Resources

- Seven (7) pilot small wind turbines for electricity generation in areas around Lake Victoria and Karamoja region have been installed to test their performance. The wind turbine systems were installed at the following sites and are in good operating conditions: Aisha Junior school – Mityana district; Luffudu Landing Site - Namayingo District; Opilitok Primary school - Kaberamaido District; Lopeei Primary school - Napak District; Losakuca Primary school - Kotido district; Kolasarich Primary school - Kotido District; and Kyankore landing site, at the shores of lake kyogga
- Two (2) wind measuring equipment were installed at Napak and Kotido District headquarters to assess the wind potential of the region and currently is being collected that will be used to generate a wind map.

### (v) Improved Cook stoves

- 17,733 cook stoves constructed for households in Northern Uganda, 100 institutional cook stoves constructed in Educational institutions and other Social Institutions and 36 in SMEs.
- First draft for Improved Cook stoves standards developed in collaboration with UNBS and ISO
- Capacity building done for artisans in improved cook stoves construction and quality management

## PETROLEUM EXPLORATION, DEVELOPMENT AND PRODUCTION

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### UPSTREAM PETROLEUM

Government continued to promote the establishment of the country's petroleum resource base so as to achieve sustainable exploitation. These efforts include: putting in place the necessary legal and policy framework, building the national expertise in the field of petroleum exploration, development and production; attraction of oil companies to invest in exploration and production as well as commercialization plans of the oil and gas resources. The key highlights of the achievements include:

#### (i) Legal and Institutional Framework

Drafting and consultations on the attendant regulations for the upstream law had been completed and were awaiting Minister's approval. The Model Petroleum Sharing Agreement (MPSA) which was revised to suit the ongoing 1st Petroleum Licensing Round plus future licensing, is in place.

The Ministry finalized the National Content Policy and Plan for the oil and gas sector. The process of putting in place new institutions namely the National Oil Company (NOC) and Petroleum Authority of Uganda (PAU) progressed with the National Oil Company being incorporated on June 12, 2015 under the Companies Act 2012 under the name Uganda National Oil Company Limited. The Board of the National Oil Company was nominated and approved by Parliament while that of the Petroleum Authority was still being considered. Filling of the approved structures under the Directorate of Petroleum and departments therein is being undertaken under Ministry restructuring.

#### (ii) Licensing and Investment Promotion

There were still three (3) international oil companies operating as Joint Venture (JV) and holding there (3) exploration licenses and one (1) production license within the Albertine Graben. These companies are: - Tullow Uganda Operations (PTY) 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 and 1A (Paraa – Wanseko –Pakwach Basin), EA 2 (Northern Lake Albert Basin), and Kingfisher Discovery Area.

In preparation for the first opening bidding licensing round scheduled for 2016, Government in February 2015 announced six (6) new blocks for licensing in the Albertine Graben through competitive bidding during the 1st Licensing round. Evaluation of 17 applicants for prequalification of companies for the first Licensing round was undertaken and 16 applicants were qualified and were notified for proceeding to the bidding stage. Government on 1st October, 2015 issued bidding documents to the 16 Qualified Applicants. The target is to issue new exploration licenses early 2016.

#### (iii) Status of Exploration and Development

In Exploration Area 1 & 1A - under Total E&P Uganda B.V. (Total),

- Nile crossing geophysical survey was completed;
- Field Development Plans for three fields, Gunya, Mpyo and Jobi-East were reviewed;
- Two well sites, Jobi-East 4 and Rii-2 were restored;
- Compensation payments for affected crops during 3-D seismic survey made.

In Exploration Area 2 - Under Tullow Uganda Operations Pty Ltd. (Tullow):

- The revised Field Development Plans (FDP) for Kasamene-Wahrindi (KW), Kigogole-Nsoga-Ngara-



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Ngege (KNNN) were reviewed;

- Survey and valuation exercise was done for land utilized for access roads and drilling of wells. In Kingfisher Discovery Area (KFDA) - under CNOOC Uganda Ltd. (CNOOC),
- CNOOC continued to carry out civil works in the Kingfisher development. These include drilling of Kingfisher-4 well, plus putting up the materials yard and base camp.
- Construction of the access road over the escarpment to Buhuka, by the Ministry of Works together with CNOOC is ongoing. General progress of this construction is estimated to be 98%.

### (iv) Review of Applications for Production Licenses

For the outstanding issues in the Applications for Production Licenses, it was agreed with oil companies that addenda to Field Development Plans (FDPs) and Petroleum Reservoir Reports (PRRs) would be submitted to Government. By the reporting time, the addenda with respect to Kasamene-Wahrindi (KW) and Kigogole-Nsoga-Ngege-Ngara (KNNN) fields in EA2 operated by Tullow had been submitted to government, reviewed and the corresponding conditions to Production Licenses were prepared as highlighted below:-

- Addendum to the Field Development Plan (FDP) and Petroleum Reservoir Report (PRR) for Mputa, Nzizi and Waraga fields in EA2 operated by Tullow were submitted and were being reviewed.
- Addenda for Ngiri and Jobi-Rii fields in EA1 operated by TOTAL were yet to be submitted.
- Applications for Production Licences together with accompanying Field Development Plans (FDPs) and Petroleum Reservoir Report (PRRs) for Gunya, Mpyo and Jobi East fields in EA1 operated by TOTAL were submitted and reviewed. Discussions with the oil companies regarding these applications were ongoing with a view of getting some clarifications.
- Appraisal of Lyeo discovery in EA1A operated by TOTAL was still ongoing.

Production licences for the fields whose appraisal has been completed are expected to be granted during the last quarter of 2015 and their development is expected to commence during the 1st half of 2016.

## MIDSTREAM PETROLEUM

### COMMERCIALIZATION STRATEGIES

A harmonised and sustainable commercialization plan for Uganda's oil and gas resources was agreed between Government and Industry during 2014 and is contained in a Memorandum of Understanding between the same.

#### (i) The Refinery Project

- The lead investor has been selected; A consortium led by RT Global Resources and negotiations with the same are in the final stages. Project agreements are expected to be executed by September 2015.
- The structuring of the refinery Project is being supported by an international Transaction Advisor, Taylor Dejong of Washington, USA on the side of Government.
- Acquisition of the 29sqkm of land to host the refinery, export pipeline starting point, and industrial park, the airport and other attendant infrastructure is 90% complete.

#### (ii) The Export Pipeline Project

A technical and economic feasibility study of the project sponsored by the three EAC Partnered States (Uganda, Kenya and Rwanda) has just been completed by M/s Toyota Tsusho. The study considered the optimal routing among others. The main routes studied included the Southern Route through Kenya to Mombasa (Hoima to Mombasa) and the Northern Route (Hoima, Lokichar to Lamu) and recommended the

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Northern Route. This recommendation has been endorsed the Heads and States for Kenya and Uganda with a conditions precedent. Detailed discussions are planned to achieve harmony among all stakeholders.

#### DOWNSTREAM

- Petroleum Products Transportation and Storage: A feasibility study for the distribution and storage facilities of the refined petroleum products for the 205km long multi-products pipeline to evacuate refined petroleum products from the refinery in Hoima to Kampala has been completed. The pipeline is to be developed as part of the refinery project including terminal facilities at Kampala/Buloba.
- Government is in the process of conducting the detailed routing survey and Environmental Baseline Survey as well as the Resettlement Action Plan that will define the routing line for the utility infrastructure corridor.
- Strategic Fuel Reserves: Government through the Public Private Partnership (PPP) arrangement with M/s Hared Petroleum Ltd refurbished the 30 million litre Jinja strategic fuel storage facility and restocking is on-going.
- The Engineering Design studies for the development of the Nakasongola strategic fuel reserves were completed in May 2015.
- Government has procured a consultant to implement the Resettlement Action Plan and to compensate land owners for the Uganda portion of the way leaves for the refined petroleum products pipeline from Eldoret (Kenya) to Buloba- Kampala (Uganda).
- The feasibility study and the preparations of tender documents for the Kampala-Kigali Pipeline have also been completed.
- The tender for the Engineering Procurement and Construction contractor for Eldoret-Kampala segment was advertised on 9th September 2014 and prequalification of the firms was completed now awaiting financial closure so that the tender documents are provided to the shortlisted firms.

#### MINERAL EXPLORATION DEVELOPMENT AND VALUE ADDITION

##### MINERAL POLICY AND MINING LEGISLATION

Review of Mineral Policy and Mining Legislation: The formulation of the revised Mineral Policy 2015 is being done in consultation with all stakeholders among them environmental and civil society organizations, commercial companies, and national and subnational government bodies to ensure a shared vision of how our mineral resources should be exploited for the benefit of all.

Licensing: A total of 818 licenses and certificates are currently operational. Out of these, were: 179 Prospecting Licenses (PLs), 125 Exploration License (Els), 14 Location Licenses (LLs), 7 Mining Leases (MLs) and 70 Mineral Dealers Licenses (MDLs). Of the 818 licenses, 433 licenses were granted during the FY 2013/14. However, only 684 Licenses were compliant. 40 Els, 4 LLs and 3 MLs were renewed. 1 ML was cancelled. 154 prospecting licenses, 168 Els, 1 RL and 12 LLs expired.

##### GEOLOGICAL SURVEYS

Geological studies undertaken involved geological mapping, geochemical surveys, geophysical surveys and earthquake monitoring, laboratory services, geodata management and dissemination, information management and mineral sector promotion.

##### (i) Geological Mapping

Geological mapping and mineral assessment of map sheets 17/1(Rom), 17/2 (Sidok), 17/3 (Longori) and

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17/4 (Kacheri) was carried out. In sheet 17/4 (Kacheri): tourmaline, gold, wolfram, tin, columbite-tantalite, beryl, zinc, cobalt, nickel and chromium were identified; and in sheet 17/1 (Rom): graphite, zinc and nickel anomalies were zoned out. From the heavy mineral concentrates studies, all the sheets have potential of hosting heavy minerals such as magnetite, ilmenite and rutile that are associated to shearing and hydrothermal alteration.

Sheets 25/1(Alerok), 25/2 (Kailong), 25/3 (Waiwer) and 25/4 (Nyakwae) were found to have mineral potential for gold mineralisation associated with shearing. On the other hand sheet 26/1(Panyangara) and sheet 26/2 (Moruarian) were found to have potential for Rare Earth Elements (REEs) and apatite in weathered carbonatite of Toror hills which also contains ferruginised limestone. Ironstones occur as disseminated and irregular bodies particularly around Theno hill. The sheets also host black sands containing magnetite, ilmenite and rutile. In addition, sheet 26/2 (Moruarian) was also found to host marble, occurring as extensive layers within the metamorphic rocks of the Karasuk Group.

### (ii) Ground Geophysical Surveys

The following ground geophysical surveys were undertaken:

- (a) Magnetic survey was carried out in Exploration License No. EL 1448, held by M/s Stout Min Metals Uganda Limited while exploring for chromite in Moroto District.
- (b) Resistivity/IP survey was carried out along sections of Aswa Shear Zone in Kitgum District for gold and base metals in exploration area held by SIPA Exploration Ltd.
- (c) Magnetic survey was carried out in Exploration License No. EL 1274, held by Rockinol (U) Ltd in Hoima District and magnetic bodies that could be hosting base metals were identified.
- (d) Gravity and magnetic survey were carried out in Kibiro and Panyimur geothermal prospects.

### (iii) Earthquake monitoring and Infrastructure

Earthquake monitoring stations of Uganda National Seismological Network were maintained. Data collection from the network is transmitted by Virtual Private Network (VPN) and the system backup of the data is automatically transmitted from Entebbe, Kilembe and Hoima stations and archived. The data is used in the design of infrastructure against earthquake shocks and mapping high risk areas in Uganda.

Procurement for design and construction of an earthquake research facility in Entebbe is ongoing.

### (iv) Geodata, Information Management and Mineral sector promotion

A total of 29 technical reports were received, processed and uploaded on Unpublished Document Information System (UDIS). A total of fifty five publications were updated in the LIBERO database.

Seventy four (74) applications for various mineral rights were scanned and uploaded into the Mining Cadastre System (MCRS) for further review for compliance with the mining law before the grant of the applied for mineral right.

### (v) Update and maintenance of the geoscience databases

Updated and maintained geo-information systems and portals hosted at the following sites <http://www.uganda-mining.go.ug>; <http://www.uganda-mining.go.ug:81/UgandaGMIS/and> <http://www.flexicadastre.com/uganda>. The sites facilitate provision of available geo-information on geology, minerals and mining in Uganda for mineral investment promotion.

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Modern documentation center systems were also maintained.

(vi) Geo-information Dissemination and Mineral Sector Investment promotion

Mineral sector investment promotion was done through the online systems as well as by participating in mining investment promotional conventions abroad that included: The Mining Indaba 2015 Convention in Cape Town, South Africa and the Prospectors and Developers Association of Canada (PDAC) in Toronto Canada in 2015.

Geological and mineral potential information were provided to China Harbour, a Chinese consultant for the Development of the Standard Gauge Railway (SGR) and Nippon Koli Co. Ltd, a JICA study team for development of a master plan on logistics in the Northern Corridor.

Dissemination of airborne geophysical data and provision of technical advice on its utilization to investors and other parties was also undertaken.

(vii) Mineral Laboratory Services

A total of four hundred and sixteen (416) samples of soil, rock, drill core, mineral ores and concentrates were analyzed for various elements.

The following were procured and installed:

(a) Five (5) fume-hoods and four (4) scrubbers, one (1) PG Bench-top UV – Visible Spectrophotometer, one (1) ultra-pure water purification unit, one (1) weighing scale, two (2) analytical balances; one (1) bench-top drying oven, one (1) multi pour system- cupellation pressing machine and its accessories; one (1) high temperature muffle furnace, one (1) automatic digital titrator and accessories, and three (3) uninterrupted power supply units for AAS, XRF and Fluxer in the Assay and Environmental laboratories;

(b) Two (2) crushing machines, one (1) KC-MD3 Flsmidth Knelson Centrifugal concentrator, one (1) slurry pump, one (1) vacuum pump, one (1) viscometer, three (3) MultiRAE multi gas (HCN, NH<sub>3</sub>, CO<sub>2</sub>, H<sub>2</sub>S, N<sub>2</sub>O) monitors, two (2) riffle splitters, , one (1) pulp density balance in the Mineral Dressing Laboratory; and

(c) Gold cyanidation test reagents, flotation reagents (collectors, activators/deactivators, modifiers, frothers, and modifiers), X-ray fluorescence (XRF) spectroscopy standards (Cu ore, Cu concentrate, Titanium ore, chromite concentrate, chromium ore, manganese ore, silicon ore, clays, tungsten ore, lead ore, lead concentrate, zinc ore, nickel ore, tantalum ore, and niobium ore), and Atomic absorption spectroscopy (AAS) standards (Au, Ag, Pt, Cu, Co, Pb).

## MINES DEVELOPMENT

The Mines Department undertakes license administration, monitoring and inspection together with compilation of geo-scientific environmental data of mines and mineral production.

(i) License Administration

Two hundred and fourteen (214) mineral right applications other than prospecting license applications were reviewed and all accompanying documents for the grant of exploration and mining licenses. Consequently

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as at 30/06/2015 the statistics of the mineral rights and other licenses were as follows: Prospecting License (178), Exploration License (501), Retention License (3), Location License (41), and Mining Lease (38), and Mineral Dealers (52), totaling to 813.

Non-Tax-Revenue (NTR) assessed in FY2014/15 was UGX 5,630,914,179. The NTR generated in FY2013/14 was UGX 6,053,522,861. The decline in FY 2014/2015 is attributed to the temporary ban on mineral exports that was in place.

### (ii) Inspections and Monitoring

Inspections were carried out to monitor exploration projects and mining operations for tin, iron ore, columbite-tantalite, gold, wolfram, copper, cobalt, limestone, phosphates and dimension stones in the districts of Kisoro, Kabale, Ntungamo, Kanungu, Isingiro, Kawenge, Mubende, Ibanda, Bugiri, Bushenyi, Buhweju, Busia, Abim, Amudat, Busia, Kaabong, Manafwa, Moroto, Nakapiripirit, Napak, and Tororo.

Furthermore, extension services were rendered to mining and quarrying operations (Sikander Meghani, Jan Mangal (U) Ltd and Dao Africa Ltd in Moroto, and artisanal operations in Rupa Sub-county in Moroto District and Panyangara and Rengen sub-counties in Kotido District) for purposes of establishing pilot custom milling centres for ASMs and a mineral beneficiation centre in Karamoja Region.

Sensitization of 100 artisanal miners on occupational health and safety, and best practices in mining and processing of gold was also undertaken.

Twenty three (23) special inspections were carried out to monitor operator performance and enforce applicable regulations; assess the impact of illegal mining and trade in minerals especially in gold rush areas such as Namayingo, Mubende and Amudat. In addition to the above, licensing, regulating and monitoring of Artisanal and Small Scale (ASM) was undertaken to enable mining activities promote the inclusion of ASM in rural development and job creation policies. The inspections created Healthy and Safe working environment and awareness of women of the government policy and human rights among miners and communities. The mineral statistics were validated as reported through surface rights verification for mining lease.

### (iii) Mines Geoscience Data Management

- Maintained the Mining Cadastre and Registry System (MCRS) in Flexi Cadastre for the Uganda mineral rights management.
- The staff participated in a User Training by Spatial Dimension.
- Commenced re-organizing the Mining Record Center.
- Updated the Mining Cadastre database.

### (iv) Mineral Development Projects

The Government of Uganda undertakes geological mapping, mineral exploration and mineral resources assessments. Information generated from these activities is packaged and availed to private investors who carry out detailed exploration and mining activities. Some of the key projects resulting from such activities include: Kilembe copper-cobalt mine, Sukulu phosphates project, and Namekhara vermiculite mine.

#### (a) Kilembe Copper Mines:

the concession was granted to Tibet Hima Mining Company Limited to redevelop the old Kilembe copper

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mines and carryout exploration on other licenses. The developer is on the ground and work is in progress.

### (b) Sukulu Phosphates Project:

The Government of Uganda granted an exploration license to M/s Guangzhou Dong Song Energy Group Limited to explore for polymetallic phosphate ore. The company carried out re-assessment of the sukulu phosphate resource that included detailed geological and geochemical sampling. A total of 72 trenches were dug followed by core drilling of 206 drill holes, totaling 6,067.9 metres. Three Thousand (3,000) samples collected from trenches together with those from the drill holes were analyzed in China. The analytical results defined reserves of 2.16 million tons associated with iron ore, phosphates, Rare Earth Elements and Niobium. After these exploration studies, the company was granted a Mining Lease in October 2014 after carrying a full and bankable feasibility study. The feasibility indicated phosphorous grade of 34.73%. The Sukulu Phosphate Comprehensive Industrial Development Project is planned to commence production in December, 2016 with plans to produce 300,000 t/year of superphosphate, 300,000 t/year of iron steel products, 400,000 t/year of sulphuric acid and generation of power of 12 MW.

### (c) Namekhara vermiculite mine:

The mine is located at Namekhara in Manafwa District and is leased to M/s Gulf Resources Limited to mine and process vermiculite. Currently 55 million tons have been established.

### (v) Institutional Capacity Building

Capacity building was done through staff training in geosciences resulting in bachelor's degrees, diplomas and certificates together with equipping the mineral laboratories. This has greatly contributed to geological, geophysical and geochemical surveys; mineral beneficiation and processing; laboratory analysis and mineral investment promotion. In addition capacity building has also improved acquisition of geo-scientific data, administration of mining legislation, inspection of mines and regulation of mining activities, monitoring of earthquakes and geo-hazards, geo-data management and dissemination to the data users, and geothermal resources exploration.

One thousand (1000) artisanal and small scale miners (ASM) were trained; these included 600 men and 400 women, registering improvement in women participation. The training resulted into improved livelihood, health and safety and mining best practices of ASM.

## GEOHERMAL RESOURCES

Geothermal resources development is still at prefeasibility stage of exploration. Capacity building has been done through training and acquisition of surface and subsurface exploration equipment, such as Magneto-tellurics (MT) and Transient Electromagnetic (TEM).

### (i) Geothermal Exploration

Preliminary surveys were undertaken at Suam (Bukwa-Kween), Kanangarok (Kaabong), Palabek (Lamwo), Elegu-Nimule (Amuru), Rubaare (Ntungamo), Amuru (Nwoya, Amuru), Amuru (Adjumani), Fort Portal and Ndale Volcanics (Kabalore), Nyakalenjijo-Bugoye, Kasese, Dwenkorebe (Kamwengye) Kaiso-Tonya (Hoima) and Butiaba-Buliisa (Buliisa).

Detailed surveys were undertaken at Kibiro, Panyimur, Buranga and Katwe. Most of the prospects are fault bound geothermal systems.

Panyimur and Kibiro: Geological structures were delineated through ground magnetic and gravity geophysical surveys which might geologically control the geothermal system.

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Katwe-Kikorongo: A structure map including a linear rift bound fault of Katwe-Kikorongo was produced based on a digital elevation model (DEM).

### (ii) Exploration Equipment

Six (6) Magnetotellurics (MT) and one (1) Transient Electromagnetic (TEM) equipment for subsurface studies were procured from Phoenix Company in Canada. One (1) Gravity meter a Global Satellite Navigation System, a Portable XRF and Gas meters were also procured to aid surface studies in Geothermal exploration.

### UGANDA GEOTHERMAL RESOURCES DEVELOPMENT PROJECT (GRDP)

The achievements of the GRDP are as follows:

#### (a) Policy formulation

The following has been undertaken to develop a geothermal policy:

- Stakeholders analysis and identification was undertaken.
- A work plan for the formulation of the geothermal policy was prepared with the assistance of Climate Technology Center and Network (CTCN).
- The staff participated in a workshop on the formulation of an ‘East African Geothermal Drilling Code of Conduct’ in conjunction with Germany Geological Survey (BGR) and African Union Commission (AUC) in Entebbe.
- Information and public awareness field trips were undertaken.

#### (b) Institutional framework

Geothermal Resources Department (GRD) was established under the Directorate of Geological Survey and Mines and its offices were renovated.

#### (c) Human capital development

Several trainings were undertaken to put in place a skilled geothermal workforce in the following areas:

- Geothermal exploration and development in Naivasha, Kenya (2);
- Enhancement of planning for geothermal development in Japan (2);
- Difference disciplines of geothermal exploration in Nakuru, Kenya (6);
- Africa Rift Geothermal Conference in Arusha (10);
- World Geothermal Congress in Melbourne, Australia (4);
- Project planning and management at Uganda Management Institute (UMI)
- Occupational health and safety at Management Training and Advisory Centre (MTAC) (9);
- Field mapping techniques at Kibiro, Katwe and Buranga (12);
- On-job training on use of newly acquired equipment (MT, TEM, Gravity meter, Digital Mapping System, Niton XRF Analyzer, and Global Satellite Navigation System);
- Briefing on GEF/UNEP’s support to the Kibiro Geothermal project at UNEP in Nairobi, Kenya (3);
- East African Geothermal Partnership Training Modules/ presentations were received from USAID; and
- A skills gap analysis was undertaken in conjunction with ARGeo-UNEP as part of institutional strengthening.

