Sector Summary

S1: Sector Overview

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

(i) Snapshot of Medium Term Budget Allocations*

Table S1.1 and Chart S1.1 below summarises the Medium Term Budget allocations for the Sector: **Table S1.1: Overview of Sector Expenditures (UShs Billion, excluding taxes and arrears)**

		2009/10			MTEF Budget Projections		
_		2008/09 Outturn	Approved Budget	Spent by End Dec	2010/11	2011/12	2012/13
	Wage	1.402	1.876	0.663	1.876	1.970	2.009
Recurrent	Non Wage	3.057	3.169	0.948	6.169	8.020	24.661
	GoU	232.221	345.244	49.947	133.964	359.405	312.054
Development	Donor**	0.000	348.641	N/A	340.451	301.604	200.197
	GoU Total	236.680	350.290	51.558	142.009	369.395	338.725
Fotal GoU+Do	onor (MTEF)	N/A	698.931	N/A	<u>482.460</u>	670.999	538.922
Non	Tax Revenue	0.000	0.000	N/A	0.000	0.000	0.000
	Grand Total	N/A	698.931	N/A	482.460	670.999	538.922

* Excluding Taxes and Arrears; **Donor expenditure data unavailable

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



* Excluding Taxes and Arrears

Sector Summary

(ii) Sector Contributions to the National Development Plan

The sector will strive to contribute to NDP sector objectives through ncrease in power generation capacity to reach 780MW-820 MW from the current 280-330 MW, increase Rural Electrification to 10 percent, promote Energy Efficiency, scale up Oil and Gas exploration, undertake commercial production of Oil and Gas and build subsquent infrastructure for distribution, operations and management and promote, empower artisanal miners and small scale miners. All these strategies are aimed at enhancing the availability of quality of gainful employment and job creation.

(iii) Medium Term Sector Policy Objectives

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

(i) to meet the energy needs of Uganda's population for social and economic development in an environmentally sustainable manner
(ii) to develop the Petroleum and Mineral sectors for them to contribute significantly to sustainable national economic and social growth; and

(iv) Key Policy Implementation Issues to be addressed over the Medium Term

The sector considers the following issues crucial to address over the medium term, to improve sector performance and the achievement of sector objectives

- High electricity generation costs and energy loss levels
- Low access to modern energy services
- Inadequate Fuel Reserves
- Difficulty in accessing development finance by the Private sector

S2: Past Sector Performance and Medium Term Plans

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

(i) Sector Outcomes and the Achievement of Sector Objectives

In the FY 2010/11 and over the medium-term, the focus has been on key sector outcomes and their contributory outputs namely :-

i) Increased power generation capacity and distribution; this outcome has been measured against the Level of electricity generation capacity at 730 MW by 2010/11, % of households with access to electricity at 12 percent by 2010/11 and the Level of load shedding (hours per day) at 0 by 2010/11. The key contributory outputs to achieving this outcome are:- Increased Thermal and Renewable energy generation capacity and Increased Access to Modern forms of energy in rural areas.

ii) Establishment of the Petroleum Resource, Oil and Gas produced in the Country i.e. In terms of the number of Oil wells successfully drilled and appraised, the amount of Oil and Gas produced. In achieving this outcome, the key contributory outputs are increased Monitoring of Upstream Petroleum activities, develop and implement a Communication Strategy for the Oil and Gas sector.

iii) Enhancing the efficiency of Petroleum Supply through measuring the percentage decrease/increase in local petroleum prices in the market. Other contributory outputs are Improved service delivery through competition(licensing), Improved standards of product quality, monitoring industrial safety and addressing environmentally related key issues.

iv) Well managed and safeguarded Mineral Resources for increased Mineral Production and Exports through undertaking a 100 % coverage of Geo scientific data for the whole country acquired through Geological and Geophysical mapping while undertaking increased licensing, inspection and the

Sector Summary

Institutional capacity for the mineral sector.

Table S2.1: Current Status and Future Forecasts for Sector Outcomes

Outcome and Outcome Indicator		Baseline	Medium Term Forecast		
Outcome: Increased Power Gene	ration capacity and Transmissio	n			
Percentage of the population accessir	ng electricity	10 (2008)	20 (2011)		
Electricity generation capacity in Ugar	nda	500MW (2008)	800MW (2011)		
Outcome: Well managed Mineral Resources for increased Mineral Production and Exports					
Mineral production and export		N/A (N/A)	UGX10 Billion (2011)		
Percentage of mineral exploration area	covered	80 (2008)	100 (2011)		
Outcome: Increased promotion of Petroleum Exploration and Monitoring of the supply chain					
Oil and Gas Production		0 (2008)	4000 bopd (2011)		
Number of discovered and appraised f	ields	2 (2008)	5 (2011)		

(ii) Past and Future Planned Sector Outputs

Performance for the first half of the 2009/10 financial year Energy Planning, Management & Infrastructure Development:

Development of the Bujagali Hydropower Project 250 MW: Construction works for the dam and powerhouse are progressing well. The power plant is expected to commence production in 2011.