#### (d) International collaboration

- Ministry staff visited KenGen and GDC facilities in Kenya to learn from their experience in geothermal

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development.

- Geothermal Development Company (GDC) of Kenya undertook a reconnaissance survey at Kibiro, Katwe and Buranga under the auspices of a MoU between GoU and Government of Kenya (GoK).
- ICEIDA seconded staff of ISOR to assist the Ministry to review data on Buranga, identify data gaps and recommend further work.
- Ministry staff attended the 6th Northern Corridor Infrastructure Regional Integration Summit in Kigali, Rwanda.

#### (d) Geothermal database management

In collaboration with UNEP-ARGeo on the Geothermal Inventory Database, DGSM developed, maintained and updated a geothermal database to house all geoscience data relevant to geothermal exploration. This information can be accessed at <http://argeo.geothermal.is>

#### (e) Health and safety

The following activities were undertaken in relation to health and safety of geothermal resources:

- Analytical data for the hot springs was given to Bunkangama Cultural Center (Kasese) on request.
- A first aid manual 2013 and a report on occupation healthy and safety on hot water burns, toxic gaseous emissions, acidic waters, hazards, risks, outcomes and risk assessment were acquired.
- Health and safety equipment were procured for field team members.
- The environmental baseline surveys were undertaken at Kibiro, Katwe, Buranga and Panyimur prospects as an on-going process.

#### (f) Promotion of geothermal energy

- Two (2) brochures were produced namely; Uganda geothermal energy and Environmental benefits of geothermal resources.
- Three hundred (300) geothermal energy promotional DVDs were produced to raise public awareness of geothermal resources, power generation and direct uses.
- Two (2) articles on geothermal exploration and development were run in the New Vision publication and one in The Monitor publication.
- Photo and video galleries for geothermal resources were opened up and made public.
- Two hundred (200) MEMD staff undertook information and awareness field trips to the geothermal fields.

#### *Preliminary 2015/16 Performance*

### ENERGY PLANNING MANAGEMENT AND INFRASTRUCTURE DEVELOPMENT

Government is taking forward the process of developing the power infrastructure in Uganda on various fronts. Construction of power generation projects, namely Karuma, Isimba, and other small power generation projects is progressing well. Implementation of electricity grid extension programmes is on-going and the rural electrification programme is nearly covering all the districts in the country. In addition, Government has made commitments at regional and international level to improve electricity generation and sharing among partner states through the Eastern Africa Power Pool (EAPP) in a bid to rationalize the generation and use of modern energy sources. The process of commercialization of oil and gas resources is being taken forward; and the development of mineral resource potential is progressing well.

### PROGRESS IN INCREASING POWER GENERATION INFRASTRUCTURE

#### (i) Large Hydro Power Generation Projects



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Development of Karuma Hydropower Project (600MW): Construction of the dam is on-going and progress has been achieved as follows:

- By end of reporting period, all major components were in line with the schedule. The Adit works to various caverns and TRTs were complete except for Adit 2.
- Excavation works for the underground tunnels i.e., Main Access Tunnel, Escape and Ventilation Tunnel, and Adit 8, 9, 10 is 100% complete while the outfall is 72% complete.
- The Intake ground surface clearing and levelling, together with the diversion channel and open excavations in soil and rock, support on the slope and the construction of sub-cofferdam has been completed.
- Other construction facilities completed include: Site Clinic; Site Quality Control Laboratory; Repair Plant; Mechanical and Electrical Warehouse and Material warehouse.
- Two aggregate processing plants on the left and right bank of the river have been set producing 70 Tons Per Hour (TPH) and 30 TPH respectively. A temporary batching plant of 60m<sup>3</sup>/h and permanent batching plant of 90m<sup>3</sup>/h are under operation on the left bank and right banks of the river respectively. A batching plant of 240m<sup>3</sup>/h is under erection near the intake.
- The diversion channel was completed and the river closed. A bridge was created over the diversion channel to enable vehicles to cross and allow transportation of machinery and materials.

During the quarter, the supervising consultant together with government continued with Site inspection and progress review meetings, Health Safety and Environmental review meetings, RAP and Progress review meetings and one security meeting were held.

The project completion time is estimated to be the end of 2018.

Isimba Hydropower Project (183 MW): progress has been achieved as follows:

- The initial development phase which included construction of camps, access roads, provision of electricity to the construction area, and the engineering designs is complete.
- Works have commenced on the construction of the cofferdam and one dyke upstream of the river has been closed.
- Concrete pouring ceremony presided over by H.E. the President of the Republic of Uganda was held in July 2015.
- Implementation of the Resettlement Action Plan: So far 83% of the PAPs affected by the Power Plant and 40% affected by the transmission line have been paid.
- Construction of the site clinic is on-going and in advanced stages.

Construction of the Power house at Isimba HPP dam progressed with the Reinforcement placements and concrete works are commenced at the powerhouse, gravity Dam 1 and 2 and at the spillways – upper and lower (ie. Location of the first stage structures). Power house: Units 1&4 concrete up to elevation 1015m and the water collection sump up to elevation 1011.42m. Volume of concrete used so far: 13,000m<sup>3</sup> out of 357,048 m<sup>3</sup>. Spillway: Spillway 1 & Spillway 2 are at Partial concrete up to elevations 1026m and 1029m respectively.

NEMA monitoring committee visited to check the compliance and come up with a checklist as guidance for HSE issues on 14th-16th September, 2015, World bank representatives visited the site in regards to the addendum of the Kalagala offset on 21st September 2015 and the Board of Directors of UEGCL visited the site to check on the progress of the project on 25th September, 2015

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Auxiliary works that included the camp's main construction works were completed, the camp is to house 700 persons and already some workers have started residing there.

Permanent storage facilities: works at this storage facility were advanced. A 20Tonne crane was erected.

The project completion time is estimated to be at the end of 2017.

Ayago Hydropower Project (840MW): Progress has been achieved as follows:

- The feasibility study for this power plant was completed
- Government signed a Memorandum of Understanding (MoU) with M/s China Gezhouba Group for the construction of the plant and the Transmission Line under an Engineering Procurement, Construction arrangement.
- A supervising Consultant to assist in the review of the feasibility study report and in the supervision of the construction of the plant has been procured.

Financial closure has not been attained. The focus of government was to conclude financial closure of Karuma and Isimba hydropower projects from the same financier (China EXIM bank). However, construction is expected to commence in 2016 and will be completed in 2022.

(ii) Medium size hydropower projects and Minihydros

Muzizi Hydro Power Project (44.7MW): Government has concluded negotiations with KfW for a loan to develop this project. The Resettlement Action Plan (RAP) implementation commenced. The implementing Consultant is Ms. ILF Consulting Engineers - Austria GmbH. The contract was signed in Aug 2015. The procurement process for the Implementation Contractor is at Bid Evaluation stage.

Kikagati (16MW): Bilateral Agreement between Tanzania and GOU has finally been signed in July 2015 after 2years of delay. Construction expected early 2016 and expected commercial operation date is during the second Quarter of Financial year 2017/2018.

Nyagak III Hydro Power Project (4.4MW):

Generation License by ERA was approved and granted to GENMAX (UEGCL, Hydromaxx and Dott Services) as developers of the project for 23years. The RAP implementation process for 310 Project Affected Persons is ongoing. Owner's Engineer /supervising consultant was procured and the evaluation process completed. Ground-breaking for construction is planned for the third quarter of Financial Year 2015/16. Hydromaxx was procured as the private partner to develop the project.

Siti 1 (6.1MW): Construction of this project has started. The Power Purchase Agreement (PPA) was signed in January 2015. Expected commercial operation date is second quarter of Financial year 2016/ 2017.

Waki (4.8MW): All agreements for the project have been signed and the developer started early construction activities in May 2015. The developer is in the process of clearing final Condition Precedent.

Rwimi (5.4MW): Most of the agreements with the lender have been signed. Ground breaking expected this Financial Year 2015/16. Expected commercial operation date is during the Financial Year 2017/18.

Nengo Bridge (6.7MW): Financial closure expected before the end of 2015. Delays resulted from a lengthy clearance process of a GET-FiT condition precedent concerning the environmental flow of the project. Now that it has been cleared, expected start of construction is before end of 2015. Expected date of operation is

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during the Financial Year 2017/18. Final discussions with the EPC contractor are currently underway.

Muvumbe (6.5MW): The contractor Vildunka has mobilised equipment to site. Ground breaking was on 21st September 2015.

Siti I (6.1 MW): Siti I is the most advanced project in the GET FiT portfolio. By June 2015 excavation activities for integral scheme components such as the water channel had commenced. Expected Commercial Operation Date is Q2 2017.

Siti II (15 MW): All required legal documentation for the project has been executed. The project is nevertheless still on hold due to its dependence on progress of the 132kV line between Bulambuli and Mbale, which is constructed by UETCL. A feasibility study for the line, funded by KfW, is expected to commence in October. It is expected that by end of this year a verifiable date for the completion of this line will be available. Expected Commercial Operation Date during the Financial Year 2018/19.

Nyamwamba (9.2MW): The developer has signed all the necessary agreements and the lender has approved the credit facility for the project and ground breaking is expected in this year 2015.

Achwa hydropower projects (83MW): This project to be developed by a consortium of PAC SPA and Berkerly Energy Fund. The feasibility for the associated transmission line, financed by Government of Uganda was completed in June 2015. The firm licensed to develop the site is finalizing negotiations of the Power Purchase Agreement (PPA) with Uganda Electricity Transmission Company Limited (UETCL) and is also negotiating an implementation agreement with the Ministry of Energy and Mineral Development.

#### (iii) Nuclear Power Development

- Nuclear Energy Roadmap Development; Pre-feasibility studies for launching the first nuclear power plant completed. Other activities included the Detailed site survey conducted.
- Study on local industries involvement in nuclear power infrastructure development initiated.
- Assessment of human resource needs and capabilities of public universities and other tertiary institutions to conduct nuclear training conducted.
- Fellowship to Vienna on energy planning conducted.
- Group fellowship to USA on Nuclear Power Program conducted.
- Review of existing policy, legal and institutional framework related to nuclear energy development completed.

#### PROGRESS IN INCREASING POWER TRANSMISSION INFRASTRUCTURE

Construction is ongoing for the following Transmission Lines:-

Bujagali-Tororo-Lessos (220kV), 127km; Mbarara – Mirama Hill - Birembo (220 kV), 66km; Mbarara – Nkenda (132kV), 160km; Tororo – Opuyo –Lira (132kV), 260km; Kawanda – Masaka (220kV) 142km; Nkenda – Fort Portal – Hoima (220kV) 234km; Isimba Interconnection Project (132kV), 40km; Karuma – Kawanda,; Karuma Lira (400kV, 220kV and 132kV line); 378km; Mutundwe – Entebbe (132kV) 35km and Opuyo-Moroto (132kV) 160km. These projects will expand the transmission infrastructure by about 2,002km.

The following substations are being to be upgraded:

Lugogo, Mutundwe, Queensway and Bujagali switchyard. Four (4) new substations to boost power supply to the proposed industrial areas are being to be constructed and these are: Namanve South, Luzira,

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Mukono and Iganga Industrial Parks substations.

Transmission Lines being prepared for implementation:

Hoima-Kinyara-Kafu (220kV), Nkenda – Mpondwe – Beni (220kV), Ayago Interconnection project, Opuyo-Moroto (132kV); Mirama –Kabale (132kV); Bulambuli (Atari) - Mbale Industrial Parks (132kV); Lira – Gulu – Agago (132kV).

Bujagali Interconnection Project: The project consist of Upgrade of Bujagali Switchyard to 220kV; Construction works are 75% complete

Karuma Interconnection Project: Commercial contract with Supervision Consultant (Intec Gopa) was signed; the Resettlement Action Plan (RAP) implementation is in progress; Detailed survey and engineering for the transmission lines and substations is complete.

Mputa Interconnection Project: The EPC contracts became effective on 24th August 2015; Design and survey is ongoing for Lot1- transmission line; Contractor's mobilization and Substation design are on-going for Lot 2 contractor; RAP Implementation is 85% complete; The current disbursement level stands at 8% for AFD and 19% for NORAD.

Mbarara-Nkenda/ Tororo-Lira Transmission Lines: Lot 1 (Tororo – Lira Transmission line) is 70% complete; Lot 2 (Mbarara – Nkenda Transmission line & Associated substations) is 76%; RAP Implementation is 77% complete for Mbarara-Nkenda Line and 83% complete for Tororo – Lira; The current disbursement level stands at 65% for ADF loan. The detail is as follows: -

Lot 1:

The construction of 260 km double circuit 132 kV Tororo- Lira transmission line:

- Total Route approved is 262.988km(100%) out of 262.988 km
- Detailed survey completed is 262.983 km(99%) out of 262.988km
- Total DCPT completed -592out of 716 locations (82.7%)
- Total Tower foundation completed – 527 out of 716(73.5%)
- Total Tower Erection completed - 473out of 716 (66%)
- Stringing of Conductor - 27.009 km from AP 21/0 to AP 27/0
- Stringing of OPGW- 26.308 Km from AP 20/9 to AP 25/9.
- Finalization of Temporary pole diversion profile for Kumi and Lira.

Opuyo substation

- All outdoor equipment civil foundation works completed
- Cable trench works under progress
- Drainage works under progress
- Road works under progress
- Guard house works under progress
- Erection of all pipe structures completed
- Fencing works under progress
- Erection of 16 towers out of 17 and 9 beams out of 10 completed
- Gas filling and pre-commissioning tests of circuit breakers completed
- tanδ and capacitance tests of CTs and CVTs completed
- Erection of all outdoor switchgears.
- Interconnection of outdoor switch gears under progress

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### Tororo Substation

- All civil works except gravel spreading completed
- Erection of two towers and one beam completed
- Casting of cable trench covers completed
- Erection of outdoor switchgear and control/protection panels completed
- Gas filling and pre-commissioning tests of circuit breakers completed
- tan $\delta$  and capacitance tests of CTs and CVTs completed

### Lira

- All civil works except gravel spreading completed
- Casting of cable trench covers completed
- Erection of all four towers and two beams completed
- Extension of existing internal road completed
- Erection of outdoor switchgear and control/protection panels completed
- Gas filling and precommissioning tests of circuit breakers completed
- tan $\delta$  and capacitance tests of CTs and CVTs completed

### Lot 2:

The construction of 160 km 132 kV double circuit Mbarara- Nkenda transmission line and associated substations including reactive power compensation.

- Detailed Survey completed.
- stringing works ongoing
- Erection of towers ongoing
- Total DCPT completed - 453 out of 453 locations (100%)
- Total Tower foundation Completed – 214 out of 317 tower locations
- Total Tower Erection Completed – 194 out of 317 towers
- Monopole foundation completed – 131 out of 136 locations
- Monopoles erected – 131 out of 136 locations

### Mbarara substation

- All civil works except gravel spreading completed
- Testing of outdoor switchgear completed

### Nkenda substation

- All civil works except gravel spreading completed
- All tower and beam erections completed
- All outdoor switchgear erection and final alignment completed. New base insulators for surge arrestors received and replaced in place of the faulty ones
- Testing of all outdoor switchgear completed
- Testing of reactor completed
- Internal road work completed
- Site leveling and compaction work almost completed. Grouting of foundations completed
- Pre-commissioning tests of control and protection panels completed
- Pre-commissioning tests of RTU extension completed

NELSAP: The current disbursement level stands at 38% for ADF and 49% for JICA; Bujagali-Tororo-Lessos line (Lot A), is 62% complete; Mbarara- Mirama line (Lot B); is 60% complete; Construction works

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Bujagali, Tororo, Mbarara and Mirama substations are 45% complete; Construction of resettlement houses for contractors is ongoing; RAP Implementation progress for Bujagali-Tororo is 85% while Mbarara-Mirama is 91%.

Hoima – Kafu: Feasibility study 100% completed; ESIA & RAP Studies completed; Final Tender documents submitted to UETCL; Procurement of Supervision Consultant for the Hoima-Kinyara portion Commenced.

Opuyo- Moroto Interconnection Project: Contract signed with supervision consultant on 2nd August, 2015; Contract awarded to GhodsNiroo Engineering Company Ltd. The Resettlement Action Plan (RAP) Implementation is 41% complete.

Electrification of Industrial Parks Project: RAP Implementation for Namanve, Mukono, Iganga and Luzira Industrial Parks on-going; 40% Completed; Namanve, Mukono, Iganga and Luzira: Sourcing for financing for construction. On-going; Mukono, Iganga and Luzira: ESIA & RAP Studies on-going; 80% completed; Namanve, Mukono, Iganga and Luzira: supervision of works consultant kicked-off and Inception report completed

Kampala-Entebbe Expansion Project: ESIA/RAP/RAP Implementation services: The Final ESIA report was submitted to NEMA on October 6, 2015 and approval was granted on February 15, 2015; Entebbe substation land was secured; Design, tender document preparation, project management and supervision of works services: Preparation of tender documents ongoing.

Electricity Sector Development Project: Construction of Kawanda-Masaka 220kV transmission line and associated substations: Lot 1. 220 kV DC Kawanda Masaka Transmission Line is 53% complete; Lot 2: Kawanda Substation Works is 41% complete; Lot 3: Masaka and Mbarara Substation Works is 23% complete; RAP Implementation is 64% complete; The current disbursement level stands at 18%

Of the total 2479 Project Affected Persons, 1595 have been compensated. 1944 PAPs have been disclosed too, 1842 agreements, 102 disputes and 535 outstanding disclosures.

The Evaluation of eligible bidders to undertake Supply, erection and complete installation, testing and commissioning of the proposed street and market lighting System was undertaken in the month of August 2015 and the combined Evaluation report was submitted to the World Bank for no-objection in the month of September 2015.

Twelve (12) ministry staff has so far completed training in the different fields. A new training plan for additional staff was approved by the World Bank on January 30th 2015 and so far 3 officers have undertaken training in the different fields.

The identification of potential; beneficiaries finalised in the districts of Wakiso, Lwengo, Butambala, Mpigi, Kalungu and Masaka.

In category 1: under grid intensification an exercise that requires less than 2 poles a total of 11,489 customers were identified with a total of UGX5,505,586,800=.

In category 2: Grid extension to potentially feasible areas a total of 2,793 potential customers were identified at accosts of UGX10.2 billion Uganda shillings.

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The ministry is in the process of finalising the framework contract between the Government of Uganda and UMEME limited. Meetings to negotiate the terms of the contract have been going on. The framework Contract was approved by contracts Committee and World Bank and was submitted to Solicitor General for clearance in September 2015.

Electrification of Industrial Parks Project: Feasibility Study, ESIA and RAP study was concluded and RAP Implementation ongoing. Procurement of Supervision consultant concluded. Contract awarded to NEK Consults Ltd. Signed commercial contract for EPC Construction with CAMCE. Design for EPC Construction works ongoing.

Kampala-Entebbe Expansion Project: Supervision Consultancy works (design) ongoing. Contract awarded to Intec Gopa. Procurement of EPC Contractors, and RAP Implementation are ongoing.

### ENERGY MANAGEMENT PROGRAMMES

#### (a) Energy Efficiency

##### Energy Efficiency Standards and Labels program

- The Ugandan energy label has been finalized and has been gazetted by UNBS. Commenced the implementation of the Energy Efficiency Standards and Labels program to promote the use of efficient electrical appliances. By end of July 2015, this intervention realised savings of about 1.0 MVA making the cumulative audited and verified total of approximately 7.03 MVA from 21 industries.
- The Draft Energy Efficiency and Conservation Bill reviewed and re-submitted to cabinet
- Two (2) industries, Lugazi Kinyoro Millers and Kyebando Combined Millers installed energy efficiency saving of about 105 and 181KVAs respectively
- Training of UNBS technicians and MEMD Energy Officers was carried out.
- Concluded the Energy Week 2015 held from 14th – 19th September 2015. The activities included the Energy Exhibition at UMA conference hall parking lot, Lugogo, the Energy Management Symposium at Imperial Royale Hotel on 17th September 2015 and the Biomass Energy Dialogue on 18th September 2015. Report has been compiled and is in place.
- Technical Support for the conducting of Energy Audits was provided to large energy users; Energy Audits conducted for NSSF, Luuka Plastics, and Steel Rolling Mills and reports in place. Savings of 0.996 MW (approximately 1 MW) power capacity was estimated to be saved by implementing the identified Energy Efficiency measures.
- Awareness materials (Brochures and pull-up banners) regarding energy saving tips for homes, efficient use of biomass energy resources and energy auditing designed produced and disseminated.
- Specifications for the lighting demo drafted, procurement of the suppliers commenced, demo designed, and delivered.

### RENEWABLE ENERGY PROMOTION

#### Awareness creation

- The National Biomass Dialogue was held in Fairway Hotel, as part of the main activities of the Energy

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Week, 2015.

- Awareness material, and pullouts on Modern and efficient biomass Energy technologies were published.
- 37 exhibitors from the private sectors exhibited renewable energy technologies during the Energy Week exhibition

The Ministry has now embarked on the process of developing Biogas standards to regulate the subsector.

### (i) Biogas Technology

- Under the Uganda Domestic Biogas Program (UDBP), phase II of the project is underway which will be implemented over a 4-year period. The second phase has set a target of 13,600 biogas units.
- The Ministry embarked on the process of developing Biogas standards to regulate the subsector, the final draft of the biogas standards for approval by the Council is out

### (ii) Construction of Biolatrines systems in schools

• Launching of the Biolatrines; the Ministry launched the bio latrines to demonstrate the management of human waste by generating biogas from the systems to partly substitute the fire wood for cooking. The launch was held in St. Tereza Primary School in Entebbe in September, 2015. The ten (10) beneficiary schools are: Asinge Senior Secondary School in Tororo district; Hamdan Girls' Senior Secondary School in Mbale district; St. Paul's Senior Secondary School in Mbale district; Teso College Aloet – Eastern Campus in Soroti district; Kitagobwa Senior Secondary School in Butambala district; Rines Senior School in Wakiso district; St. Thereza Girls' Primary School in Wakiso district; Mbarara High School in Mbarara district; and Ntare School in Mbarara district.

### (iii) Promotion of Gasification

Through the World Bank ACCES program, the Ministry, the Ministry will demonstrate thermal gasifier stoves in institutions. Already a team has conducted a scoping exercise to identify education institutions to demonstrate the gasification technology for cooking.

### (iv) Wind Energy Resources

- Seven (7) pilot small wind turbines for electricity generation in areas around Lake Victoria and Karamoja region have been installed to test their performance. The wind turbine systems were installed at the following sites and are in good operating conditions: Aisha Junior school – Mityana district; Luffudu Landing Site - Namayingo District; Opilitok Primary school - Kaberamaido District; Lopeei Primary school - Napak District; Losakuca Primary school - Kotido district; Kolasarich Primary school - Kotido District; and Kyankore landing site, at the shores of lake Kyogga
- Two (2) wind measuring equipment were installed at Napak and Kotido District headquarters to assess the wind potential of the region and currently is being collected that will be used to generate a wind map.
- The data collected now shows that are sufficient wind speeds in Karamoja region for electricity generation using
- Procurement of 5 hybrid solar/wind systems for electricity generation initiated. Technical specification for the procurement developed.

### (v) Improved Cook stoves

- 17,733 cook stoves constructed for households in Northern Uganda, 100 institutional cook stoves



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constructed in Educational institutions and other Social Institutions and 36 in SMEs.

- Review of the National standard on the cookstove, US761:2007 Energy efficiency stoves — Household biomass stoves — Performance requirements and test methods, was initiated in collaboration with UNBS, Uganda National Alliance on Clean Cooking
- Development of the Committee Draft of ISO TC/ 285: Clean Cookstoves and Clean Cooking Situations with Experts from the Ministry and the International Standards Organization, ISO.
- Capacity building done for forty (40) artisans in advanced construction of improved institutional cook stoves construction and quality assurance in Masaka S.S and Uganda Cooperative College, Tororo.

#### (vi) Biofuels development

- Draft Bill approved by Cabinet; now awaiting discussion Parliament to pass the Biofuels and Blending Act.
- Assessment of Biofuels feedstock conducted in Kayunga and Masindi and mobilization of farmers to grow biofuels crops conducted.
- Monitoring of Biodiesel processing conducted at Nexus Biofuel Factory in Kayunga district.

#### (vii) Addressing barriers to Sustainable charcoal Production

- 500,000 seedlings were distributed to over 300 farmers in the districts of Kiboga, Kiryandongo, Mubende and Nakaseke districts to plant trees for sustainable charcoal production.
- Over 16 Community Based Organization in the Districts of Kiboga, Kiryandongo, Mubende and Nakaseke were trained in Conservational Agriculture, in partnership with the Ministry of Agriculture, Animal Industry and Fisheries at Bukalasa Agricultural training school in Nakaseke district.
- A stakeholders' engagement conducted for all the players in the charcoal production value chain, in order to demonstrate good charcoal production, transportation and marketing practices as well as to map all stakeholders in the charcoal value chain.

#### (viii) Mainstreaming energy implementation into District Local Government Plans and Budgets

- The 17 districts of West Nile and Lango Districts signed a Local Subsidy contract for the implementation of monitoring of energy activities, data collection in energy activities, as well as awareness creation, such as radio talk shows in issues such as use of improved cook stoves, efficient lighting and solar PV technology.
- The 17 districts integrated energy activities in their DDPs and Annual Work plans and receive a quarterly budget of 5 Million Shillings to implement Energy related activities like data collection and awareness creation in their districts.

#### (ix) Award of the East African Centre for Renewable Energy and Energy Efficiency (EACREE) Centre of Excellence

The Ministry won the bid for the establishment of the College of Engineering, Art , Design and Technology as the EACREE Centre of Excellence for demonstration of the best practices in Renewable Energy and Energy efficiency research. Design and implementation in September, 2015. The Centre of excellence is to become fully operational by the month of December, 2015.

### PETROLEUM EXPLORATION, DEVELOPMENT AND PRODUCTION

#### UPSTREAM PETROLEUM

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### (i) Legal and Regulatory Framework

For the period July 2015 to date, the following are key achievements have so far been made:

- Drafting and consultations on the attendant regulations for the upstream and midstream laws were completed.
- The National Content Policy and Strategy for the oil and gas sector finalized and is in place.
- Drafting of the Model Production Sharing Agreement (MPSA) was concluded and the MPSA is in place.
- Procurement of a consultant to design a database to be used in implementation of the Monitoring and Evaluation (M&E) strategy for the National Oil and Gas Policy (NOGP) is still ongoing; at contract approval stage.

### (ii) Promotion of Country's Petroleum Potential

The ultimate goal of promotion of country's petroleum resources is to attract investment in the oil and gas sector. Progress for the period under review is as follows: -

- Government progressed with the 1st Licensing round by issuing of bidding documents to the 16 Qualified Applicants. The target is to issue new exploration licenses early 2016.
- Commenced procurement of a contractor to undertake the environmental and social impact assessment for the speculative surveys.
- Basin analysis on Lake Edward sub-Basin was undertaken.

### (iii) Development of National Expertise in Oil and Gas

- Four staff (4) continued to undertake undergraduate training in the country.
- Nine (9) staff commenced Master's degree programs in petroleum related studies, tenable at Universities abroad.
- Supported six (6) officers from other MDAs to undertake Postgraduate training in various petroleum related fields.

### (iv) Monitoring licensee field operations, costs and review of applications for production licenses

- Reviewed addenda to three (3) Field Development Plans (Kaiso-Tonya, KNNN & KW).
- Monitored the Rapid Asset Survey study for the KFDA and FEED (Front End Engineering and Design) pipeline route from Buhuka (KFDA) to the refinery at Kabaale.
- Monitored Ngara waste removal operations in EA1.
- Monitored construction of the access road over the escarpment to Buhuka, by the Ministry of Works together with CNOOC is ongoing. Progress of this construction is estimated to be 98%.

### (vi) Regional Initiatives

The Department and the Ministry participated in one Sectoral Council of Ministers on Energy Summit in Arusha, Tanzania.

### (vii) Establishment of new Institutions i.e. PAU, NATOIL and Petroleum Directorate.

The Boards of the National Oil Company that of the Petroleum Authority were inaugurated and have commenced their operations. A bidding round for issuance of new Exploration Licenses is making good

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progress and will be concluded in May 2016.

(viii) Government buildings

Phase-2 construction was completed and consultancy services to re-design and supervise the Phase-3 construction including access road were procured. Procurement of Phase-3 contractor is ongoing. Maintenance of existing buildings and related infrastructure undertaken.

#### MIDSTREAM PETROLEUM

(i) Regulations for the Midstream

The Draft Regulations for the Midstream were availed to Stakeholders for consultations. Comments on the Regulations were received from the key stakeholders and addressed by the working group on regulations comprising of representatives from the Department and the First Parliamentary Council (FPC), Ministry of Justice and Constitutional Affairs. The process of developing standards for Midstream petroleum operations has progressed and to date a number of standards have been developed.

The Technical Working Group on Refining and Transportation developed 7 draft standards. To date about 40 draft Uganda standards have been developed.

(ii) Capacity Building for the oil & gas sector:

Four (4) officers commence training at Master's level; 2 short term trainings attended; Continue engagement with educational institutions on curricula development incorporating Midstream aspects.

(iii) Crude Oil Export Pipeline Development

Detailed Comparative Analysis Report presentation by the Lead Consultant Undertaking the Feasibility Study and Preliminary Engineering Design for the Proposed Hoima - Lokichar - Lamu Crude Oil Pipeline in Nairobi, Kenya.

Workshop to discuss Crude Oil Export Pipeline Development at Entebbe, Uganda.  
Multi-Sectoral Committee for Oil and Gas (OGMSC) meeting at Jinja Resort.  
Uganda International Oil and Gas Conference at Serena Hotel, Kampala.

(iv) Development of Oil Refinery

Negotiation of the Project Agreements for the Refinery Project between GOU and the RT Global Resources Consortium is in the final stages. Three additional meetings were held during the period under review. The outstanding issues in the Agreements were presented to Cabinet for guidance on 4th September 2015.

(v) Implementation of RAP for Refinery Land

A total number of 2460 out of 2615 Property Owners who opted for cash compensation, which is about 94.1%, have been compensated. Cash compensation is expected to be concluded by end of 2015. It should be noted that the earlier report indicated 95% cash compensation as completed, however later in August, BoU communicated that payments to 43 PAPs had bounced.

- The implementation of the physical development plan for the 533 acres of resettlement land in

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Kyakaboga through demarcation and survey is being concluded.

- Contractors to construct resettlement houses, schools and rehabilitate health centres were procured and the respective sites were handed over to them. They are expected to start mobilisation and consequently commence construction work.
- A consultant was procured to supervise the construction of resettlement houses and social infrastructure and is now concluding the review of designs to enable the contractors to commence work. The Ministry in conjunction with Ministry of Works and Transport and Civil Aviation Authority are taking forward the development of a master plan and detailed engineering design for phase 1 (excluding a control Tower and Terminal Building) for an Airport at Kabaale, Hoima. The Terms of Reference for consultancy services for the assignment were developed in consultation with International Civil Aviation Organisation.
- Initial Master Plan review meeting held was on 11th June 2015 at CAA offices in Entebbe. The Final Master Plan review meeting was held on 17/07/2015 at CAA offices from which comments on the report were generated for incorporation.
- The Master Plan has been completed and submitted with the received comments incorporated. But a Master Plan is a living document and can be updated if conditions change. This could be the case after initial review meeting of the detailed design report

### Strengthening the Development and Production Phases of Oil and Gas Sector

Promotion of the country's petroleum potential and licensing: Following announcement by Government of 6 new blocks for licensing in the Albertine Graben through competitive bidding during the 1st Licensing round, evaluation of 17 applicants for prequalification of the Licensing round emerged with 16 applicants, who qualified and were notified for proceeding to the bidding stage.

The bidding documents comprised of the Request for Proposal, Model Production Sharing Agreement 2015 (MPSA), Model Confidentiality Agreement for sale of data, Petroleum (Exploration, Development and Production) (Data Sale) Regulations 2014 and Petroleum (Exploration, Development and Production) (Data Sale) (Amendment), Regulations 2015.

The target is to issue new exploration licenses early 2016.

Commenced procurement of a contractor to undertake the environmental and social impact assessment for the speculative surveys.

Basin analysis on Lake Edward sub-Basin continued and was completed.

Two staff members attended the American Association of Petroleum Geologists' (AAPG) Conference in Melbourne, Australia, where the country's petroleum potential was promoted.

### Downstream Petroleum Infrastructure

- HSE training manuals development completed
- Procurement of staff protective gears was completed
- Building of JST perimeter wall is on-going (60% complete)
- Quantity of fuel in reserves monitored and inspected
- 73 Million has been collected as hospitality fee during the quarter from Hared as NTR to consolidated fund
- Automated distillation Apparatus (laboratory) procurement for Malaba and Busia border entry points

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has been completed

- Payment for Bulooba land commenced

### MINERAL EXPLORATION DEVELOPMENT AND VALUE ADDITION

In midterm performance, more minerals targets of Graphite, Chromite, Base Metals and Gold have been discovered in Karamoja region on top of the sixteen (16) previously confirmed. For each one developed in to production, one mineral target can contribute significantly in solving unemployment. If developed, one mine can create at least 100,000 to 150,000 jobs in a mining Community.

In overall, Mining engages a significant part of the population, over. 26% of the population during 2011 to 2015 was employed in mining related business.

The output targets for 2015/16 are focused on the implementation of the development plan (a) Geothermal Project and (b) Mineral Wealth and Mining Infrastructure Development Project.

#### (i) NEW POLICIES AND LEGISLATION

##### (a) Mineral Policy and Mining Legislation

The review of the Mineral Policy, 2001 is being done in consultation with stakeholders among them include: environmental and civil society organizations, commercial companies, and national and subnational government bodies to ensure a shared vision of how the national mineral resources should be exploited for the benefit of all citizens. A draft Green Paper on Mineral and Mining Policy has been accomplished and preparation of Principles to be embodied in the Mining Act, 2003 has commenced. It is planned that both documents in the revised form will be ready by early 2016 for a Cabinet Paper to be prepared and presented to Cabinet.

##### (b) Geothermal Policy and Legislation

Climate Technology Center and Network (CTCN) endorsed a technical assistance action plan with the Government of Uganda to provide expert services for developing the geothermal policy and legislation. This activity is ongoing.

#### © Mineral Certification

Inspection manuals are under development and have so far been tested on a tin mining site in Isingiro District. Implementation of the regional certification mechanism is on track and will be in place and fully operational by 2016/17.

#### (ii) GEOLOGICAL SURVEYS

Government has commenced uranium exploration in Ndale, Fort Portal and Rusekere volcanic fields (Fort Portal west uranium anomaly) and rare earth elements (REE) exploration at Makutu-Buwaya radiometric anomaly in Eastern Uganda.

##### (a) New Mineral Discoveries

Thirty percent (30%) of the current mineral map of Karamoja has been updated from the ground geological

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and geochemical surveys. New mineral targets have been discovered from geological mapping and geochemical surveys done; they include tourmaline, gold, wolfram, tin, columbite-tantalite, beryl, zinc, cobalt, nickel and chromium and potential of black sands that host heavy metals such as magnetite, ilmenite and rutile. More minerals could be discovered after airborne surveys.

### (b) Follow ups in Mineral Exploration

Follow up on mineral targets for mining and industrial development is being tracked for both public and private partnership. These mineral targets include those of iron ore; nickel and platinum group metals (PGMs); and nickel, copper, and lead.

#### Iron ore discoveries

Follow-up of airborne geophysical surveys with ground geological and geochemical mapping resulted into new discoveries of iron ore resources in Buhara, Muyebe and Nyamiringa in Kabale District; Nyamiyaga and Kazogo in Kisoro District; and Kinamiro in Butogota, Kanungu District. Over 200 million tons of indicated resources of iron ore exist in the South Western Region.

#### Nickel (Ni) and Platinum Group Elements (PGE) exploration in Kiryandongo District

Interpretation of airborne geophysical survey data undertaken in Katulikire in Kiryandongo District by Pearl Mining (U) Limited resulted in definition of geophysical anomalies. The defined anomaly was followed by ground magnetic and transient electromagnetic (TEM) surveys which revealed massive magnetic conductors which could probably host nickel, gold and other base metals.

#### Nickel-Copper-Lead (Ni-Cu-Pb) exploration in Kitgum District

Interpretation of airborne geophysical survey data undertaken over areas in Kitgum, Lamwo and Pader districts by M/s Sipa (U) Limited resulted in definition of geophysical anomalies. The defined anomalies were followed by geological, geochemical and ground geophysical surveys that revealed massive magnetic conductors, which could probably host nickel and other base metals. The massive magnetic conductors have been drilled, preliminary results indicate nickel bearing sulphides and further drilling is ongoing.

### (c) Geo-information and data management

#### Geo-information and data management

Updated geo-data base, ICT system and management of geological, mineral information and documentation. Geoscience information/data plays a vital role in all aspects of planning and management, including environmental management, natural resources exploration and exploitation and research.

Continued the acquisition, processing and dissemination of information online and in other digital information systems to improve access by potential investors and promote the mineral sector. Continued the reconciliation of paper records with digital database.

### (iii) MINES DEVELOPMENT

#### (a) Kilembe Mines Limited (KML)

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Kilembe Mines concession was acquired by Tibet Hima Mining Company Limited (THMCOL) in 2014 to produce copper sheets of 99.9% Cu from the current 4.52 million tons of copper ore reserves. The company also acquired a number of exploration licenses to explore for copper in areas surrounding the mining lease to increase the tonnage of the copper reserves. The operations of the company are supervised and monitored by Kilembe Mines Limited (KML) on behalf of Government.

Government continued to monitor the progress of the implementation of the concession agreement between THMCOL, Government of Uganda and Kilembe Mines Ltd and also enforce compliance to the mining and applicable legislations.

#### Licensing

A total of 796 licenses and certificates were operational as at 30th September 2015. Out of these, there were 184 Prospecting Licenses (PL), 464 Exploration Licenses (EL), 3 Retention Licenses (RL), 46 Location Licenses (LL), 38 Mining Leases (ML), and 61 Mineral Dealers' Licenses (MDL).

#### Non-Tax Revenue

The sector assessed and generated Non-Tax Revenue (NTR) to the tune of UGX 567 million as of 30th September, 2015.

#### (iv) GEOTHERMAL RESOURCES DEVELOPMENT

Detailed geophysical exploration in Buranga in Bundibugyo District is ongoing. Detailed geophysical, geological and geochemical exploration in Kibiro in Hoima District is underway.

#### (v) EARTHQUAKE MONITORING AND GEO-HAZARDS

Continued to monitor earthquakes and other geotectonic activities using seismological stations installed at Kilembe, Hoima and Kyahi. Extension of network coverage to other stations and restoration of earthquake research facility are under procurement.

The VSAT and GCI were upgraded so as to improve seismic data transmission from Kyahi earthquake monitoring station near Mbarara to Entebbe National Data Centre and then to Vienna International Data Centre.

A study of other geo-hazards such as landslides and lightning risk in the country so as to generate risk maps for prone zones has been undertaken. A project proposal has been developed to address the impacts and the mitigations of the geo-hazards.

#### SUPPORT SERVICES

Progress of implementation of the activities of this Financial Year 2015/16 is as follows: -

- The development of the Data collection guidelines was completed development during the first half of this Financial Year 2015/16.
- Commenced on the ToR for the development of a comprehensive databank (Database Management System - DBMS) for EMD Sector. Data structures have been developed Energy and Mineral Statistical Metadata sheet and Sector Data base updated

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Continued with the Management of Amber house since its fully under MEMD

- Selection of Consultant to carry out designs and BOQs for Remodeling of Amber House and development of the adjacent plot on going.
- Remedial renovation works on leaking roofs and sanitary systems in amber house done
- Resource Centre refurbished and equipped
- Internet services (WiFi) procured and maintained
- Computer peripherals/ hardware and softwares/ licencing procured
- Commenced the procurements to strengthen the capacity of DGSM to establish modern laboratory
- Procurement of office furniture and fittings for the FA under the services of cleaning the exterior of Amber House
- Final Draft Feasibility Studies report for Rwimi/Nyamba Hydro Power Plant in place

**Table V2.1: Past and 2016/17 Key Vote Outputs\***

<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2015/16 Spending and Outputs Achieved by End Sept</b>	<b>2016/17 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>	Disseminate improved household stoves	Disseminated 14783 improved household stoves and 43 institutional stoves	Energy Efficiency measures implemented
<i>Performance Indicators:</i>			
Percentage of Audited firms implementing Energy efficiency measures	100	100	
Number of sites demonstrating use of improved energy technologies	10	10	50
Number of prepaid meters installed	175,000	155,000	200,000
Percentage of Audited firms implementing Energy efficiency measures			100
<i>Output Cost: US\$ Bn:</i>	<i>1.254</i>	<i>US\$ Bn: 0.227</i>	<i>US\$ Bn: 6.146</i>
<b>Output: 030103</b>	<b>Renewable Energy Promotion</b>		
<i>Description of Outputs:</i>	Nyagak III HPP land acquisition to be undertaken.	Land acquisition on going	Complete RAP for Nyagak III
<i>Performance Indicators:</i>			
Stage of development of Waki HPP			Financial closure
Stage of development of Siti 2 HPP			Contractor on site, civil works
Stage of development of Siti 1 HPP			Contractor on site, civil works
Stage of development of Rwimi HPP			Financial closure
Stage of development of Nyamwamba HPP			Contractor on site, civil works
Stage of development of Nyagak III HPP			Contractor on site, civil works



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<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2015/16 Spending and Outputs Achieved by End Sept</b>	<b>2016/17 Proposed Budget and Planned Outputs</b>
<i>Output Cost: US\$ Bn:</i>	2.229	<i>US\$ Bn:</i> 0.462	<i>US\$ Bn:</i> 5.089
<b>Output: 030104</b>	<b>Increased Rural Electrification</b>		
<i>Description of Outputs:</i>	Connect district headquarters to the national grid	Five (05) district headquarters were connected to the national grid and these districts are: Bullisa, Adjumani, Moyo, Amuru and Otuke	Connect district headquarters to the national grid
<i>Performance Indicators:</i>			
Number of District Headquarters electrified	8	5	
Number of Solar systems installed	20,000	3180	20,000
Number of line KM of MV (33KV) constructed	3,500	1938	3,500
Number of line KM of LV (11KV) constructed	3,000	1633	3,000
Number of District Headquarters electrified			5
<i>Output Cost: US\$ Bn:</i>	31.942	<i>US\$ Bn:</i> 0.196	<i>US\$ Bn:</i> 7.008
<i>Output Cost Excl. Ext Fin. US\$ Bn:</i>	0.872	<i>US\$ Bn:</i> 0.196	<i>US\$ Bn:</i> 0.872
<b>Output: 030152</b>	<b>Thermal and Small Hydro Power Generation (UETCL)</b>		
<i>Description of Outputs:</i>	To continue with the discussions with investors	Govt has continued with the discussions with investors in the HFO thermal power	Capacity payment for thermal power
<i>Output Cost: US\$ Bn:</i>	72.287	<i>US\$ Bn:</i> 18.072	<i>US\$ Bn:</i> 72.287
<b>Vote Function Cost</b>	<b><i>US\$ Bn:</i> 241.780</b>	<b><i>US\$ Bn:</i> 23.860</b>	<b><i>US\$ Bn:</i> 365.429</b>
<b>VF Cost Excl. Ext Fin.</b>	<b><i>US\$ Bn</i> 103.959</b>	<b><i>US\$ Bn</i> 23.860</b>	<b><i>US\$ Bn</i> 103.959</b>
<b>Vote Function: 0302 Large Hydro power infrastructure</b>			
<b>Output: 030251</b>	<b>Increased power generation - Largescale Hydro-electric</b>		
<i>Description of Outputs:</i>	Construction of Karuma and Isimba Hydropower Plants progresses.	Construction of Karuma and Isimba Hydropower Plants progressing well	Construction of Karuma, Isimba, Nyagak III, and Muzizi Hydropower Plants progresses.
<i>Performance Indicators:</i>			
Status of Karuma power project			-Fabrication and shipping of main EM/HM equipmet -Dam still pool & guide wall – 100% -Installation of Gates #5-#13 – 90% -Excavation of #1-#6 HRT and Pressure shaft – 100% -Power Intake structure & trash rack installation - 100%; HM – 50%
Status of Isimba power project			•Manufacture and shipping of HM/EM equipment •Phase II river diversion and closure – 100% •Phase I Embankment dam filling – 50% •Installation of metal structures – 90%