Karuma Hydropower Project (500 - 700MW): Government has engaged Consultant to study the various options for optimising capacity of 500 MW to 700 MW, and carry out a detailed feasibility study, engineering design and bid preparation. Construction is expected to start in 2011 using the Energy Fund.

Isimba Hydropower Project 100 MW: This project is located 25 km downstream of Kalagala Falls and is estimated to produce 100 MW of power. A consultant was engaged to carry out the feasibility study for this project. Construction of this site is expected to start in 2012

Renewable Energy Projects:

During the FY2009/10, one renewable energy project (Bugoye (13 MW), was completed and commissioned in October 2009 by HE. The President of the Republic of Uganda and is producing power. The following renewable energy projects are under development and are near completion: - Mpanga (18 MW), Buseruka (10 MW), and Ishasha (6.5 MW), Nyagak Small Hydropower project (3.3 MW).

Energy efficiency Programmes: Five (5) Energy Audits carried out in various SMEs in Northern Uganda, Energy Efficiency Week eheld in July 2009, Three (3) Awareness workshops conducted in Northern Uganda.

A total of over 550,000 household stoves and about 552 institutional improved energy saving stoves have been disseminated over the years across the country leading to reduction in fuel wood use, thus preserving the environment. Of these, a total of 139 were institutional stoves was diseminated by December 2009. In addition a total of 7,500 were disseminated in Northern Uganda (Yumbe, Arua, and Moyo) through various stakeholders.

Transmission Projects:

The Bujagali Interconnection project had commenced and is progressing well. Others that are yet to start are: Mbarara – Nkenda 132 Kv line, Kaiso Tonya – Fortportal – Nkenda 132 Kv line; Opuyo – Moroto 132 Kv line, Karuma – Kawanda 400 Kv line; Karuma – Oluiyo 132 Kv line, Tororo –Opuyo – Lira 132 Kv line and Mutundwe – Entebbe 132 Kv line. A 33 Kv distribution line will be constructed from Mbale – Nakapiripirit - Moroto. Regional interconnection projects are; Bujagali – Tororo – Lessos (Kenya) 220 Kv line; Mbarara – Mirama – Birembo (Rwanda) 220 Kv line, Masaka – Mwanza (Tanzania) 220 Kv line,

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Nkenda - Beni - Rutshuru and Beni - Bunia 220 Kv (DRC).

Rural Electrification:

During the first half of the FY2009/10, Government completed some rural electrification projects , namely:- Corner Kilak – Kalongo – Pader-Abim; Fort-Portal – Karugutu – Bundibugyo – Nyahuka;; Kyotera – Mutukula and Kasensero; Mbarara – Kikagate – Ntungamo; Soroti – Kaberamaido, extension of West Nile mini grid, Bukungu fish landing site, power extension to Oyam district headquarters and Buhweju tea factory, Northern Uganda Youth development Centre, Kalaki, Lwala, Mutukula, Kakuuto, Kabuyanda, Mirama hill, Kitwe, Ruhama, Kirewa TC, Iyolwa TC, Kikorongo, Kisinga, Bwera, Mpondwe Township, and Mabale. Government was in the final stages of completing the construction of the following major rural electrification schemes: Kawete-Itanda and Bugiri-Iwemba.

Petroleum Supply, Infrastructure and Regulation:

Development of an appropriate Legal and Regulatory framework. During the FY2009/10, Government commenced the process of putting in place a modern a legal and regulatory framework to provide for the new areas of oil refining, bulk crude oil transportation and storage and gas processing and conversion. These new areas had not existed before in the country and have emerged because of the discovery of oil reserves in Uganda. Thus, an appropriate legal and regulatory framework is critical for the development of these areas. In addition, statutory regulations for fuel marking technology and supply were drafted

In addition, during the FY 2009/10, following the commercial discoveries, Government resolved that this oil will be refined locally to meet the local and regional demand in additional to providing maximum optimal benefits to the country. Through an international procurement process, the Government has already completed the procurement of a consultant to undertake a feasibility study for the establishment of a refinery and a contract was signed in December 2009 and work started on January 2, 2010.

In FY2009/10 the Kenya – Uganda oil pipeline extension project was coordinated by a Joint Coordinating Commission set up between Uganda and Kenya. The pipeline design and environmental impact assessment were completed and approved. Various agreements and contracts were drafted and funding for the project was secured.

From September 2008 survey and valuation of the land where the pipeline will be laid was undertaken. Land valuation and acquisition from Malaba - Kampala was also completed. Compensation of affected people is underway and construction is scheduled to commence during this financial year. Commercial operation to follow thereafter for a period of 20 years before the concession expires

Mineral Exploration, Development & Production:

During FY2009/10, Geological mapping of Northern and West Nile regions commenced. In addition, the establishment of a GIS web-based Geological and Mineral Information System and hosting a Department website for geo-information dissemination and was undertaken in efforts to promote sectoral investment. All maps in the Geological mines and surveys department were digitalized.