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<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2015/16 Spending and Outputs Achieved by End Sept</b>	<b>2016/17 Proposed Budget and Planned Outputs</b>
Status of Ayago power project			<ul style="list-style-type: none"> <li>•Dam concrete works – 30%</li> <li>•Phase II Embankment dam works – 10%</li> </ul> Financial Closure
	<i>Output Cost: US\$ Bn:</i> 93.305	<i>US\$ Bn:</i> 135.035	<i>US\$ Bn:</i> 31.644
<b>Output: 030280</b>	<b>Large Hydro Power Infrastructure</b>		
<i>Description of Outputs:</i>	Progress with the Construction of Karuma Hydropower Plant	Progressed with the Construction of Karuma Hydropower Plant	Progress with the Construction of Karuma Hydropower Plant
<i>Performance Indicators:</i>			
Percentage of land freed up for Karuma Transmission Line	25	10	100
Percentage of land freed up for Isimba Transmission Line	25	10	100
	<i>Output Cost: US\$ Bn:</i> 1,610.551	<i>US\$ Bn:</i> 3.905	<i>US\$ Bn:</i> 876.799
<i>Output Cost Excl. Ext Fin.</i>	<i>US\$ Bn:</i> 5.421	<i>US\$ Bn:</i> 3.905	<i>US\$ Bn:</i> 52.979
<b>Vote Function Cost</b>	<b><i>US\$ Bn:</i> 2,357.440</b>	<b><i>US\$ Bn:</i> 144.335</b>	<b><i>US\$ Bn:</i> 1,507.711</b>
<i>VF Cost Excl. Ext Fin.</i>	<i>US\$ Bn</i> 108.580	<i>US\$ Bn</i> 144.335	<i>US\$ Bn</i> 107.580
<b>Vote Function: 0303 Petroleum Exploration, Development &amp; Production</b>			
<b>Output: 030303</b>	<b>Capacity Building for the oil &amp; gas sector</b>		
<i>Description of Outputs:</i>	Train six (6) members of staff in Petroleum Geoscience, Engineering and Refinery Design. Also 8 staff fully complete their courses PAU, NATOIL and Petroleum Directorate in place; Increase national participation from the current approx 10% to 20%	Six (6) members of staff are training in Petroleum Geoscience, Engineering and Refinery Design	Train six (6) members of staff in Petroleum Geoscience, Engineering and Refinery Design. Also 6 staff fully complete their courses
<i>Performance Indicators:</i>			
Number of staff enrolled for professional training in Oil and gas discipline	6	6	6
Stage of formation new petroleum institution, Petroleum Directorate			100%
Stage of formation new petroleum institution, Petroleum Authority			100%
Stage of formation new petroleum institution, National Oil Company			100%
	<i>Output Cost: US\$ Bn:</i> 4.930	<i>US\$ Bn:</i> 0.994	<i>US\$ Bn:</i> 9.800
<b>Output: 030304</b>	<b>Monitoring Upstream petroleum activities</b>		
<i>Description of Outputs:</i>	Three Field Development Plans (FDPs) approved and corresponding Production Licenses (PLs) issued; Costs	One Field Development Plans (FDPs) approved	Four Field Development Plans (FDPs) approved and corresponding Production Licenses (PLs) issued; Costs

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2015/16 Spending and Outputs Achieved by End Sept</b>	<b>2016/17 Proposed Budget and Planned Outputs</b>
	database fully populated; continue monitoring Development activities in Kingfisher Development Area (KFDA), including 3D development seismic surveys.		database fully populated;
<i>Performance Indicators:</i>			
Number of line Km of seismic data acquired.	400	0	400
Number of field development plans approved for issuance of Production License	3	1	4
Level of compliance by exploration companies with petroleum operations guidelines	100	100	100
<i>Output Cost: US\$ Bn:</i>	56.685	<i>US\$ Bn:</i> 0.314	<i>US\$ Bn:</i> 0.500
<i>Output Cost Excl. Ext Fin. US\$ Bn:</i>	2.740	<i>US\$ Bn:</i> 0.314	<i>US\$ Bn:</i> 0.500
<b>Output: 030305</b>	<b>Develop and implement a communication strategy for oil &amp; gas in the country</b>		
<i>Description of Outputs:</i>	Public awareness in the oil and gas sector undertaken.	Public awareness in the oil and gas sector undertaken.	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.	<input type="checkbox"/> Involvement of the public and other stakeholders in the oil and gas activities achieved.	<input type="checkbox"/> Involvement of the public and other stakeholders in the oil and gas activities achieved.
	Departmental website maintained.	Departmental website maintained.	Departmental website maintained.
<i>Performance Indicators:</i>			
Number of Radio talk shows held	12	3	12
Number of newspaper advertorials made and published	5	3	5
<i>Output Cost: US\$ Bn:</i>	0.100	<i>US\$ Bn:</i> 0.020	<i>US\$ Bn:</i> 0.550
<b>Output: 030380</b>	<b>Oil Refinery Construction</b>		
<i>Description of Outputs:</i>	Finalise resettlement of the Project affected persons who opted for resettlement	Commenced construction of houses for 93PAPS to finalise resettlement of the Project affected persons who opted for resettlement	FEED for refinery development undertaken
	Plan for development of supporting infrastructure including pipelines, airport, refinery industrial park etc.	Negotiations for the Formation of the Special Purpose Vehicle and undertake Pre-FID activities for refinery development still ongoing	EIA for refinery development undertaken
	Formation of the Special Purpose Vehicle and undertake Pre-FID activities for refinery development	commenced master plan for the Airport at Kabaale	PAPS houses and other resettlement infrastructure constructed
	Develop master plan for the Airport at Kabaale	initiated master plan for Kabaale Industrial park	

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2015/16 Spending and Outputs Achieved by End Sept</b>	<b>2016/17 Proposed Budget and Planned Outputs</b>
	Develop a master plan for Kabaale Industrial park		
<i>Performance Indicators:</i>			
Stage of Land Acquisition			100% PAP compensation
Stage of identifying Lead Investor			Lead investor engaged
<i>Output Cost: US\$ Bn:</i>	27.880	<i>US\$ Bn:</i> 3.760	<i>US\$ Bn:</i> 134.340
<b>Vote Function Cost</b>	<b>US\$ Bn: 118.158</b>	<b>US\$ Bn: 7.392</b>	<b>US\$ Bn: 174.353</b>
<i>VF Cost Excl. Ext Fin.</i>	<i>US\$ Bn 55.013</i>	<i>US\$ Bn 7.392</i>	<i>US\$ Bn 55.013</i>
<b>Vote Function: 0304 Petroleum Supply, Infrastructure and Regulation</b>			
<b>Output: 030402</b>	<b>Management and Monitoring of petroleum supply Industry</b>		
<i>Description of Outputs:</i>	Petroleum supply market operations monitored for compliance to Petroleum Supply Act, 2003. Petroleum standards enforced; Compliance with applications for new licenses evaluated	Petroleum supply market operations monitored for compliance to Petroleum Supply Act, 2003. Petroleum standards enforced	Petroleum supply market operations monitored for compliance to Petroleum Supply Act, 2003. Petroleum standards enforced; Compliance with applications for new licenses evaluated
<i>Performance Indicators:</i>			
% of the facilities confirming 75 to the Petroleum facilities standards		97	100
<i>Output Cost: US\$ Bn:</i>	0.231	<i>US\$ Bn:</i> 0.044	<i>US\$ Bn:</i> 0.236
<b>Output: 030406</b>	<b>Kenya - Uganda - Rwanda Oil pipelines</b>		
<i>Description of Outputs:</i>	Continue to Supervise wayleaves acquisition and compensation of Project Affected Persons	Re-evaluation of PAPs done for Kenya Uganda .Continued to Supervise wayleaves acquisition and compensation of Project Affected Persons	Petroleum strategic reserves maintained (Kenya-Uganda- Rwanda pipelines)
<i>Output Cost: US\$ Bn:</i>	0.045	<i>US\$ Bn:</i> 0.009	<i>US\$ Bn:</i> 0.045
<b>Vote Function Cost</b>	<b>US\$ Bn: 13.857</b>	<b>US\$ Bn: 1.441</b>	<b>US\$ Bn: 13.857</b>
<b>Vote Function: 0305 Mineral Exploration, Development &amp; Production</b>			
<b>Output: 030502</b>	<b>Institutional capacity for the mineral sector</b>		
<i>Description of Outputs:</i>	Number of Staff trained (short term). Number of Staff trained (long term). Number of lab equipment installed. Number of research papers, maps workshops, conferences, and minerals discovered	20 Staff trained (short term) and 04 Staff trained (long term). Some Lab equipment installed.	Number of Staff trained (short term). Number of Staff trained (long term). Number of lab equipment installed. Number of research papers, maps workshops, conferences, and minerals discovered
<i>Performance Indicators:</i>			
Number of staff enrolled for 4 training in Mineral sub-sector		4	4
Number of Mineral analysis 2 techniques developed to ISO standards		1	2
Number of Mineral Artisans 300 and small scale miners (ASM) trained in Mining Districts		120	300
% of earthquake monitoring 35		5	35

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

<i>Vote, Vote Function Key Output</i>	<b>Approved Budget and Planned outputs</b>	<b>2015/16 Spending and Outputs Achieved by End Sept</b>	<b>2016/17 Proposed Budget and Planned Outputs</b>
stations installed against NDP target of 40 stations Draft mineral laboratory services policy developed			Draft submitted to Cabinet for approval
<i>Output Cost: US\$ Bn:</i>	0.469	<i>US\$ Bn:</i> 0.070	<i>US\$ Bn:</i> 0.725
<b>Output: 030503</b>	<b>Mineral Exploration, development, production and value-addition promoted</b>		
<i>Description of Outputs:</i>	Number of new mineral investment projects initiated. Number of mineral targets mapped. topographical map sheets	02 mineral targets mapped. 04 topographical map sheets produced in Ndale Kabarole	Number of new mineral investment projects initiated. Number of mineral targets mapped. topographical map sheets
<i>Performance Indicators:</i>			
Total Value of Mineral Production (UGX)- Bn	400	26	400
Total Value of Mineral Exports as per permits issued (UGX)- Bn	200	8	210
Number of potential Uranium resources targets discovered	2	2	2
Number of mineralized areas discovered	3	2	3
<i>Output Cost: US\$ Bn:</i>	2.564	<i>US\$ Bn:</i> 0.365	<i>US\$ Bn:</i> 1.373
<b>Output: 030505</b>	<b>Licencing and inspection</b>		
<i>Description of Outputs:</i>	mineral rights granted. Site inspections	91 mineral rights and licences granted. 12 Site inspections done.	mineral rights granted. Site inspections
<i>Performance Indicators:</i>			
Number of flagships projects monitored	2	2	
Number of mining site inspections conducted	24	12	
Number of Mineral rights (licences) operational	600	798	650
Number of flagships projects monitored			2
Amount of NTR collected (US\$ bn)	9	0.5	10
Number of mining site inspections conducted			24
% of mining companies complying with mining regulations	100	100	100
<i>Output Cost: US\$ Bn:</i>	0.958	<i>US\$ Bn:</i> 0.180	<i>US\$ Bn:</i> 0.545
<b>Vote Function Cost</b>	<b>US\$ Bn:</b>	<b>12.684 US\$ Bn:</b>	<b>1.953 US\$ Bn:</b>
<b>Vote Function: 0349 Policy, Planning and Support Services</b>			
<b>Vote Function Cost</b>	<b>US\$ Bn:</b>	<b>23.415 US\$ Bn:</b>	<b>5.392 US\$ Bn:</b>
<b>Cost of Vote Services:</b>	<b>US\$ Bn:</b>	<b>2,767.115 US\$ Bn:</b>	<b>184.373 US\$ Bn:</b>
<b>Vote Cost Excl. Ext Fin.</b>	<b>US\$ Bn</b>	<b>317.507 US\$ Bn</b>	<b>184.373 US\$ Bn</b>
			<b>2,097.765 US\$ Bn</b>
			<b>316.824 US\$ Bn</b>

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## Vote Summary

\* Excluding Taxes and Arrears

### 2016/17 Planned Outputs

#### ENERGY PLANNING, MANAGEMENT AND INFRASTRUCTURE DEVELOPMENT

##### A) ELECTRICITY GENERATION

##### LARGE HYDRO POWER PROJECTS

- i. Monitor performance of all generation plants.
- ii. Carry out sensitization and outreach programmes.

##### Karuma HPP (600MW)

- i. Continue monitoring the implementation of the Karuma HPP and target to achieve 70 % of the total progress of the Project.
- ii. Complete Resettlement Action Plan (RAP) implementation for the HPP.
- iii. Implement 60% of the Community Development Action Plan (CDAP) activities.

##### Isimba HPP (183.2MW)

- i. Continue monitoring the implementation of the Karuma HPP and target to achieve 75 % of the total progress of the Project.
- ii. Complete RAP implementation for the Hydropower Plant and the transmission line.
- iii. Implement 50 % of CDAP activities.

##### Ayago HPP (840 MW)

- i. Achieve the Financial Closure.
- ii. Award EPC Contract.
- iii. Commence pre-construction activities.

##### SMALL HYDRO POWER PROJECTS

##### Muzizi HPP (44.7 MW)

- i. Complete 100 % RAP implementation;
- ii. Award EPC Contract;
- iii. Commence pre-construction activities.

##### Nyagak III HPP (5.5 MW)

Complete 50 % implementation of the project.

##### GET-FIT PROJECTS

Complete 30 % implementation of 7 small HPP (6.1 MW Siti 1, 4.8 MW Waki, 5.4 MW Rwimbi, 6.5 MW Muvumbe, 9.2 MW Nyamwamba, 16 MW Kikagati and 6.7 MW Nengo Bridge).

##### ESIA CERTIFICATES OF APPROVAL FOR ALL HPPS

Monitor compliance to conditions in various certificates and permits.

##### West Nile Grid Extension

Supervising and monitoring activities during defects liability period.

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### B) TRANSMISSION INFRASTRUCTURE

- i.  Complete construction of the following projects: - Kawanda – Masaka 220kV line (EPC-100%, RAP-100%), Nkenda – Fort Portal – Hoima 220kV line (EPC-100%, RAP-100%) and Improvement of Queensway substation (EPC-100%);
- ii. Continue construction of the following projects:- Namanve South, Luzira, Mukono and Iganga industrial park substations (EPC-60%, RAP – 100%), Opuyo – Moroto 132kV line (EPC – 40%, RAP - 100% ), Mutundwe- Entebbe 132kV line (EPC – 60%, RAP – 100%), Mirama-Kabale 132kV line (EPC – 20%, RAP- 50%), Isimba Interconnection (EPC-70%, RAP-90% ) , Karuma Interconnection project (EPC –70% , RAP – 80%), Hoima-Kinyara 220kV (EPC – 20%, RAP- 70%), Masaka-Mbarara 220kV line (EPC – 10%, RAP- 30%), Lira – Gulu – Agago 132kV Line (EPC- 10%, RAP – 30%), New Nkenda 132/33kV substation (EPC – 20%) and Opuyo substation upgrade (EPC – 50%);
- iii. Sign contracts with EPC contractors for the following projects:- Lira-Gulu-Nebbi-Arua 132kV line and Project enhancement of Greater Kampala Transmission system.
- iv.  Conclusion of feasibility study, ESIA and RAP of the following projects:- Kabulasoke – Kiboga – Hoima 132kV Line and Bulambuli (Atari)-Mbale Industrial parks 132kV line
- v. Commencement of feasibility study, ESIA&RAP study of the following projects:- Masaka-Mwanza 220kV Line, detailed RAP study, Nkenda – Mpondwe – Beni 220kV line, detailed RAP study, Nalubaale – Lugazi 132kV, Karuma- Nimule-Juba 400kV, Kawanda-Bombo 132kV

### C) RURAL ELECTRIFICATION

- i. Germany (kfW)Grid Densification: 8,500 connections done nationally;
- ii. BADEA/OFID-2Construction of 33kv distribution lines (MV 790km, LV 620 km) kayunga and kamuli;
- iii. OFID-1 PROJECTSConstruction of 33kv distribution lines ( MV367km, LV 359km) Buikwe and Oyam: 100% completion of works;
- iv. IDB I (Karamoja Region) Grid rural electrification project: Kaabong and Kotido district headquarters connected to the grid (MV 710km, LV 140km). 100% completion;
- v. IDB II(RE Projects in mirama-Kabale&Teso-Karamoja sub-region (MV 1400km, LV 108km): 50% completion of works;
- vi. IDB III Funded Projects RE Projects in Northern, Central, Eastern, Western (MV 1767km, LV 1750km): 100% completion of the project;
- vii. AfDB (African Development Bank) Uganda Rural electricity access (MV 1305km, LV1112km): 100% completion of the project;
- viii. French Development Agency projectsGrid extensions in North West;Rwenzori, Western, Mid western, South and South Western Service territories (MV 1379km, LV 1485km): 50% completion of the project;
- ix. World Bank ERT III ( MV 1272km, LV 1220km):50% completion of the project;
- x. Abudhabi Electricity power networks in Kalungu (MV 400km, LV 160km): 50% completion of the project;
- xi. Access: 110,616 connections made (40,000 connections will be OBA).

### D) ELECTRICITY ACCESS – UEDCL

- i. Conduct Network Audit to determine funding gap requirement;
- ii.  Service Territories – Reduce losses in each service territory to 16%;
- iii. Connect 10,000 customers in the service territories;
- iv. Acquire a call center;
- v. Procure 50 acres of land for pole plant expansion;
- vi. Produce 30,000 poles;
- vii. Continue Monitoring and Evaluation (M&E) of Umeme Concession;

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viii. Rehabilitation of the Maziba progressed to 50%.

### E) SUSTAINABLE ENERGY FOR ALL INITIATIVE (SE4ALL)

- i. Continue with SE4ALL Secretariat institutionalization, define the implementation and operational program, and secure funding for personnel, equipment and execution of activities;
- ii. Implementation of the communication, awareness, sensitization strategy;
- iii. Development of the SE4All Monitoring and Information Data Base;
- iv. Continue with project development and collaboration with the SE4All Thematic Hubs in Africa and Denmark;
- v.  Kick – start the Energy Efficiency programme for sub Saharan cities under SE4All.

### F) ELECTRICITY DISPUTES RESOLUTION

- i. Receiving and processing new complaints;
- ii. Finalizing hearing of existing complaints;
- iii. Public awareness campaigns (2 per district);
- iv. Complaints gathering from the districts;
- v. Rolling out the sittings of the EDT to 60 districts;
- vi. Training and capacity building for the 6 members of Staff;
- vii. 4 Study visits to similar organizations abroad;
- viii. Hold 2 Stakeholder dialogues;
- ix. Hold 3 Regional workshops;
- x. Reorganize to effectively deliver quality service. Retooling;

### G) UGANDA ENERGY CREDIT CAPITALIZATION COMPANY

- i. Working Capital Facility for Solar Vendors put in place for Solar Companies selling systems on pay plan and those selling on cash basis;
- ii. Roll out of connection loan facility of at least USD 200,000 to cover entire Country;
- iii. Commence construction phase of the 10 sites under the ORIO Mini-hydro Power Project;
- iv. Bio-Mass Financing Facility put in place and capitalized with USD 100,000;
- v. 3 Independent Power Producers (IPPs) to receive Early Stage Transaction Advisory Services;
- vi. Two (2) IPPs to be connected to Programs of Activities (PoAs);
- vii. Four (4) SACCOs (1 from each of the four geographical regions of Uganda) to receive Solar Facilities to on-lend to Members to enable Solar Systems acquisitions.

### H) ENERGY MANAGEMENT

- i. Energy Efficiency and Conservation draft Bill in place;
- ii. Comprehensive energy audits continued in at least 5 high energy consuming facilities;
- iii. Minimum Energy Performance Standards and Labels programme for the 5 selected appliances;
- iv. Energy Management Standard ISO 50001 introduced in 10 high energy consuming facilities;
- v. Continue the promotion of Fuel Efficiency in Transport and develop and fuel; efficiency policy and strategy;
- vi. Energy Management Training of at least 30 Energy Managers and Auditors done;
- vii. Four (4) regional exhibitions on energy efficient technologies conducted;
- viii. At least 4 lighting technologies (i.e. CFLs, LEDs, Fluorescents, HPSV) on the market tested for standards;
- ix. Communication Strategy regarding Awareness creation on Energy Efficiency developed;
- x. Energy Week 2016 to be conducted;

### I) PROMOTION OF SMALL SCALE RENEWABLE ENERGY SYSTEMS



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- i. Collect and analyze data from the two installed wind measuring equipment in Kotido and Napak;
- ii. Install five new wind measuring equipment in the Northern Region;
- iii. Identify sites for pico/micro hydro and collect resource data in Mt. Elgon and Rwenzori Areas;
- iv. Identify and study areas suitable for off-grid solutions like Islands and remote/isolated areas;
- v. Develop Legislation that allows purchase of small renewables by distribution companies;
- vi. Study the impact of small scale renewable energy generations on the grid;
- vii. Set up a testing facility for solar technologies products and a framework for enforcement of standards;
- viii. Enhance the existing financing mechanism for renewable energy to support the private sector with working capital and end-user loans;
- ix. Support the private sector players in renewable energy to adhere to professional code to ensure delivery of quality services;
- x. Rehabilitate 10 non-functional wind mills for water pumping in Karamoja;
- xi. Set up 10 hybrid wind / solar systems, 1 large solar PV irrigation system, 2 institutional solar water heating system and 2 demonstration systems for solar drying technology for agricultural produce;
- xii. Review and gazette 19 solar water heating standards and develop their technical regulations with UNBS.

## J) BIOMASS RESOURCE MANAGEMENT

### Biogas Technology Promotion and Dissemination

- i. Biogas Standards developed;
- ii. 20 Household biogas systems constructed for demonstration and train 40 house hold biogas technicians;
- iii. 10 Bio-latrines constructed in social institutions for energy generation and 20 Bio latrine technicians trained;
- iv. Design a Biogas unit for Electricity production;
- v. Support the completion of Biogas to Electricity plant at Kayei Apac.

### Energy Saving Institutional Stoves

- i. Fifteen (15) energy saving demonstration institutional stoves constructed;
- ii. Twenty (20) technicians trained in institutional stove (Construction, operation and maintenance).

### Energy Saving Household Stoves

- i. 160 artisans trained in construction and maintenance of house hold cook stoves;
- ii. Develop a strategy for scaling up access to house hold stoves for solid fuels.

### Gasification technology

- i. Scale up the operations of Nyabyeya Gasification unit (extension of the power line to staff quarters and the saw mill);
- ii. Demonstrate 100 Household Gasification stoves;
- iii. Demonstrate 20 gasification units for cooking in social institutions;
- iv. Demonstrate 4 gasification units for electricity generation;
- v. Develop an implementation strategy and plan for gasification technology.

### Briquetting technology

- i. Twenty (20) Small scale briquetting units disseminated and 100 artisans trained on small scale briquetting production;
- ii. Four (4) technicians trained in large scale briquetting production;

### Biofuels Production and Promotion

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- i. Biofuels regulations in place;
- ii. Standards for Biodiesel Blends formulated;
- iii. Demonstrate the use of bio-fuels in agro-processing for value addition;
- iv. Inventory of farmers and crops for bio-fuels.

### Interlocking Soil Stabilization Technology

Promote Interlocking Soil Stabilization Technology to reduce the use of firewood for brick burning.

### Improved Charcoal production

- i. National Charcoal Survey carried out;
- ii. Four (4) million trees planted for Sustainable charcoal production in the 4 pilot districts of Nakaseke, Mubende, Kiboga and Kiryandongo;
- iii. 100 Cassamance kilns disseminated;
- iv. Fourty (40) Sam-1 retorts disseminated;
- v. 360 Charcoal producers trained in using improved kilns and retorts;
- vi. Thirty six (36) charcoal producer associations formed and registered.

### Institutional Co-ordination

- i. Support to Centre of Excellence for East African Centre for Renewable Energy and Energy Efficiency (EACREEE) hosted by CEDAT Makerere University;
- ii. Concept paper for the proposed Biomass Energy Resources Authority formulated;
- iii. Technical backstopping to UNACC;
- iv. International Biomass Energy Conference held;
- v. National Biomass Energy Strategy publicized;
- vi. Renewable Energy Policy reviewed;
- vii. Line of credit financing dedicated for Biomass energy enterprises and technologies.

### L) NUCLEAR ENERGY

- i. Finalize the development of a nuclear energy policy for Uganda;
- ii. Develop a radioactive waste management strategy for Uganda;
- iii. Conduct scientific visits, fellowships and training courses with support from International Atomic Energy Agency;
- iv. Recruit and train three (3) staff under Nuclear Energy Unit;
- v. Prepare briefs on IAEA-TCP for top management of the implementing agencies;
- vi. Encourage all implementing agencies to integrate IAEA – TC activities into their annual budget;
- vii. Continue coordinating and monitoring Technical Cooperation Projects in agriculture, water and health sectors;
- viii. Establish a Nuclear Information Centre;
- ix. Conduct regular awareness campaigns in training institutions, at district level and actively participate in annual Energy Week;
- x. Conduct detailed nuclear power plant site surveys to identify suitable sites.

### M) ATOMIC ENERGY REGULATION

- i. Lobby for more funds from Government and development partners;
- ii. Seek fellowships and training courses with support from IAEA;
- iii. Procurement of more monitoring and inspection equipment;
- iv. Procurement of 2 field vehicles;
- v. Enhance collaboration with different stakeholders for example URA- Customs and Police by signing MOU;

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- vi. Conduct more sensitization workshops;
- vii. Develop more regulations, guides and procedures;
- viii. Finalize enforcement policy;
- ix. Registration of radiation sources;
- x. Continue Authorization and inspections of facilities using ionizing radiation.

### PETROLEUM EXPLORATION DEVELOPMENT AND PRODUCTION

#### A) UPSTREAM

- i. Continue supporting operations of the new Institutions (PAU and UNOC);
- ii.  Continue promotion of the country's petroleum potential;
- iii. Continue the acquisition of geological, geophysical and geochemical data in the country;
- iv. Undertake and implement SEA in petroleum operational areas;
- v. Complete reviewing applications for production licenses and Field development Plans and Petroleum Reservoir Reports for technical guidance with regard to award of the attendant Production Licenses;
- vi. Continue the development of guidelines, codes and standards;
- vii. Continue Phase-3 construction of the National Petroleum Data Repository, Laboratories and Offices at PEPD, Entebbe;
- viii. Continue the implementation of the oil and gas communication strategy;
- ix. Continue oil and gas National content development and capacity building;
- x. Continue participation in regional initiatives.

#### B) MIDSTREAM

- i. Conclude the construction houses and other resettlement infrastructure for Project Affected Persons;
- ii. Undertake FEED and ESIA for the refinery development by the Refinery Company;
- iii. Commence EPC for Refinery development and crude oil pipelines;
- iv. Conclude the formulation of regulations for Midstream operations;
- v. Continue the development of Standards, Codes and Guidelines for midstream facilities and operations;
- vi. Continue capacity building (training of staff) and Institutional Framework development;
- vii. Formulate a Plan and strategy for Petrochemical and other energy based industries development;
- viii. Support the development of the crude export pipeline from Kabaale to the East African coast;
- ix. Support upstream oil companies in acquiring land for the development of crude oil feeder pipelines;
- x. Undertake Resettlement Action Plan (RAP) study and implementation for the infrastructure corridor development from the refinery (Kabaale) to Buloba terminal.

#### C) DOWNSTREAM

- i. Complete implementation of RAP for Malaba-Kampala Petroleum products Pipeline;
- ii. Commence construction works of Eldoret-Kampala Petroleum products pipeline;
- iii. Complete route survey and undertake ESIA for Kampala-Kigali Petroleum products Pipeline;
- iv. Undertake RAP study and implementation for Kampala-Kigali Petroleum products Pipeline;
- v. Restock Jinja storage tanks with 12 million litres as part of government portion;
- vi. Complete Phase-1 construction of Nakasongola Strategic Fuel Reserves;
- vii. Promote Liquefied Petroleum Gas Usage;
- viii. Commence implementation of the Master Plan for Buloba Multi-user products terminal;
- ix. Continue with institutional capacity building.

### MINERAL DEVELOPMENT, PRODUCTION AND VALUE ADDITION

- i. Complete review of the Mineral Policy and Mining legislation (Mining Act and Mining Regulations);

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- ii. Carry out airborne geophysical surveys of Karamoja to Completion of 20% aeromagnetic data coverage and follow up Airborne geophysical surveys;
- iii. Establish Mineral Certification Infrastructure at Entebbe;
- iv. Appraise the mineral targets of Iron Ore, Rare Earth and Uranium.
- v. Design the Earthquake research and monitoring facilities;
- vi. Construct at least one (1) mineral beneficiation centre;
- vii. Equip and build capacity of mineral laboratories for value addition;
- viii. Mainstream and formalise Artisanal and Small Scale Miners and control illegal mining activities;
- ix. Inspect and monitor exploration and mining activities and enforce compliance (environment protection, occupation health and safety standards, elimination of child labour among others);
- x. Finalise code of ethics for Ugandan Earth Scientists in FY 2016/17;
- xi. Equipment and installation of geo-data backup and offsite recovery infrastructure in FY 2015/16 and 2016/17;
- xii. Publish new geological data (on geology and minerals) obtained during the SMMRP project in FY2016/17;
- xiii. Undertake a feasibility study for iron ore reduction using hydrocarbons and coal in order to setup an integrated iron and steel mill;
- xiv. The Ministry and the Uganda Police Force curb illegal mining activities
- xv. Collaborate with local governments and other stakeholders in inspections;
- xvi. Fast-track establishing weigh bridges in mining areas;
- xvii. Expedite the formulation of geothermal policy and law for efficient geothermal exploration and development;
- xviii. Continue promoting investment in the mineral sector;
- xix. Continue building institutional and human resource capacity;
- xx. Geothermal exploration: Complete surface studies in Kibiro, Katwe, Buranga and Panyimur geothermal prospects;
- xxi. Feasibility studies and appraisal: Drill at least one (1) deep exploration well at Kibiro and Buranga and undertake well flow testing;
- xxii. Capacity building: Carry out training and human resources development including in-house training of staff in Uganda geothermal fields, UNU-GTP Reykjavik, Iceland, hands-on training programs at AGCE, Geothermal Development Company of Kenya (GDC), Kyushu Japan;
- xxiii. Undertake geothermal energy promotion and sensitization to ensure community understanding and support of the economic, environment and social benefits of geothermal energy.

### SUKULU PHOSPHATES PROJECT

Follow up on:

- i. Import of required equipment for mining and processing;
- ii. Recruitment of local and expatriate staff;
- iii. Development of the mine infrastructure and construct the processing plants;
- iv. Plan for the provision of power 200MW and required infrastructure (transmission line and substation) by December 2016;
- v. Commencement of production of both iron and phosphates;
- vi. Continued exploration on EL1178 and ML 1393.

### SECTOR GOVERNANCE

- i. Conclude and approve the Records Retention Schedules and the Records Management Policy.
- ii. Conclude the procurement of the consultancy services for redevelopment of Amber House building and the development of the adjacent plot.
- iii. Embark on the construction for the Petroleum Coordination and Seismology Offices in Hoima District

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and the Mineral Coordination Office in Moroto District.

- iv. Enhance the integration of gender, health, safety, climate change and environment management issues across the subsectors in the Ministry.
- v. Streamline acquisition of land for infrastructure development in the Energy and Mineral Development Sector.
- vi. Sensitize the public on the roles and functions of the Atomic Energy Council and the Electricity Disputes Tribunal.
- vii. Continue implementing the communication strategy of the Ministry.
- viii. Continue the implementation of the Sector Strategic Investment Plan.
- ix. Improve the monitoring and evaluation framework for the Sector.
- x. Improve the technical planning framework for the sector.
- xi. Continue the implementation of the new Ministry Structure by filling at least 80% of the vacant positions.
- xii. Support the operationalization of the new institutions in the Energy and Mineral Development Sector.
- xiii. Continue building the capacity of staff in accordance with the Training Policy and Plan.
- xiv. Continue the implementation of the Energy and Mineral Sector Strategic Plan for Statistics (EMSSPS) and develop the Energy and Minerals Database Management System.
- xv. Conduct the Joint Sector review for the FY 2015/16.
- xvi. Devise a comprehensive solution to procurement delays for effective implementation of programs.

**Table V2.2: Past and Medium Term Key Vote Output Indicators\***

Vote Function Key Output Indicators and Costs:	2015/16		MTEF Projections			
	2014/15 Outturn	Approved Plan	Outturn by End Sept	2016/17	2017/18	2018/19
<b>Vote: 017 Ministry of Energy and Mineral Development</b>						
<b>Vote Function:0301 Energy Planning,Management &amp; Infrastructure Dev't</b>						
Percentage of Audited firms implementing Energy efficiency measures				100	100	100
Percentage of Audited firms implementing Energy efficiency measures		100	100			
Number of prepaid meters installed		175,000	155,000	200,000	200,000	300,000
Number of sites demonstrating use of improved energy technologies		10	10	50	50	30
Stage of development of Nyagak III HPP				Contractor on site, civil works	EPC Contractor on site, civil works	EPC Contractor on site, civil works
Stage of development of Nyamwamba HPP				Contractor on site, civil works	EPC Contractor on site, civil works	EPC Contractor on site
Stage of development of Rwimi HPP				Financial closure	EPC Contractor on site, civil works	EPC Contractor on site, civil works
Stage of development of Siti 1 HPP				Contractor on site, civil works	EPC Contractor on site, civil works	EPC Contractor on site, civil works
Stage of development of Siti 2 HPP				Contractor on site, civil works	EPC Contractor on site, civil works	EPC Contractor on site, civil works

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Vote Function Key Output Indicators and Costs:	2014/15 Outturn	2015/16		MTEF Projections		
		Approved Plan	Outturn by End Sept	2016/17	2017/18	2018/19
Stage of development of Waki HPP				Financial closure	works Contractor on site, civil works	works Contractor on site, civil works
Number of District Headquarters electrified				5	1	1
Number of District Headquarters electrified		8	5			
Number of line KM of LV (11KV) constructed		3,000	1633	3,000	3000	3000
Number of line KM of MV (33KV) constructed		3,500	1938	3,500	3500	3500
Number of Solar systems installed		20,000	3180	20,000	30000	40000
<b>Vote Function Cost (US\$ bn)</b>	<i>N/A</i>	<b>241.780</b>	<b>23.860</b>	<b>365.429</b>	<b>339.693</b>	<b>320.558</b>
<i>VF Cost Excl. Ext Fin.</i>	<i>81.500</i>	<i>103.959</i>	<i>23.860</i>	<i>103.959</i>	<i>N/A</i>	<i>N/A</i>
<b>Vote Function:0302 Large Hydro power infrastructure</b>						
Status of Ayago power project				Financial Closure	EPC Contractor	Works in progress
Status of Isimba power project				<ul style="list-style-type: none"> <li>•Manufacture and shipping of HM/EM equipment</li> <li>•Phase II river diversion and closure – 100%</li> <li>•Phase I Embankment dam filling – 50%</li> <li>•Installation of metal structures – 90%</li> <li>•Dam concrete works – 30%</li> <li>•Phase II Embankment dam works – 10%</li> </ul>	Works in progress	Complete construction
Status of Karuma power project				<ul style="list-style-type: none"> <li>-Fabrication and shipping of main EM/HM equipmet</li> <li>-Dam still pool &amp; guide wall – 100%</li> <li>-Installation of Gates #5-#13 – 90%</li> <li>-Excavation of #1-#6 HRT</li> </ul>	Works in progress	Complete construction

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Vote Function Key Output Indicators and Costs:	2014/15 Outturn	2015/16		MTEF Projections		
		Approved Plan	Outturn by End Sept	2016/17	2017/18	2018/19
				and Pressure shaft – 100%		
				-Power Intake structure & trash rack installation - 100%; HM – 50%		
Percentage of land freed up for Isimba Transmission Line		25	10	100		
Percentage of land freed up for Karuma Transmission Line		25	10	100		
<b>Vote Function Cost (US\$ bn)</b>	<i>N/A</i>	<b>2,357.440</b>	<b>144.335</b>	<b>1,507.711</b>	<b>1,846.210</b>	<b>1,370.801</b>
<i>VF Cost Excl. Ext Fin.</i>	<i>37.403</i>	<i>108.58</i>	<i>144.335</i>	<i>107.580</i>	<i>N/A</i>	<i>N/A</i>
<b>Vote Function:0303 Petroleum Exploration, Development &amp; Production</b>						
Number of staff enrolled for professional training in Oil and gas discipline		6	6	6	8	8
Stage of formation new petroleum institution, National Oil Company				100%		
Stage of formation new petroleum institution, Petroleum Authority				100%		
Stage of formation new petroleum institution, Petroleum Directorate				100%		
Number of field development plans approved for issuance of Production License		3	1	4		
Level of compliance by exploration companies with petroleum operations guidelines		100	100	100	100	100
Number of line Km of seismic data acquired.		400	0	400	400	400
Number of newspaper advertorials made and published		5	3	5	5	5
Number of Radio talk shows held		12	3	12	12	12
Stage of identifying Lead Investor				Lead investor engaged		
Stage of Land Acquisition				100% PAP compensation		
<b>Vote Function Cost (US\$ bn)</b>	<i>N/A</i>	<b>118.158</b>	<b>7.392</b>	<b>174.353</b>	<b>170.483</b>	<b>290.392</b>
<i>VF Cost Excl. Ext Fin.</i>	<i>44.926</i>	<i>55.013</i>	<i>7.392</i>	<i>55.013</i>	<i>N/A</i>	<i>N/A</i>
<b>Vote Function:0304 Petroleum Supply, Infrastructure and Regulation</b>						
% of the facilities conforming to the Petroleum facilities standards		75	97	100	100	100
<b>Vote Function Cost (US\$ bn)</b>	<b>4.798</b>	<b>13.857</b>	<b>1.441</b>	<b>13.857</b>	<b>13.857</b>	<b>24.511</b>
<b>Vote Function:0305 Mineral Exploration, Development &amp; Production</b>						
% of earthquake monitoring stations installed against NDP target of 40 stations		35	5	35	40	40
Draft mineral laboratory services policy developed				Draft submitted to Cabinet for	Draft Approved by Parliament	Policy in place, under implementation

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Vote Function Key Output Indicators and Costs:	2014/15 Outturn	2015/16		MTEF Projections		
		Approved Plan	Outturn by End Sept	2016/17	2017/18	2018/19
				approval		n
Number of Mineral Artisans and small scale miners (ASM) trained in Mining Districts		300	120	300	200	200
Number of Mineral analysis techniques developed to ISO standards		2	1	2	2	2
Number of staff enrolled for training in Mineral sub-sector		4	4	4	4	6
Number of mineralized areas discovered		3	2	3	3	2
Number of potential Uranium resources targets discovered		2	2	2	2	2
Total Value of Mineral Exports as per permits issued (UGX)- Bn		200	8	210	300	400
Total Value of Mineral Production (UGX)- Bn		400	26	400	500	550
Number of mining site inspections conducted				24	24	24
Number of mining site inspections conducted		24	12			
% of mining companies complying with mining regulations		100	100	100	100	100
Amount of NTR collected (US\$ bn)		9	0.5	10	12	14
Number of flagships projects monitored		2	2			
Number of flagships projects monitored				2	2	2
Number of Mineral rights (licences) operational		600	798	650		
<b>Vote Function Cost (US\$ bn)</b>	<b>7.045</b>	<b>12.684</b>	<b>1.953</b>	<b>13.684</b>	<b>12.884</b>	<b>32.743</b>
<b>Vote Function:0349 Policy, Planning and Support Services</b>						
<b>Vote Function Cost (US\$ bn)</b>	<b>20.389</b>	<b>23.196</b>	<b>5.392</b>	<b>22.732</b>	<b>23.399</b>	<b>23.379</b>
<b>Cost of Vote Services (US\$ Bn)</b>	<b>N/A</b>	<b>2,767.115</b>	<b>184.373</b>	<b>2,097.765</b>	<b>2,406.525</b>	<b>2,062.384</b>
<i>Vote Cost Excl. Ext Fin</i>	<i>196.060</i>	<i>317.288</i>	<i>184.373</i>	<i>316.824</i>	<i>N/A</i>	<i>N/A</i>

### Medium Term Plans

#### ENERGY PLANNING, MANAGEMENT & INFRASTRUCTURE DEVELOPMENT:

- (i) Construction of Karuma Hydropower Project (600 MW) continued.
- (ii) Construction of Isimba hydro power project (188MW) completed.
- (iii) Commence the construction of Ayago (600MW) Hydropower Project.

#### PETROLEUM EXPLORATION, DEVELOPMENT AND PRODUCTION

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

- (i) Promote the Country's petroleum potential and undertake a licensing round for the unlicensed



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acreage in the country;

- (ii) Develop and commission a 60,000bopd refinery in the country;
- (iii) Develop transport and storage infrastructure for petroleum and petroleum products in the country;
- (iv) Facilitate the development of infrastructure for the export of crude oil;
- (v) Coordinate the implementation of the oil and gas regulations in the sector;
- (vi) Build capacity of the Oil and Gas sector in the country;
- (vii) Monitor and regulate the upstream petroleum activities;
- (viii) Continue the implementation a communication strategy for the Oil and Gas sector in the country;
- (ix) Participate in Regional initiatives related to the oil and gas sector.

### PETROLEUM SUPPLY, INFRASTRUCTURE AND REGULATION

- (i) Development and stocking fuel strategic reserves.
- (ii) Management and Monitoring of petroleum supply and marketing industry
- (iii) Maintenance of National Petroleum Information System
- (iv) Operational Standards and laboratory testing of petroleum products
- (v) Development of an Emergency Petroleum Supply Plan
- (vi) Develop the Kenya - Uganda; Kampala - Kigali oil products pipeline

### MINERAL EXPLORATION, DEVELOPMENT & PRODUCTION:

- (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.
- (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.

### POLICY, PLANNING AND SUPPORT SERVICES:

- (i) Planning, Budgeting and Monitoring undertaken
- (ii) Financial Management and Procurement undertaken
- (iii) Procurement and maintenance of Assets and Stores
- (iv) Management of Human Resources
- (v) Development of Office infrastructure and Regional liason offices

### (ii) Efficiency of Vote Budget Allocations

To ensure efficiency of Vote Budget allocations, and ensure that value for money is realised, budget allocation has focused on areas that contribute to sector priorities. Specifically, outputs geared towards capital purchases for power generation and transmission, electricity access, mineral value addition and security of supply of petroleum products have been targeted. These outputs are considered to have high results impacts.

**Table V2.3: Allocations to Key Sector and Service Delivery Outputs over the Medium Term**

Billion Uganda Shillings	(i) Allocation (\$hs Bn)				(ii) % Vote Budget			
	2015/16	2016/17	2017/18	2018/19	2015/16	2016/17	2017/18	2018/19

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Billion Uganda Shillings	(i) Allocation (Shs Bn)				(ii) % Vote Budget			
	2015/16	2016/17	2017/18	2018/19	2015/16	2016/17	2017/18	2018/19
Key Sector	1,905.4	1,147.1	2,109.3	1,771.0	68.9%	54.7%	87.6%	85.9%
Service Delivery	267.0	135.9	131.2	140.0	9.6%	6.5%	5.4%	6.8%

Cost assumptions have been benchmarked on prevailing market rates and industry best practices.

**Table V2.4: Key Unit Costs of Services Provided and Services Funded (Shs '000)**

Unit Cost Description	Actual 2014/15	Planned 2015/16	Actual by Sept	Proposed 2016/17	Costing Assumptions and Reasons for any Changes and Variations from Plan
<i>Vote Function:0301 Energy Planning, Management &amp; Infrastructure Dev't</i>					
Cost per Mega Watt hour (MWh) of thermal generated electricity		813,817			The cost represents the energy price per MW generated.
Cost per kilo Watt hour (kWh) sold by the system operator UETCL to the energy distributors		348			The cost represents the peak hour cost of electricity transmitted by UETCL
1		385			Approved retail tariffs by the Electricity Regulatory Authority
<i>Vote Function:0302 Large Hydro power infrastructure</i>					
Cost per Mega Watt of electricity produced per hour by a large hydro power station		38,746			Approved energy tariff for the power generated at the Nalubaale - Kiira operated by a concessionaire
<i>Vote Function:0303 Petroleum Exploration, Development &amp; Production</i>					
Number of line km of seismic data acquired in the Albertine Graben.					Costs incurred vary from licenced companies and the areas of operation. GoU only facilitates staff to carry out monitoring.
Drilling of one well					Costs incurred vary from licenced companies and the areas of operation. GoU only facilitates staff to carry out monitoring.
<i>Vote Function:0304 Petroleum Supply, Infrastructure and Regulation</i>					
Cost of monitoring a petroleum facility					
<i>Vote Function:0305 Mineral Exploration, Development &amp; Production</i>					
Mineral analysis per sample in international laboratory for 51 elements					Mineral analysis per sample in international laboratory for fifty (51) elements. This is only the laboratory expense excluding freight or transportation and data interpretation
Cost per line kilometre of airborne geophysical data		39,000			Resources Project 2004 - 2011 of USD 5.005 million for 632,681 line kilometres covered; averaged USD 7.911 per line kilometre. Global Inflation and change in technology

### (iii) Vote Investment Plans

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**Table V2.5: Allocations to Capital Investment over the Medium Term**

Billion Uganda Shillings	(i) Allocation (Shs Bn)				(ii) % Vote Budget			
	2015/16	2016/17	2017/18	2018/19	2015/16	2016/17	2017/18	2018/19
Consumption Expenditure(Outputs Provided)	138.9	60.4	73.3	81.1	5.0%	2.9%	3.0%	3.9%
Grants and Subsidies (Outputs Funded)	183.2	110.6	85.7	75.7	6.6%	5.3%	3.6%	3.7%
Investment (Capital Purchases)	2,445.0	1,926.7	2,247.5	1,905.5	88.4%	91.8%	93.4%	92.4%
<b>Grand Total</b>	<b>2,767.1</b>	<b>2,097.8</b>	<b>2,406.5</b>	<b>2,062.4</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

As a medium term strategy, during the FY 2016/17, the Sector will continue to focus major capital purchases towards investments in the construction of Large Hydropower generation infrastructure (Karuma, Isimba Hydro Power Projects); construction of transmission lines and acquisition of the associated Way leaves through the implementation of the Resettlement Action Plans (RAP) and capacity payments towards thermal power generation.

In the Oil and Gas sub-sector, focus will be towards the implementation of the refinery development activities including the development of the oil pipelines and aerodrome, and the implementation of the oil and gas policy. Downstream petroleum activities will largely focus on the development of the Buloba terminal infrastructure; Kampala - Kigali oil products pipeline.

In the Mineral sub-sector, government will focus on the follow-up of the mineral targets identified in the airborne surveys of the country; ground geophysical mapping of Karamoja and the geothermal exploration. In addition, the development of earthquake research facility will commence and also continue acquiring requisite laboratory infrastructure.

To support the general administrative function, the sector has also committed resources towards the renovation Amber house and the development of the adjacent plot.

**Table V2.6: Major Capital Investments**

Project, Programme	2015/16		2016/17
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Project 1223 Institutional Support to Ministry of Energy and Mineral Development</b>			
<b>034972 Government Buildings and Administrative Infrastructure</b>	Designs and BOQs for Remodelling of Amber House and development of the adjacent plot in place.	Consultant to carry out designs and BOQs for Remodelling of Amber House and development of the adjacent plot on going.	Remodelling of Amber House and development of the adjacent plot in place.
	Procurement of a contractor for the Remodelling of Amber House and development of the adjacent initiated.		Administrative Infrastructure Oil and Gas Police;  Oil and Gas Police Uniports office in Albertine
<b>Total</b>	<b>2,375,965</b>	382,536	<b>6,000,000</b>
<i>GoU Development</i>	2,375,965	382,536	6,000,000
<i>External Financing</i>	0	0	0
<b>034976 Purchase of Office and ICT Equipment, including Software</b>	- A disaster recovery solution for the Ministry developed	Resource Centre refurbished and equipped	- A disaster recovery solution for the Ministry implemented
	- Commence procurement of collaboration softwares under structured cabling Phase III	- Internet services (WiFi) procured and maintained	- Procurement of collaboration softwares under structured cabling Phase III
	- Resource Centre equipped	- Computer peripherals/hardware and softwares/licencing procured	- Resource Centre equipped

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Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16 Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	2016/17 Proposed Budget, Planned Outputs (Quantity and Location)
	- Internet services (WiFi) procured and maintained		- Internet services (WiFi) procured and maintained
	- Computer peripherals/ hardware and softwares/ licencing procured		- Computer peripherals/ hardware and softwares/ licencing procured
	- ICT user trainings and sensitization held		- ICT user trainings and sensitization held
	- Cloud computing and cyber security implemented		- Structured Cabling Phase III
<b>Total</b>	<b>810,000</b>	<b>6,240</b>	<b>1,000,000</b>
<i>GoU Development</i>	<i>810,000</i>	<i>6,240</i>	<i>1,000,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>034977 Purchase of Specialised Machinery &amp; Equipment</b>	Strengthen the capacity of DGSM to establish modern laboratory	Commenced the procurements to strengthen the capacity of DGSM to establish modern laboratory	Strengthen the capacity of DGSM to establish modern laboratory
	Purchase of vehicles for political leadership		
<b>Total</b>	<b>1,000,000</b>	<b>19,400</b>	<b>1,000,000</b>
<i>GoU Development</i>	<i>1,000,000</i>	<i>19,400</i>	<i>1,000,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1199 Uganda Geothermal Resources Development</b>			
<b>030572 Government Buildings and Administrative Infrastructure</b>	Initiate Procurement Process for Design of Geothermal Resources Department	commenced the procurement process for the design of the Geothermal Dept	Temporary Geothermal Resources Department offices at the Directorate of Geological Survey and Mines renovated
			Access road to Directorate of geological Survey and Mines rennovated.
			Access road to drilling sites for geothermal development opened
<b>Total</b>	<b>160,000</b>	<b>8,021</b>	<b>750,000</b>
<i>GoU Development</i>	<i>160,000</i>	<i>8,021</i>	<i>750,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030575 Purchase of Motor Vehicles and Other Transport Equipment</b>			Motor Vehicles and Other Transport Equipment for Geothermal exploration purchased
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1,080,000</b>
<i>GoU Development</i>	<i>0</i>	<i>0</i>	<i>1,080,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030577 Purchase of Specialised Machinery &amp; Equipment</b>	Continue the procurement of Deep subsurface geothermal exploration equipment and laboratory consumables	Procured MT specialized equipment for geothermal exploration (Petro-physics & age dating)	Continued the procurement of Deep subsurface geothermal exploration equipment and laboratory consumables

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Project, Programme Vote Function Output <i>US\$ Thousands</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Total</b>	<b>1,680,000</b>	<i>842,305</i>	<b>747,000</b>
<i>GoU Development</i>	<i>1,680,000</i>	<i>842,305</i>	<i>747,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1353 Mineral Wealth and Mining Infrastructure Development</b>			
<b>030572 Government Buildings and Administrative Infrastructure</b>	Earthquake research and monitoring facilities designed  Four (4) mineral beneficiation centres constructed Karmoja, Fort-portal Ntungamo and Tororo	Commenced the procurement for a consultant to design Earthquake Research Facility in Entebbe	Earthquake research and monitoring facilities designed  Design and construct (4) mineral beneficiation centres constructed Karmoja, Fort-portal Ntungamo and Tororo constructed  Modification of design and refurbishment of laboratories at DGSM to accommodate newly acquired equipment and or incorporation of environment protection and safety measures undertaken
<b>Total</b>	<b>3,380,000</b>	<i>13,410</i>	<b>3,079,000</b>
<i>GoU Development</i>	<i>3,380,000</i>	<i>13,410</i>	<i>3,079,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030575 Purchase of Motor Vehicles and Other Transport Equipment</b>	Field motor vehicles procured	No funds released	Three (3) field motor vehicles procured
<b>Total</b>	<b>700,000</b>	<i>0</i>	<b>600,000</b>
<i>GoU Development</i>	<i>700,000</i>	<i>0</i>	<i>600,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1258 Downstream Petroleum Infrastructure</b>			
<b>030471 Acquisition of Land by Government</b>	Eldoret-Kampala petroleum products pipelines constructed  Kampal-Kigali products Pipeline constructed	-Resettlement Action Plan(RAP) on going and draft update reports submitted	Development of 120,000 CM refined products storage terminal at Buloba Promoted.  Use of Barges transport on lake Victoria promoted  Capacity to promote and regulate downstream petroleum industry developed  Development of Kenya-Uganda-Rwanda refined petroleum products pipelines promoted.
<b>Total</b>	<b>5,700,000</b>	<i>485,708</i>	<b>5,190,000</b>
<i>GoU Development</i>	<i>5,700,000</i>	<i>485,708</i>	<i>5,190,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030477 Purchase of Specialised Machinery &amp; Equipment</b>	Downstream petroleum policy put in Place  Technical regulations(standards	-HSE training manuals development completed -Procurement of staff protective gears was completed	Downstream Petroleum policy put in place.  Use of Liquefied petroleum gas

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Project, Programme	2015/16		2016/17
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
	and codes of practice) reviewed and implemented.	-Building of JST perimeter wall is on going (60% complete)	promoted. LPG supply regulations made
<b>Total</b>	<b>1,400,000</b>	50,263	<b>930,000</b>
<i>GoU Development</i>	<i>1,400,000</i>	<i>50,263</i>	<i>930,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030479 Acquisition of Other Capital Assets</b>	Nakasongola strategic reserves facility completed and operational  Jinja storage tanks restocked and operations monitored  Plans for Buloba Multi User Product terminal produced	-Quantity of fuel in reserves monitored and inspected -73 Millions has been collected as hospitality fee during the quarter from Hared as NTR to consolidated fund -Automated distillation Apparatus (laboratory) procurement for Malaba and Busia border entry points has been completed  -Payment for Buloba land commenced	Jinja Storage Tanks Strategic Reserves Restocked.  Equipment acquired for quality monitoring of products at strategic reserves
<b>Total</b>	<b>4,700,000</b>	682,650	<b>6,310,000</b>
<i>GoU Development</i>	<i>4,700,000</i>	<i>682,650</i>	<i>6,310,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1184 Construction of Oil Refinery</b>			
<b>030372 Government Buildings and Administrative Infrastructure</b>			Well organized and structured work environment
<b>Total</b>	<b>0</b>	0	<b>7,865,000</b>
<i>GoU Development</i>	<i>0</i>	<i>0</i>	<i>7,865,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030375 Purchase of Motor Vehicles and Other Transport Equipment</b>			A well coordinated and monitored midstream oil and gas infrastructure
<b>Total</b>	<b>0</b>	0	<b>1,828,000</b>
<i>GoU Development</i>	<i>0</i>	<i>0</i>	<i>1,828,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030380 Oil Refinery Construction</b>	Special Purpose Vehicle (SPV) for the refinery development formulated  Undertake Pre-FID activities for refinery development  All property owners from the refinery land full compensated and resettled  A Master Plan for the Airport at Kabaale, Hoima district developed  Develop a Master plan for the	The Lead Investor Consortium and GOU constitutes a Special Purpose Vehicle (the Refinery Company) to take forward engineering and financing aspects of the Project. During the quarter, preparation of documents continued.  Negotiation of the Project Agreements for the Refinery Project between GOU and the RT Global Resources Consortium is in the final stages.	FEED for refinery development undertaken  EIA for refinery development undertaken  PAPS houses and other resettlement infrastructure constructed  •Airport in Hoima developed  Develop a Master plan for the Kabaale Industrial Park, Refinery Complex Area

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
	<p>Kabaale Industrial Park, Refinery Complex Area</p> <p>A strategy and plan for petrochemicals and other energy based industries formulated</p>	<p>The implementation of the physical development plan for the 533 acres of resettlement land in Kyakaboga through demarcation and survey is being concluded.</p> <p>Payment of cash compensation continued and by the end of the reporting period 94% of the PAPs who opted for cash compensation had been paid.</p> <p>Contractors to construct resettlement houses, schools and rehabilitate health centres were procured and the respective sites were handed over to them to commence construction work. A consultant was procured to supervise the construction of resettlement houses and social infrastructure and is now concluding the review of designs to enable the contractors to commence work.</p> <p>The Master Plan has been completed and submitted with the received comments incorporated. But a Master Plan is a living document and can be updated if conditions change. This could be the case after initial review meeting of the detailed design report. 65% of the detailed design has been completed.</p> <p>Procurement of a consultant to develop a Master Plan for the Industrial Park is underway and the interested bidders submitted the Expressions of Interest.</p> <p>These were evaluated and the eight (8) successful firms were invited to submit their proposals on 25th September 2015 which will be evaluated before a consultant is selected.</p> <p>A consultant has started work of writing the National Strategy and plan into a acceptable legal or policy document</p>	<p>A strategy and plan for petrochemicals and other energy based industries formulated</p> <p>Refinery land boundly marked</p> <ul style="list-style-type: none"> <li>• Monitoring and evaluation of the RAP activities for refinery land</li> </ul>

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme	2015/16		2016/17
Vote Function Output <i>US\$ Thousands</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Total</b>	<b>27,880,220</b>	<b>3,760,216</b>	<b>134,340,000</b>
<i>GoU Development</i>	<i>27,880,220</i>	<i>3,760,216</i>	<i>15,000,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>119,340,000</i>
<b>Project 1352 Midstream Petroleum Infrastructure Development Project</b>			
<b>030371 Acquisition of Land by Government</b>	<p>A framework for Infrastructure corridors integrating pipelines with other infrastructure, starting with Hoima-Kampala infrastructure corridor put in place</p> <p>Rights of ways for the pipelines and storage facilities acquired</p> <p>Implementation Plan for the National Strategy and Plan for Petroleum Transportation and Storage facilities developed</p> <p>Undertake and Environmental baseline study and detailed route survey for the Multi-products pipeline from the refinery to Buloba terminal.</p> <p>Undertake the RAP study and its implementation for the Multi-products pipeline from the refinery to the Buloba Terminal</p> <p>Develop and execute an inter-governmental agreement for the crude export pipeline</p>	<p>The Conceptual Design Report was presented to Government and its stakeholders on 15th September 2015.</p> <p>The Ministry signed a contract with Dr. Eng. Bernard Buhwezi of Makerere University on 18th September 2015 to review the Uganda National Strategy and Plan for Transportation and Storage undertaken by WorleyParsons to the required format by government. The study is expected to take one month.</p> <p>The Ministry engaged the Consultant Strategic Friends International (SFI) to undertake Resettlement Action Plan (RAP) Study and its Implementation.</p> <p>The study is expected to commence in October 2015 once the route has been defined and approved by the Ministry. The study and RAP implementation is expected to take 24 months.</p>	<p>A framework for Infrastructure corridors integrating pipelines with other infrastructure, starting with Hoima-Kampala infrastructure corridor put in place</p> <p>Rights of ways for the pipelines and storage facilities acquired</p> <p>Implementation Plan for the National Strategy and Plan for Petroleum Transportation and Storage facilities developed</p> <p>Undertake and Environmental baseline study and detailed route survey for the Multi-products pipeline from the refinery to Buloba terminal.</p> <p>Undertake the RAP study and its implementation for the Multi-products pipeline from the refinery to the Buloba Terminal</p> <p>Develop and execute an inter-governmental agreement for the crude export pipeline</p>
<b>Total</b>	<b>2,225,000</b>	<b>612,453</b>	<b>2,105,000</b>
<i>GoU Development</i>	<i>2,225,000</i>	<i>612,453</i>	<i>2,105,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1355 Strengthening the Development and Production Phases of Oil and Gas Sector</b>			
<b>030372 Government Buildings and Administrative Infrastructure</b>	<p>Construction of Phase-3 of the new Data Centre at Entebbe commenced;</p> <p>Maintenance of existing buildings and related infrastructure undertaken.</p>	<p>Phase-2 construction completed. Paid the final certificate to the Phase-2 contractor (Pearl engineering Company Limited).</p> <p>Procured consultancy services to re-design and supervise the Phase-3 construction including access road.</p> <p>Maintenance of existing buildings and related infrastructure undertaken.</p> <p>Procurement for furniture and fixtures commenced.</p>	<p>Contribution to 80% Phase-3 construction of Data Centre, Labs and Office Building at Entebbe.</p> <p>Maintenance of existing buildings and related infrastructure undertaken.</p>



# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousands</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Total</b>	<b>5,000,000</b>	<i>850,000</i>	<b>3,000,000</b>
<i>GoU Development</i>	<i>5,000,000</i>	<i>850,000</i>	<i>3,000,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030375 Purchase of Motor Vehicles and Other Transport Equipment</b>			Procure One 62-seater staff bus.
<b>Total</b>	<b>0</b>	<i>0</i>	<b>850,000</b>
<i>GoU Development</i>	<i>0</i>	<i>0</i>	<i>850,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030376 Purchase of Office and ICT Equipment, including Software</b>			ICT Equipment and maintenance licenses for specialized software packages procured.
<b>Total</b>	<b>0</b>	<i>0</i>	<b>1,000,000</b>
<i>GoU Development</i>	<i>0</i>	<i>0</i>	<i>1,000,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030377 Purchase of Specialised Machinery &amp; Equipment</b>	Three (3) GPS sets, one (1) Gravity meter and laboratory equipment procured.	Procurement of one (1) Gravity meter and laboratory equipment commenced.  Paid for servicing of LECO Laboratory equipment.	Procure assorted Laboratory equipment and chemicals;  Maintenance of assorted Laboratory equipment undertaken;  Two (2) Differential GPS Sets procured.
<b>Total</b>	<b>600,000</b>	<i>0</i>	<b>540,000</b>
<i>GoU Development</i>	<i>600,000</i>	<i>0</i>	<i>540,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1143 Isimba HPP</b>			
<b>030279 Acquisition of Other Capital Assets</b>	Capital assets	Auxilliary works that included the camp3 main construction works were completed, the camp is to house 700 persons and already some workers have started residing there. Permanent storage facilities: works at this storage facility were advanced. A 20Tonne crane was erected.	- Supervision of works for Isimba HPP (MEMD)  Healthy Safety and Environment Activities  - Implementation of Community Development Action Plan  - Environment and Social Management Plan (ESMP) supervised and Monitored  - Monitoring and supervision of P/APs livelihoods within the affected and host communities  - Commissioning of resettlement houses  - Community Sensitisation  - HIV/AIDS Awareness Activities

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme	2015/16		2016/17
Vote Function Output <i>US\$ Thousand</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Total</b>	<b>635,751,991</b>	<b>3,294,567</b>	<b>574,140,000</b>
<i>GoU Development</i>	<i>6,061,991</i>	<i>3,294,567</i>	<i>11,710,000</i>
<i>External Financing</i>	<i>629,690,000</i>	<i>0</i>	<i>562,430,000</i>
<b>Project 1183 Karuma Hydroelectricity Power Project</b>			
<b>030280 Large Hydro Power Infrastructure</b>	- Supervision of works for Karuma HPP	During the quarter, the supervising consultant together MEMD continued with Site inspection and progress review meetings, Health Safety and Environmental review meetings, RAP and Progress review meetings and one security meeting were held.	<p>-Supervision of works for Karuma HPP (MEMD)</p> <p>Health Safety and Environment Activities</p> <p>Implementation of Community Development Action Plan</p> <p>Environment and Social Management Plan (ESMP) supervised and Monitored</p> <p>Monitoring and supervision of PAPs livelihoods within the affected and host communities</p> <p>- Commissioning of relocated institutions (churches mosque and Karuma Primary school).</p> <p>-Commissioning of resettlement houses</p> <p>Community Sensitisation</p> <p>HIV/AIDS Awareness Activities</p> <p>Development of a Strategic Environment Assessment for the cascade development of hydropower plants along the river Nile.</p>
<b>Total</b>	<b>1,610,551,419</b>	<b>3,905,322</b>	<b>876,799,459</b>
<i>GoU Development</i>	<i>5,421,419</i>	<i>3,905,322</i>	<i>52,978,720</i>
<i>External Financing</i>	<i>1,605,130,000</i>	<i>0</i>	<i>823,820,739</i>
<b>Project 1256 Ayago Interconnection Project</b>			
<b>030271 Acquisition of Land by Government</b>	Land	Financial closure hasn't been attained due to the fact that gov't was soliciting funds for both SGR project and Ayago HPP from the same financier (China EXIM bank).	<p>RAP for Ayago Transmission Line</p> <p>Northern Corridor coordination</p> <p>Development of a Strategic</p>

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
			Environment Assessment for the cascade development of hydropower plants along the river Nile.  a.Finalisation of the ESIA for Ayago HPP. b.ESIA for Ayago transmission line. c.Biodiversity offset study. d.Biodiversity monitoring. e.Procurement of Land for the Camp and auxiliary facilities. f.Carrying out the SEA for Ayago. g.Stakeholder consultations
<b>Total</b>	<b>100,000</b>	<i>1,286</i>	<b>2,726,985</b>
<i>GoU Development</i>	<i>100,000</i>	<i>1,286</i>	<i>2,726,985</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1350 Muzizi Hydro Power Project</b>			
<b>030279 Acquisition of Other Capital Assets</b>	EIA Certificate for Muzizi HPP  Supervision of works	1.Procurement of an Implementation Engineer was completed and a contract signed on August 14, 2015 with ILF Consulting Engineers Austria GmbH. A site visit to kick start the consultancy services was held from 11th to 13th August 2015 followed by a kick-off meeting on 14th August 2015. 2.A Negotiation meeting with AFD on their draft loan agreement took place on 08th September 2015. In the meeting Government of Uganda was represented by officials from MoFPED, MoJCA, and UEGCL. Discussions on the unresolved issues from the negotiation meeting are still on-going with AFD. 3.Negotiations of the KfW loan agreement were finalized and a final version of the agreement received from KfW on September 25, 2015. 4.A Channelling Agreement between MEMD and UEGCL for the 4 million Euros KfW grant to the project was executed on September 22, 2015. 5.Procurement of a RAP Implementation Consultant is in advanced stages with the best evaluated bidder identified as Newplan Limited.	-Supervision of works for Muzizi HPP (MEMD)  -Health Safety and Environment Activities  -Implementation of Community Development Action Plan  - Environment and Social Management Plan (ESMP) supervised and Monitored  - Monitoring and supervision of PAPs livelihoods within the affected and host communities  -Community Sensitisation  -HIV/AIDS Awareness Activities  Supervision of works for Maziba SHPP (Implementation consultant)  Supervision and monitoring construction of Maziba (MEMD)

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousands</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Total</b>	<b>15,110,000</b>	<i>183,004</i>	<b>16,225,000</b>
<i>GoU Development</i>	<i>1,070,000</i>	<i>183,004</i>	<i>2,345,000</i>
<i>External Financing</i>	<i>14,040,000</i>	<i>0</i>	<i>13,880,000</i>
<b>Project 1351 Nyagak III Hydro Power Project</b>			
<b>030271 Acquisition of Land by Government</b>	RAP for Nyagak III	Generation License by ERA was approved and granted to GENMAX (UEGCL, Hydromaxx and Dott Services ) as developers of the project for 23years  The RAP implementation process for 310PAPs is ongoing	-Supervision and Monitoring of West Nile Grid Extension Project under KFW during defects liability period.  - RAP Implementation for West Nile Grid Extension wayleaves
<b>Total</b>	<b>630,575</b>	<i>141,879</i>	<b>5,000,000</b>
<i>GoU Development</i>	<i>630,575</i>	<i>141,879</i>	<i>5,000,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>030279 Acquisition of Other Capital Assets</b>	Supervision of Works for Nyagak III	Owner's Engineer /supervising consultant was procured and the evaluation process completed	-Supervision of works for Nyagak III HPP (MEMD)  -Health Safety and Environment Activities  -Implementation of Community Development Action Plan  - Environment and Social Management Plan (ESMP) supervised and Monitored  - Monitoring and supervision of PAPs livelihoods within the affected and host communities  -Community Sensitisation  -HIV/AIDS Awareness Activities
<b>Total</b>	<b>279,425</b>	<i>62,871</i>	<b>1,074,802</b>
<i>GoU Development</i>	<i>279,425</i>	<i>62,871</i>	<i>1,074,802</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Project 1023 Promotion of Renewable Energy &amp; Energy Efficiency</b>			
<b>030177 Purchase of Specialised Machinery &amp; Equipment</b>	-Five (5) hybrid small wind energy/ solar photovoltaic systems procured, installed and commissioned.  -Two (2) solar water heating systems for; Refurbishment in Mbale and another procured for lira hospital.  -Fifteen (15) Institutional	-Procurement initiated for one solar heating system for Mbale Regional Referral hospital. Technical specification for the procurement developed.  -Installation of two wind measuring equipment completed and commissioning done	- Purchase of Energy Audit equipment  - Purchase of Power Factor correction equipment  - Purchase of Energy Monitoring Set for Amber House  - Procurement of Lot 3 (Electrical Measurements and

**Vote: 017** Ministry of Energy and Mineral Development**Vote Summary**

Project, Programme Vote Function Output <i>US\$ Thousands</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
	energy saving stoves procured and installed.  - Two wind measuring equipment procured	-Procurement of 5 hybrid solar/wind systems for electricity generation initiated. Technical specification for the procurement developed.  -Selection of beneficiary institutions for institutional stoves done. Procurement deferred due to lack of funding  -Selection of artisans in institutional stove construction done             -Procurement of 4 small scale briquetting units concluded and are still in transit	Humidity & Temperature treatment) of the missing Testing equipment for lighting appliances  - Two (2) Wind Energy Demonstration units Installed in Karamoja and Kigezi regions  - Five Hybrid Solar Water Heating Units Installed in Institutions
<b>Total</b>	<b>10,350,000</b>	<i>187,990</i>	<b>9,060,000</b>
<i>GoU Development</i>	<i>2,000,000</i>	<i>187,990</i>	<i>1,000,000</i>
<i>External Financing</i>	<i>8,350,000</i>	<i>0</i>	<i>8,060,000</i>
<b>Project 1024 Bujagali Interconnection Project</b>			
<b>030171 Acquisition of Land by Government</b>	Supervision of transmission line works	•EPC (Engineering Procurement and Construction) contract awarded to NCC Ltd. •Construction works ongoing •Supervision Consultancy works ongoing. Contract awarded to AECOM	-Completion of Upgrade of Bujagali Switchyard to 220kV  Supervision of transmission line works
<b>Total</b>	<b>7,460,000</b>	<i>500,000</i>	<b>1,130,000</b>
<i>GoU Development</i>	<i>500,000</i>	<i>500,000</i>	<i>500,000</i>
<i>External Financing</i>	<i>6,960,000</i>	<i>0</i>	<i>630,000</i>
<b>Project 1026 Mputa Interconnection Project</b>			
<b>030179 Acquisition of Other Capital Assets</b>	- Construction of Nkenda-Hoima 220kV transmission line and associated substations.  - RAP Implementation	•EPC (Engineering Procurement and Construction) contract awarded to KEC International Ltd for transmission line component and Shandong Taikai Ltd for substations component. Physical works yet to begin  •Supervision Consultancy works ongoing. Contract awarded to Fichtner GmbH	Construction of Nkenda-Hoima 220kV transmission line and associated substations.  - RAP Implementation

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme	2015/16		2016/17
Vote Function Output <i>US\$ Thousands</i>	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
<b>Total</b>	<b>6,854,000</b>	<i>112,500</i>	<b>91,450,000</b>
<i>GoU Development</i>	<i>1,500,000</i>	<i>112,500</i>	<i>1,500,000</i>
<i>External Financing</i>	<i>5,354,000</i>	<i>0</i>	<i>89,950,000</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>-Construction of Mbarara-Nkenda (Lot 2)&amp;Tororo-Lira (Lot 1) transmission lines and associated substations</li> <li>-RAP implementation</li> </ul>	<ul style="list-style-type: none"> <li>Lot 1: The construction of 260 km double circuit 132 kV Tororo-Lira transmission line:               <ul style="list-style-type: none"> <li>•Total Route approved is 262.988km(100%) out of 262.988 km</li> <li>•Detailed survey completed is 262.983 km(99%) out of 262.988km</li> <li>•Total DCPT completed -592out of 716 locations (82.7%)</li> <li>•Total Tower foundation completed – 527 out of 716(73.5%)</li> <li>•Total Tower Erection completed - 473out of 716 (66%)</li> <li>•Stringing of Conductor - 27.009 km from AP 21/0 to AP 27/0</li> <li>•Stringing of OPGW- 26.308 Km from AP 20/9 to AP 25/9.</li> <li>•Finalization of Temporary pole diversion profile for Kumi and Lira.</li> </ul> </li> <li>Opuyo substation               <ul style="list-style-type: none"> <li>•All outdoor equipment civil foundation works completed</li> <li>•Cable trench works under progress</li> <li>•Drainage works under progress</li> <li>•Road works under progress</li> <li>•Guard house works under progress</li> <li>•Erection of all pipe structures completed</li> <li>•Fencing works under progress</li> <li>•Erection of 16 towers out of 17 and 9 beams out of 10 completed</li> <li>•Gas filling and precommissioning tests of circuit breakers completed</li> <li>•tanδ and capacitance tests of CTs and CVTs completed</li> <li>•Erection of all outdoor switchgears.</li> <li>•Interconnection of outdoor switch gears under progress</li> </ul> </li> <li>Tororo Substation               <ul style="list-style-type: none"> <li>•All civil works except gravel</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>-Completion of construction of Mbarara- Nkenda &amp; Tororo-Lira transmission lines and associated substations and project closure</li> <li>- Defects liability period</li> <li>-Completion of RAP implementation</li> </ul>

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
		<p>spreading completed</p> <ul style="list-style-type: none"> <li>•Erection of two towers and one beam completed</li> <li>•Casting of cable trench covers completed</li> <li>•Erection of outdoor switchgear and control/protection panels completed</li> <li>•Gas filling and pre-commissioning tests of circuit breakers completed</li> <li>•tanδ and capacitance tests of CTs and CVTs completed</li> </ul> <p>Lira</p> <ul style="list-style-type: none"> <li>•All civil works except gravel spreading completed</li> <li>•Casting of cable trench covers completed</li> <li>•Erection of all four towers and two beams completed</li> <li>•Extension of existing internal road completed</li> <li>•Erection of outdoor switchgear and control/protection panels completed</li> <li>•Gas filling and precommissioning tests of circuit breakers completed</li> <li>•tanδ and capacitance tests of CTs and CVTs completed</li> </ul> <p>Lot 2: The construction of 160 km 132 kV double circuit Mbarara-Nkenda transmission line and associated substations including reactive power compensation.</p> <ul style="list-style-type: none"> <li>•Detailed Survey completed.</li> <li>•Stringing works ongoing</li> <li>•Erection of towers ongoing</li> </ul> <ul style="list-style-type: none"> <li>•Total DCPT completed - 453 out of 453 locations (100%)</li> <li>•Total Tower foundation Completed – 214 out of 317 tower locations</li> <li>•Total Tower Erection Completed – 194 out of 317 towers</li> <li>•Monopole foundation completed – 131 out of 136 locations</li> <li>•Monopoles erected – 131 out of 136 locations</li> </ul> <p>Mbarara substation</p> <ul style="list-style-type: none"> <li>•All civil works except gravel spreading completed</li> <li>•Testing of outdoor switchgear completed</li> </ul> <p>Nkenda substation</p> <ul style="list-style-type: none"> <li>•All civil works except gravel</li> </ul>	

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## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
		spreading completed •All tower and beam erections completed •All outdoor switchgear erection and final alignment completed. New base insulators for surge arrestors received and replaced in place of the faulty ones •Testing of all outdoor switchgear completed •Testing of reactor completed •Internal road work completed •Site leveling and compaction work almost completed. Grouting of foundations completed •Pre-commissioning tests of control and protection panels completed •Pre-commissioning tests of RTU extension completed	
<b>Total</b>	<b>11,618,621</b>	325,940	<b>3,828,621</b>
<i>GoU Development</i>	<i>1,448,621</i>	325,940	<i>1,448,621</i>
<i>External Financing</i>	<i>10,170,000</i>	0	<i>2,380,000</i>
<b>Project 1140 NELSAP</b>			
<b>030179 Acquisition of Other Capital Assets</b>	- Construction works of Bujagali-Tororo-Lessos and Mbarara-Mirama- transmission lines Lot A: Uganda-Kenya; Lot B: Uganda-Rwanda and Lot C: Substations  -RAP implementation	Lot A: Uganda- Kenya Overhead 220kV transmission line: <input type="checkbox"/> Route alignment and survey, 100% (128km of 128km) <input type="checkbox"/> Tower design and tests 100% (5 of 5no tower types) <input type="checkbox"/> Foundation design 100% <input type="checkbox"/> Foundation works 77% (308 of estimated 402no) <input type="checkbox"/> Tower Erection 68% (275 of estimated 402no) <input type="checkbox"/> Supply of tower stubs and parts 90% <input type="checkbox"/> Supply of line materials (conductor, OPGW, insulators, hardware fittings, etc.) 20%  Lot B: Uganda- Rwanda Overhead 220kV transmission line: <input type="checkbox"/> Route alignment and survey, 100% (66 of 66km) <input type="checkbox"/> Tower design and tests 100% (5 of 5no tower types) <input type="checkbox"/> Foundation design 100% <input type="checkbox"/> For 79% (166 of estimated 211no; <input type="checkbox"/> Tower Erection 39% (83 of estimated 211no) <input type="checkbox"/> Supply of tower stubs and parts 64% <input type="checkbox"/> Supply of line materials	Construction works of Bujagali-Tororo-Lessos and Mbarara-Mirama- transmission lines Lot A: Uganda-Kenya; Lot B: Uganda-Rwanda and Lot C: Substations  -Completion of RAP implementation



# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
		(conductor, OPGW, insulators, hardware fittings, etc.) 0%	
		<p>Lot C: Uganda- Kenya-Rwanda Substations:</p> <p>1.New Mbarara Substation:  <input type="checkbox"/> Topographic survey and geotechnical investigations 100%;  <input type="checkbox"/> Site clearance and levelling 100%; complete;  <input type="checkbox"/> Design 95%;  <input type="checkbox"/> Manufacture of equipment and materials 90%;  <input type="checkbox"/> Supply of equipment and materials 47%;  <input type="checkbox"/> Equipment foundations 99.6%;  <input type="checkbox"/> Equipment erection 4%;  <input type="checkbox"/> Control building 50%;  <input type="checkbox"/> General civil works 71%;</p> <p>2.Bujagali Switchyard  <input type="checkbox"/> Topographic survey and geotechnical investigations 100%;  <input type="checkbox"/> Site clearance and levelling 100%; complete;  <input type="checkbox"/> Design 95%;  <input type="checkbox"/> Manufacture of equipment and materials 90%;  <input type="checkbox"/> Supply of equipment and materials 65%;  <input type="checkbox"/> Equipment foundations 100%;  <input type="checkbox"/> Equipment erection 35%;</p> <p>3.Tororo Substation  <input type="checkbox"/> Topographic survey and geotechnical investigations 100%;  <input type="checkbox"/> Site clearance and levelling 100%; complete;  <input type="checkbox"/> Design 95%;  <input type="checkbox"/> Manufacture of equipment and materials 90%;  <input type="checkbox"/> Supply of equipment and materials 63%;  <input type="checkbox"/> Equipment foundations 91%;  <input type="checkbox"/> Equipment erection 47%;  <input type="checkbox"/> Control building 25%;  <input type="checkbox"/> General civil works 12%;</p> <p>4.Mirama Substation  <input type="checkbox"/> Topographic survey and geotechnical investigations 100%;  <input type="checkbox"/> Site clearance and levelling 89%; complete;  <input type="checkbox"/> Design 95%;  <input type="checkbox"/> Manufacture of equipment and materials 75%;</p>	

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
		<input type="checkbox"/> Supply of equipment and materials 62%; <input type="checkbox"/> Equipment foundations 0%; <input type="checkbox"/> Equipment erection 0%; <input type="checkbox"/> Control building 0%; <input type="checkbox"/> General civil works 0%;	
<b>Total</b>	<b>22,654,685</b>	292,157	<b>21,557,253</b>
<i>GoU Development</i>	2,337,253	292,157	2,337,253
<i>External Financing</i>	20,317,432	0	19,220,000
<b>Project 1144 Hoima - Kafu interconnection</b>			
<b>030171 Acquisition of Land by Government</b>	-Supervision of Hoima-Kafu transmission lines works.	•Procurement of supervision Consultant and RAP Implementation Consultant ongoing	-Solicitation for financing for EPC Works -RAP Implementation -Procurement of EPC Contractor
<b>Total</b>	<b>1,000,000</b>	225,000	<b>15,470,000</b>
<i>GoU Development</i>	1,000,000	225,000	4,000,000
<i>External Financing</i>	0	0	11,470,000
<b>Project 1212 Electricity Sector Development Project</b>			
<b>030171 Acquisition of Land by Government</b>	-Compensation for land for the Kawanda-Masaka transmission line (RAP implementation)  -Supervision of the RAP monitoring process of UETCL.	Of the total 2479 Project Affected Persons, 1595 have been compensated. 1944 Paps have been disclosed too, 1842 agreements, 102 disputes and 535 outstanding disclosures.	Payments undertaken, disputes resolved.
<b>Total</b>	<b>200,000</b>	45,000	<b>1,037,000</b>
<i>GoU Development</i>	200,000	45,000	1,037,000
<i>External Financing</i>	0	0	0
<b>030176 Purchase of Office and ICT Equipment, including Software</b>	-Purchase of desktop computers and laptops for field work.  -Buying of 2 specialized printers for use with IFMIS.  - Procuring licenses required for the Power Sector Information centers	Commenced the Purchase of desktop computers and laptops for field work.	Computers, IT equipment and accessories delivered
<b>Total</b>	<b>100,000</b>	22,500	<b>624,000</b>
<i>GoU Development</i>	100,000	22,500	100,000
<i>External Financing</i>	0	0	524,000
<b>030179 Acquisition of Other Capital Assets</b>	-Construction of new Kawanda-Masaka transmission line and related upgrades to substations.  Establishment of Power Sector Information Center in place and staff recruited to run.  - Feasibility study for feasibility study Lira –Gulu- Nebbi –Arua transmission line.	The terms of reference for the additional Consultancy Services for Providing implementation support services (needs, identification, designs and supervision) for connection of customers in the Peri-Urban areas along Masaka-Transmission Line were approved by the World Bank on 7th September 2015 and request	-Construction of new Kawanda-Masaka transmission line and related upgrades to substations.

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Project, Programme Vote Function Output <i>US\$ Thousand</i>	2015/16		2016/17
	Approved Budget, Planned Outputs (Quantity and Location)	Actual Expenditure and Outputs by September (Quantity and Location)	Proposed Budget, Planned Outputs (Quantity and Location)
	-	to procure services was submitted to MEMD Contracts Committee for approval.	
<b>Total</b>	<b>1,037,000</b>	233,325	<b>19,200,000</b>
<i>GoU Development</i>	<i>1,037,000</i>	<i>233,325</i>	<i>200,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>19,000,000</i>
<b>Project 1221 Opuyo Moroto Interconnection Project Op</b>			
<b>030179 Acquisition of Other Capital Assets</b>	Procurement of Supervision Consultant  Procurement of EPC Contractor	•RAP Implementation ongoing •Supervision Consultancy works ongoing. Contract awarded to Ghods Niroo Engineering Company Ltd.	-Completion of RAP Implementation  -Procurement of EPC Contractor  -Commencement of Construction of Opuyo- Moroto transmission Line and associated substations
<b>Total</b>	<b>3,690,000</b>	225,000	<b>1,000,000</b>
<i>GoU Development</i>	<i>1,000,000</i>	<i>225,000</i>	<i>1,000,000</i>
<i>External Financing</i>	<i>2,690,000</i>	<i>0</i>	<i>0</i>
<b>Project 1222 Electrification of Industrial Parks Project</b>			
<b>030171 Acquisition of Land by Government</b>	-Construction of Namanve South, Luzira, Mukono and Iganga Industrial Park Substations and Associated transmission lines  -RAP Implementation	•Feasibility Study, ESIA and RAP study concluded •RAP Implementation ongoing •Procurement of Supervision consultant concluded. Contract awarded to NEK Consults Ltd •Signed commercial contract for EPC Construction with CAMCE •Design for EPC Construction works ongoing	Construction of Namanve South, Luzira, Mukono and Iganga Industrial Park Substations and Associated transmission lines  -RAP Implementation
<b>Total</b>	<b>1,040,000</b>	171,000	<b>72,340,000</b>
<i>GoU Development</i>	<i>1,040,000</i>	<i>171,000</i>	<i>1,040,000</i>
<i>External Financing</i>	<i>0</i>	<i>0</i>	<i>71,300,000</i>
<b>Project 1259 Kampala-Entebbe Expansion Project</b>			
<b>030171 Acquisition of Land by Government</b>	-Construction Works  -RAP Implementation	•Supervision Consultancy works (design) ongoing. Contract awarded to Intec Gopa •Procurement of EPC Contractors ongoing. •RAP Implementation ongoing.	-Construction Works  -RAP Implementation
<b>Total</b>	<b>53,493,000</b>	1,578,450	<b>32,473,000</b>
<i>GoU Development</i>	<i>10,523,000</i>	<i>1,578,450</i>	<i>7,523,000</i>
<i>External Financing</i>	<i>42,970,000</i>	<i>0</i>	<i>24,950,000</i>

### (iv) Vote Actions to improve Priority Sector Outcomes

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

To ensure efficiency of Vote Budget allocations, and ensure that value for money is realised, budget allocation has focused on areas that contribute to sector priorities. Specifically, outputs geared towards capital purchases for power generation and transmission, electricity access, mineral value addition and security of supply of petroleum products have been targeted. These outputs are considered to have high results impacts.

**Table V2.7: Priority Vote Actions to Improve Sector Performance**

2015/16 Planned Actions:	2015/16 Actions by Sept:	2016/17 Planned Actions:	MT Strategy:
<b>Sector Outcome 1: Increased access to affordable and efficient sources of energy</b>			
Vote Function: 03 01 Energy Planning, Management & Infrastructure Dev't			
<i>VF Performance Issue: - High cost of electricity generation</i>			
Develop more cheaper sources of power and increase their mix in power generation	Govt has continued with efforts to attract investors to develop more cheaper sources of power and increase their mix in power generation	Continue to implement the automatic tariff adjustment mechanism	Develop more cheaper sources of power and increase their mix in power generation
<i>VF Performance Issue: - Poor transmission and distribution network resulting into energy losses.</i>			
Refurbishment of the transmission and distribution infrastructure (i.e line, transformer and substation upgrade)	Refurbishment of the transmission and distribution infrastructure on going	Refurbishment of the existing network especially around Kampala and continued monitoring of measures put forward on energy loss reduction	Refurbishment of the transmission and distribution infrastructure (i.e line, transformer and substation upgrade)
Vote Function: 03 49 Policy, Planning and Support Services			
<i>VF Performance Issue: - Access to adequate financial resources Monitoring and Evaluation of the sub-sectors</i>			
Develop capacity to monitor and evaluate the sector.	Trained 5 SPPAD staff in monitoring and evaluation skills	Develop capacity to monitor and evaluate the sector.	Develop capacity to monitor and evaluate the sector.
<b>Sector Outcome 2: Sustainable management of mineral resources for development</b>			
Vote Function: 03 05 Mineral Exploration, Development & Production			
<i>VF Performance Issue: - Complicated procedures for access of land for the development of mining infrastructure</i>			
Sensitisation of local communities and land owners on the benefits of the intended projects. Attracted private investors to take over the development of Mineral resources in Sukulu (phosphates) and Kilembe (copper).	Sensitisation of local communities and land owners on the benefits of the intended projects on going	Involved the private sector developers, local leaders and land owners in a dialogue to ease access	Sensitisation of local communities and land owners on the benefits of the intended projects. Attracted private investors to take over the development of Mineral resources in Sukulu (phosphates) and Kilembe (copper).
<i>VF Performance Issue: - Limited access to adequate resources for inspection and monitoring of exploration and mining operations</i>			
(a) Ten (10) development projects packaged. MoFPED to borrow for the funding gap of 115.14 bn for priority projects in the Mineral Sector. (b) To allow the use of NTR at Source to cater for Appropriation in Aid (AIA) and increase more NTR from mining.	Development projects packaged. MoFPED to borrow for the funding gap	Present a case for use of NTR generated from mining activities to step up inspection	(a) Ten (10) development projects packaged. MoFPED to borrow for the funding gap of 115.14 bn for priority projects in the Mineral Sector. (b) To allow the use of NTR at Source to cater for Appropriation in Aid (AIA) and increase more NTR from mining.
Vote Function: 03 49 Policy, Planning and Support Services			
<i>VF Performance Issue: - The need to strengthen Policy Analysis , Implementation and Coordination</i>			

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## Vote Summary

2015/16 Planned Actions:	2015/16 Actions by Sept:	2016/17 Planned Actions:	MT Strategy:
Operationalise Program 02 Planning and Policy.	Operationalised Program 02 Planning and Policy Analysis to a department (SPPAD).	Develop capacity in Policy Analysis , Implementation and Coordination	Upgrade the Planning and Policy Unit to a department.
<b>Sector Outcome 3: Sustainable management of the country's Oil and Gas resources</b>			
Vote Function: 03 03 Petroleum Exploration, Development & Production			
<i>VF Performance Issue: - Insufficient capacity to efficiently manage the country's oil and gas potential</i>			
Continued strengthening of the institutional capacity	Continued strengthening of the institutional capacity	Six technical Staff commenced M.Sc. Degrees in Petroleum studies.  Implementation of the National participation and local content strategy by both Government and oil companies continued.	Continued strengthening of the institutional capacity
<i>VF Performance Issue: - The Enactment of the Oil and Gas Resource Management Law.</i>			
Continue the implementation of the oil and gas policy and legislations.	Continued the implementation of the oil and gas policy and legislations.	Emplacement of Midstream Regulations	Continue the implementation of the oil and gas policy and legislations.
Vote Function: 03 49 Policy, Planning and Support Services			
<i>VF Performance Issue: - No budgetary provisions for the Internal Audit functions</i>			
Internal Audit Unit upgraded to a department.	Internal Audit Unit now headed by an assistant commissioner.	Source funding for the inspection and supervision	Internal Audit Unit upgraded to a department.

## V3 Proposed Budget Allocations for 2016/17 and the Medium Term

This section sets out the proposed vote budget allocations for 2016/17 and the medium term, including major areas of expenditures and any notable changes in allocations.

**Table V3.1: Past Outturns and Medium Term Projections by Vote Function\***

	2014/15 Outturn	2015/16		MTEF Budget Projections		
		Appr. Budget	Spent by End Sept	2016/17	2017/18	2018/19
<b>Vote: 017 Ministry of Energy and Mineral Development</b>						
0301 Energy Planning, Management & Infrastructure Dev't	81.500	241.780	23.860	365.429	339.693	320.558
0302 Large Hydro power infrastructure	37.403	2,357.440	144.335	1,507.711	1,846.210	1,370.801
0303 Petroleum Exploration, Development & Production	44.926	118.158	7.392	174.353	170.483	290.392
0304 Petroleum Supply, Infrastructure and Regulation	4.798	13.857	1.441	13.857	13.857	24.511
0305 Mineral Exploration, Development & Production	7.045	12.684	1.953	13.684	12.884	32.743
0349 Policy, Planning and Support Services	20.389	23.196	5.392	22.732	23.399	23.379
<b>Total for Vote:</b>	<b>196.060</b>	<b>2,767.115</b>	<b>184.373</b>	<b>2,097.765</b>	<b>2,406.525</b>	<b>2,062.384</b>

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

For the FY2016/17, total budget allocation to Vote 017 is Ush. 3,037.678. this includes Ush.4.063 as wage, Ush. 4.885 was non-wage recurrent, Ush. 307.877 as GoU development and Ush. 2,720.678 as contribution from the development partners. The nonwage budget has reduced by about Ush. 500 million compared to the FY2015/16. This poses a challenge to the implementation of the development budget. Also, given that much of the budget is from development partners, it implies that counterpart obligations may be difficult to meet.

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Over the medium term, there is a general increment of resources allocated to the sector, but the non-wage recurrent budget remains small. This is likely to compromise support service like inspections and quality assurance.

### (ii) The major expenditure allocations in the Vote for 2016/17

For the FY 2016/17, the development of large Hydro Power Projects (Karuma and Isimba HPP) have the largest budgetary allocation of Ush. 107.58 bn as GoU development and Ush. 2720.85 bn as development partner contribution. This is followed by payment for thermal power generation capacity charges at Ush. 72.29 bn. The development of petroleum infrastructure is allocated Ush. 53.16bn as GoU development budget and Ush. 63.145 bn as development partner contribution., largely for the oil refinery activities, pipeline development activities and petroleum data centre. Mineral development activities have a budget allocation of Ush. 11.90 bn. Vote 017 also support the Atomic Energy Council, Uganda Energy Credit Capitalisation Company, and the Electricity Disputes Tribunal. In addition, it is also planned that the development of Amber house and adjacent plot will commence.

### (iii) The major planned changes in resource allocations within the Vote for 2016/17

There are largely no major changes on resource allocation as the focus remains on the development of power generation and transmission infrastructure

**Table V3.2: Key Changes in Vote Resource Allocation**

Changes in Budget Allocations and Outputs from 2015/16 Planned Levels:			Justification for proposed Changes in Expenditure and Outputs
2016/17	2017/18	2018/19	
<i>Vote Function:0301 Energy Planning,Management &amp; Infrastructure Dev't</i>			
<b>Output: 0301 01 Energy Policy/Plans Dissemination, Regulation and Monitoring</b>			
<i>UShs Bn:</i> 1.175	<i>UShs Bn:</i> -0.840	<i>UShs Bn:</i> -1.840	<i>Implementation of various assignments in the following areas:</i>  <i>- Peri-Urban Electrification</i>  <i>- Street and Market</i>
Finalise Consultancy assignments in the following areas:	Implementation of various assignments in the following areas:	Implementation of various assignments in the following areas:	
- Peri-Urban Electrification	- Peri-Urban Electrification	- Peri-Urban Electrification	
- Street and Market Lighting at Masaka Municipality.	- Street and Market	- Street and Market	
- Development of a Power Sector Information Center			
<b>Output: 0301 02 Energy Efficiency Promotion</b>			
<i>UShs Bn:</i> 4.893	<i>UShs Bn:</i> -0.077	<i>UShs Bn:</i> -1.077	<i>The provision is for maintenace of the CFL test bench; setting up energy efficiency demonstration sites; and address the capacity issues that are still a challenge</i>
The provision is for maintenace of the CFL test bench; setting up energy efficiency demonstration sites; and address the capacity issues that are still a challenge	Energy Efficiency demonstration sites will have been setup		
<b>Output: 0301 03 Renewable Energy Promotion</b>			
<i>UShs Bn:</i> 2.859	<i>UShs Bn:</i> 7.404	<i>UShs Bn:</i> 7.404	<i>Development of new small hudropower plants (Nyagak III; Muzizi; Nyanwamba)</i>
Development of New renewable projects	New renewable project outpus shall be packaged	New renewable project outpus shall be packaged	
<b>Output: 0301 04 Increased Rural Electrification</b>			
<i>UShs Bn:</i> -24.934	<i>UShs Bn:</i> -12.070	<i>UShs Bn:</i> -22.070	<i>Much of this output is beeing implemented under Vote 123 Rural Electrification</i>
Much of this output is beeing implemented under	Much of this output is beeing implemented under	Much of this output is beeing implemented under	

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Changes in Budget Allocations and Outputs from 2015/16 Planned Levels:			Justification for proposed Changes in Expenditure and Outputs
2016/17	2017/18	2018/19	
Vote 123 Rural Electrification			
<b>Output: 0301 53 Cross Sector Transfers for ERT (Other Components)</b>			
<i>US\$ Bn:</i> -10.017	<i>US\$ Bn:</i> 1.388	<i>US\$ Bn:</i> -8.612	<i>Resources are to be transferred to ERT III implementing Institutions. Funding is mainly from development partners largely supporting rural electrification programs</i>
Resources are to be transferred to ERT III implementing Institutions. Funding is mainly from development partners largely supporting rural electrification programs	Resources are to be transferred to ERT III implementing Institutions. Funding is mainly from development partners largely supporting rural electrification programs		
<b>Output: 0301 71 Acquisition of Land by Government</b>			
<i>US\$ Bn:</i> 59.257	<i>US\$ Bn:</i> -46.099	<i>US\$ Bn:</i> -46.099	<i>For the projects under implementation, RAP implementation is at advanced stages</i>
For the projects under implementation, RAP implementation is at advanced stages	For the projects under implementation, RAP implementation is at advanced stages	For the projects under implementation, RAP implementation is at advanced stages	
<b>Output: 0301 77 Purchase of Specialised Machinery &amp; Equipment</b>			
<i>US\$ Bn:</i> -1.290	<i>US\$ Bn:</i> -8.350	<i>US\$ Bn:</i> -8.350	<i>Much of the purchases has been supported by the development partners. For the medium term, the projection of this support is reducing.</i>
Much of the purchases has been supported by the development partners. For the medium term, the projection of this support is reducing.	Much of the purchases has been supported by the development partners. For the medium term, the projection of this support is reducing.	Much of the purchases has been supported by the development partners. For the medium term, the projection of this support is reducing.	
<b>Output: 0301 79 Acquisition of Other Capital Assets</b>			
<i>US\$ Bn:</i> 91.182	<i>US\$ Bn:</i> 156.033	<i>US\$ Bn:</i> 158.898	<i>Acquisition of equipment for capital works</i>
Acquisition of equipment for capital works	Acquisition of equipment for capital works	Acquisition of equipment for capital works	
<i>Vote Function:0351 Large Hydro power infrastructure</i>			
<b>Output: 0302 51 Increased power generation - Largescale Hydro-electric</b>			
<i>US\$ Bn:</i> -61.661	<i>US\$ Bn:</i> -93.305	<i>US\$ Bn:</i> -93.305	<i>Payment for Loan insurance for Karuma and Isimba already made; Construction in progress</i>
Payment for Loan insurance for Karuma and Isimba already made; Construction in progress			
<b>Output: 0302 71 Acquisition of Land by Government</b>			
<i>US\$ Bn:</i> 5.385	<i>US\$ Bn:</i> -2.442	<i>US\$ Bn:</i> -2.442	<i>Finalisation of Land acquisition for Nyagak and Muzizi</i>
Finalisation of Land acquisition for Nyagak and Muzizi			
<b>Output: 0302 79 Acquisition of Other Capital Assets</b>			
<i>US\$ Bn:</i> -59.702	<i>US\$ Bn:</i> -651.141	<i>US\$ Bn:</i> -651.141	<i>Acquisition of equipment for capital works</i>
Acquisition of equipment for capital works			
<b>Output: 0302 80 Large Hydro Power Infrastructure</b>			
<i>US\$ Bn:</i> -733.752	<i>US\$ Bn:</i> 235.658	<i>US\$ Bn:</i> -239.750	
The resources provided for the development of large hydropower infrastructure, beginning with Karuma and Isimba HPPs. The funding for Karuma and Isimba have been obtained through	The resources earlier provided for the development of large hydropower infrastructure, beginning with Karuma and Isimba HPPs. The funding for Karuma and Isimba have		

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Changes in Budget Allocations and Outputs from 2015/16 Planned Levels:			Justification for proposed Changes in Expenditure and Outputs
2016/17	2017/18	2018/19	
credit from China EXIM Bank	been obtained through credit from China EXIM Bank		
<i>Vote Function:0301 Petroleum Exploration, Development &amp; Production</i>			
<b>Output: 0303 01 Promotion of the country's petroleum potential and licensing</b>			
<i>US\$ Bn:</i> -8.428	<i>US\$ Bn:</i> -12.299	<i>US\$ Bn:</i> -12.299	<i>New institutions are expected to be fully operational</i>
New institutions are expected to be fully operational	New institutions are expected to be fully operational		
<b>Output: 0303 02 Initiate and formulate petroleum policy and legislation</b>			
<i>US\$ Bn:</i> -1.150	<i>US\$ Bn:</i> -2.270	<i>US\$ Bn:</i> -2.270	
To support achievement of local production			
<b>Output: 0303 03 Capacity Building for the oil &amp; gas sector</b>			
<i>US\$ Bn:</i> 4.870	<i>US\$ Bn:</i> 4.870	<i>US\$ Bn:</i> 4.870	
To support achievement of local production			
<b>Output: 0303 04 Monitoring Upstream petroleum activities</b>			
<i>US\$ Bn:</i> -56.185	<i>US\$ Bn:</i> -51.185	<i>US\$ Bn:</i> -51.185	
Subscription will have been made			
<b>Output: 0303 06 Participate in Regional Initiatives</b>			
<i>US\$ Bn:</i> 1.631	<i>US\$ Bn:</i> -0.669	<i>US\$ Bn:</i> -0.669	
<b>Output: 0303 51 Transfer for Petroleum Refining (Midstream Unit)</b>			
<i>US\$ Bn:</i> -1.500	<i>US\$ Bn:</i> -5.500	<i>US\$ Bn:</i> -5.500	
<b>Output: 0303 72 Government Buildings and Administrative Infrastructure</b>			
<i>US\$ Bn:</i> 5.865	<i>US\$ Bn:</i> 5.865	<i>US\$ Bn:</i> 5.865	
Much of the works on the new building for the data centre and office space will have been done			
<b>Output: 0303 75 Purchase of Motor Vehicles and Other Transport Equipment</b>			
<i>US\$ Bn:</i> 2.678	<i>US\$ Bn:</i> 0.000	<i>US\$ Bn:</i> 2.678	<i>Vehicles for the new institutions and for exploration activities</i>
Vehicles for the new institutions and for exploration activities		Vehicles for the new institutions and for exploration activities	
<b>Output: 0303 76 Purchase of Office and ICT Equipment, including Software</b>			
<i>US\$ Bn:</i> 1.359	<i>US\$ Bn:</i> 0.000	<i>US\$ Bn:</i> 1.359	<i>Equipment for New Institutions and to aid in exploration activities</i>
Equipment for New Institutions and to aid in exploration activities		Equipment for New Institutions and to aid in exploration activities	
<b>Output: 0303 80 Oil Refinery Construction</b>			
<i>US\$ Bn:</i> 106.460	<i>US\$ Bn:</i> 104.054	<i>US\$ Bn:</i> 232.309	
Resources provided for will support studies for pipeline development and development of attendant infrastructure	Development of attendant infrastructure for the refinery		
<i>Vote Function:0379 Petroleum Supply, Infrastructure and Regulation</i>			
<b>Output: 0304 79 Acquisition of Other Capital Assets</b>			
<i>US\$ Bn:</i> 1.610	<i>US\$ Bn:</i> 4.053	<i>US\$ Bn:</i> 14.707	<i>Need to restock national fuel reserves to ensure security of supply of petroleum</i>
Need to restock national	Ensure security of supply of		



# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Changes in Budget Allocations and Outputs from 2015/16 Planned Levels:		Justification for proposed Changes in Expenditure and Outputs	
2016/17	2017/18	2018/19	
fuel reserves to ensure security of supply of petroleum products	petroleum products		products
<i>Vote Function:0303 Mineral Exploration, Development &amp; Production</i>			
<b>Output: 0305 03 Mineral Exploration, development, production and value-addition promoted</b>			
US\$ Bn: -1.191	US\$ Bn: 10.320	US\$ Bn: 30.179	Focus will be promotion and attracting private investment and capacity development for the laboratory infrastructure
Focus will be promotion and attracting private investment	Focus will be promotion and attracting private investment; and capacity development for the laboratory infrastructure	Focus will be promotion and attracting private investment; and capacity development for the laboratory infrastructure	
<i>Vote Function:0301 Policy, Planning and Support Services</i>			
<b>Output: 0349 01 Planning, Budgeting and monitoring</b>			
US\$ Bn: -1.113	US\$ Bn: -1.213	US\$ Bn: -1.436	Development of data collection instruments AND THE Meta data sheet was concluded
Development of data collection instruments and the Meta data sheet was concluded			
<b>Output: 0349 06 Management of Policy Issues, Public Relation, ICT and Electricity disputes resolved</b>			
US\$ Bn: -1.794	US\$ Bn: -2.794	US\$ Bn: -2.794	Records retention policy and the training policy are being finalised
Records retention policy and the training policy are being finalised			
<b>Output: 0349 72 Government Buildings and Administrative Infrastructure</b>			
US\$ Bn: 3.624	US\$ Bn: 8.091	US\$ Bn: 8.091	Redevelopment of Amber house
Redevelopment of Amber house			
<b>Output: 0349 79 Acquisition of Other Capital Assets</b>			
US\$ Bn: -1.740	US\$ Bn: -1.740	US\$ Bn: -1.740	Feasibility studies for Nyamba have been completed
Feasibility studies for Nyamba have been completed			

## V4: Vote Challenges for 2016/17 and the Medium Term

This section sets out the major challenges the vote faces in 2016/17 and the medium term which the vote has been unable to address in its spending plans.

Illegal mining by the Artisanal Miners. There is an increase of illegal mining being carried out by artisans illegal in areas of Mubende, Namayingo, Bugiri and the Karamoja region. This shall be addressed in the revised legislation where some areas will be gazette for these Artisanal and Small-scale mining.

Land Acquisition: To acquire land for energy infrastructure and mineral development, petroleum and mineral exploration takes a very long time and land is very costly. That delays project development and results into high investment costs.

Low access to modern energy forms especially among rural households: Expanding electricity coverage to realize the required transformation in rural areas of Uganda in reasonable time poses unique challenges. First, rural areas are characterized by low population densities due to dispersed settlements. Second, a significant number of households are poor and find it difficult to connect and pay for electricity services. Therefore, despite the heavy investment in the construction of the rural electrification infrastructure which is capital intensive, the connection rates have remained very low.

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Management of expectations created by the discovery of petroleum: The people of Uganda in general, and in the areas where the discoveries have been made in particular, expect quick revenues, jobs and businesses, among other things. There are also anxieties about the possible negative aspects of developing the oil resources like environment degradation and how the revenues will be managed. To mitigate this challenge, government has intensified the sharing of information on the realistic development programme of the sector.

Tax incentives for investors: The oil and gas (upstream) and refinery investors categorically want incentives to proceed. This matter remains unresolved.

New policy measure of non-export of commodities: The Mineral subsector under performance is largely due to the new policy measure of non-export of commodities and the weak regulatory structure. Government is however, in the process of reviewing the mineral sector legislation.

### UNFUNDED PRIORITIES

MIRAMA-KABALE 132kV Transmission Line and Associated Substations Ush. 18bn

UETCL PROJECTS TAXES Ush. 60bn

Airborne Geophysical – Karamoja US\$20 Million

Pipeline Project (Eldoret – Kampala) Ush.32bn

### PETROLEUM EXPLORATION AND PRODUCTION DEPARTMENT

1. Operationalisation of the new institutions (PAU, NOC, Directorate): 42 billions
2. Monitoring Upstream Petroleum activities: 4.3 billion
3. Equity contribution by Government of Uganda for refinery development USD \$ 500M (1.396 trillion)
4. Facilitate pipeline related activities (specifically studies i.e. environmental survey & detailed routing and RAP Study consultancy fees and related administrative expenses) UGX 12.1 billion
5. Implementation of the RAP for the Infrastructure corridor (Est. UGX 200 billion)-this is subject to the findings of the RAP study

There is need to complete the acquisition of wayleaves for the oil products transport pipeline and storage infrastructure (Ush. 42billion)

### MINERAL DEVELOPMENT

Additional resources are essential to enhanced generation of Non-tax revenue. Additional funds are for specific programmes in line with NDP that need funding: Airborne Geophysical Surveys of Karamoja (46bn), Geothermal Resources Development (5.1bn), Uranium Exploration (14.12bn), Rare Earth Elements/minerals 13.18bn), Laboratories Infrastructure Enhancement (11.3bn, Mining Law Reform (1.9), Mineral Data Backup Infrastructure (3.1bn), National Seismological Network (13.4) and Geoparks and Geosites projects (0.62 bn).

**Table V4.1: Additional Output Funding Requests**

Additional Requirements for Funding and Outputs in 2016/17:	Justification of Requirement for Additional Outputs and Funding
<i>Vote Function: 0372 Energy Planning, Management &amp; Infrastructure Dev't</i>	
<b>Output:</b> 0301 72 Government Buildings and Administrative Infrastructure	
<i>US\$ Bn:</i> 423.710	
Resources are required to support the development of power transmission infrastructure in terms of wayleaves acquisition,	<i>There is need to fund transmission and distribution infrastructure to evacuate power from the various power plants being developed and distribute to the users</i>

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

Additional Requirements for Funding and Outputs in 2016/17:	Justification of Requirement for Additional Outputs and Funding
<p>construction of the transmission lines and capacity building</p>	
<p><i>Vote Function:0372 Large Hydro power infrastructure</i></p>	
<p><b>Output: 0302 72 Government Buildings and Administrative Infrastructure</b></p>	
<p><i>US\$ Bn: 1,005.000</i></p>	<p><i>There is need to provide financing to support the objective for which the Energy Investment Fund was established and payment for Agago RAP</i></p>
<p>Development of Large hydropower generation and transmission infrastructure</p>	
<p><i>Vote Function:0380 Petroleum Exploration, Development &amp; Production</i></p>	
<p><b>Output: 0303 80 Oil Refinery Construction</b></p>	
<p><i>US\$ Bn: 1,058.234</i></p>	<p><i>This output will support the development of the refinery and attendant infrastructure like pipelines and storage facilities.</i></p>
<p>Finalisation of Refinery development studies;</p>	
<p>Government Equity in the Refinery company</p>	<p><i>Contribution to Government Equity in the Refinery company</i></p>
<p><i>Vote Function:0304 Petroleum Supply, Infrastructure and Regulation</i></p>	
<p><b>Output: 0304 04 Operational Standards and laboratory testing of petroleum products</b></p>	
<p><i>US\$ Bn: 37.200</i></p>	<p><i>This activity is in line Objective 7 and 8 of NDP under Oil and Gas sector. Newly recruited need specialized training in downstream related field to handle the activities of the sector effectively.</i></p>
<p>The need to complete the acquisition of wayleaves for the oil products transport pipeline and storage infrastructure</p>	
<p><i>Vote Function:0305 Mineral Exploration, Development &amp; Production</i></p>	
<p><b>Output: 0305 05 Licencing and inspection</b></p>	
<p><i>US\$ Bn: 42.000</i></p>	<p><i>Additional resources are essential to enhanced generation of Non-tax revenue. Additional funds are for specific programmes in line with NDP that need funding: Airborne Geophysical Surveys of Karamoja (46bn), Geothermal Resources Development (5.1bn), Uranium Exploration (14.12bn), Rare Earth Elements/minerals 13.18bn, Laboratories Infrastructure Enhancement (11.3bn, Mining Law Reform (1.9), Mineral Data Backup Infrastructure (3.1bn), National Seismological Network (13.4) and Geoparks and Geosites projects (0.62 bn).</i></p>
<p>Resources will be required for the development of earthquake research facility, development of geothermal resources and geological data acquisition for the remaining 20% of the country (Karamoja region). In addition, resources are need to support monitoring and inspection of mineral activities</p>	
<p><i>Vote Function:0306 Policy, Planning and Support Services</i></p>	
<p><b>Output: 0349 06 Management of Policy Issues, Public Relation, ICT and Electricity disputes resolved</b></p>	
<p><i>US\$ Bn: 23.000</i></p>	<p><i>The MEMD is required to respond to the emerging challenges of managing an oil and gas industry by instituting the appropriate institutional capacity, in the form of a new Directorate for Petroleum, Petroleum Authority, National Oil Company, human capital (retention and motivation), capital stock items, and associated superstructures. In addition, Management of Amber house that has been passed on to the MEMD</i></p>
<p>Development of Amber house and the adjacent plot</p>	

*This section discusses how the vote's plans will address and respond to the cross-cutting policy, issues of gender and equity; HIV/AIDS; and the Environment, and other budgetary issues such as Arrears and NTR..*

### (i) Cross-cutting Policy Issues

*(i) Gender and Equity*

*(ii) HIV/AIDS*

*(iii) Environment*

**Objective:** Carrying out the SEA for Ayago  
Finalisation of the ESIA for Ayago HPP  
ESIA for Ayago transmission line

# Vote: 017 Ministry of Energy and Mineral Development

## Vote Summary

*Issue of Concern :*

*Proposed Interventions*

*Budget Allocations UGX billion*

*Performance Indicators*

**Objective:** Biodiversity offset study  
Biodiversity monitoring

*Issue of Concern :*

*Proposed Interventions*

*Budget Allocations UGX billion*

*Performance Indicators*

**Objective:** Development of a Strategic Environment Assessment for the cascade development of hydropower plants along the river Nile.

*Issue of Concern :*

*Proposed Interventions*

*Budget Allocations UGX billion*

*Performance Indicators*

### (ii) Payment Arrears

The table below shows all the payment arrears outstanding for the Vote:

No arrear have been verified

### (ii) Non Tax Revenue Collections

The table below shows Non-Tax Revenues that will be collected under the Vote:

Source of NTR	UShs Bn	2014/15 Actual	2015/16 Budget	2015/16 Actual by Sept	2016/17 Projected
Windfall Gains			0.000		0.000
	<b>Total:</b>		<b>0.000</b>		<b>0.000</b>