In the area of community development and Assistance to Small-Scale Miners about 200 people drawn from the mining community, mining associations, chamber of mines, Local Governments and Ministries responsible for gender and labour, water & environment and health received various trainings. This has resulted into best mining practices; improved uses of resources obtained from mining and reduced illegal mining, through acquisition of mineral rights and formation of mining groups/associations. In the area of licensing, there were 101 licenses issued. This is largely due to participation in investment promotion internationally and sensitization carried out in mining districts

Petroleum Exploration and Production:

Government has continued to support efforts to promote petroleum exploration in Uganda. Investment in

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

Seismic Operations

Tullow oil, the Licensee of Exploration Area 2 continued to appraise fields discovered in EA2, appraisal drilling 2D and 3D seismic surveys in the area, with a view of properly defining the discoveries in this area and also aid in the planning of the Early Production Scheme.

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

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

Drilling Operations

Nine wells were drilled and these are:Ngassa-2, Mputa-5, Nsoga-1, Karuka-2, Kigogole-3, Wairindi-1, Awaka-1, Ngara-1 and Iti-1 and all encountered hydrocarbons. A cumulative total of 34 wells have so far been drilled in the country and 32 out of these have encountered hydrocarbons, hence maintaining a very high (95%) technical success rate.

Full Tensor Gradiometry survey: Tullow contracted Bell Geospace of USA to undertake a 19,700 line kilometre survey over EA1 and EA2 in an effort to evaluate the faulting patterns and basement morphology in the area. This survey which commenced in February 2009, was completed in June 2009. Analysis and evaluation of these data-sets, in view of improved geological interpretation, is still ongoing. Early Production System: In view of lager discovered petroleum reserves and reduced international oil price that would render very small developments of the size of the original EPS uneconomical, there is consideration by Government and licensed oil companies to use gas generation and crude oil from Extended well testing to produce power in the short term. In the medium term, a feasibility study for establishment of refinery has commenced. This feasibility study which will recommend the type, size and other aspects of the facility is expected to be concluded by mid-2010.

Implementation of the Oil and Gas Policy:

The National Oil and Gas Policy which was approved by put in place in February 2008 provides the guiding principles in the petroleum value chain and institutional framework for prudent management of resources and oil revenues. The principles of the oil and gas Resource Management law which were submitted to Cabinet were approved and cabinet has asked the Ministry of Justice and constitutional Affairs to commence preparation of draft bill. The procurement of the firm to develop and implement the Communication Strategy for oil ands gas in the country is in advanced stages. In the mean time the Ministry has adopted a stop gap measure to address the existing communication gaps in the petroleum industry. This has been taken forward by engagement of the media in informing the public on oil and gas issues. Field visits to the Albertine Graben and subsequent interaction with the Ministry and the oil companies operating in the Country were undertaken. On the establishment of the new institutions, the Ministry is in the process of engaging a Chief Technical Advisor (CTA) whose responsibility is to recommend the structure of the institutions.

Monitoring / Regulation:

The Petroleum Exploration and Production Department continues to monitor the petroleum exploration operations and plans for development and production. These activities are monitored to ensure compliance with the relevant Laws of Uganda, Production Sharing Agreements and Environmental Impact Assessment reports as well as ensuring that costs from the company expenditures are genuine since they will be

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recovered in future.

Policy, Planning and Support Services:

BFP and MPS were all submitted by June 2009, Q1&Q2 reports submitted to MoFPED and OPM. Activities monitored and the LPOs closed on the system.

Table S2.2: Past and Medum Term Key Sector Output Indicators*

Weter Frankling Kan Ontered	2000/00	2009/1		MTEF P	rojections		
Vote Function Key Output Indicators and Costs:	2008/09 Outturn	Approved Plan	Outturn by End Dec	2010/11	2011/12	2012/13	
Vote: 017 Ministry of Energy and M							
Vote Function:0301 Energy Planning		-					
Number of Renewable Energy systems installed (Biomass, solar, gasification technologies) household stoves	70,000	100,000	50,000	100,000	100,000	120,000	
Number of small Renewable Energy projects developed	8	10	01	10	10	05	
Number of new conections	Not reported	20,000	Not reported	20,000	20,000	20,000	
-Additional hydropower generation capacity	Not reported	18 MW	Not reported	93 MW	147 MW	100MW	
Vote Function Cost (UShs bn)	N/A	466.067	N/A	<u>446.675</u>	434.816	193.520	
VF Cost Excluding Donor	120.560	158.315	47.845	<i>131.315</i>	N/A	N/A	
Vote Function:0302 Large Hydro po	wer infrastructui	re (Energy Fun	<i>d</i>)				
Additional large hydro power plants	0	N/A	0	1	1	1	
Number of feasibility studies undertaken	0	4	1	2	2	2	
Vote Function Cost (UShs bn)	109.280	191.280	0.000	3.320	191.280	208.083	
Vote Function:0303 Petroleum Explo	oration, Develop	ment & Produc	tion				
- Geological & Geochemical surveys undertaken	15	10	Not reported	10	10	10	
- Number of National Expertise departments for Oil & Gas developed	20	4	6	2	6	б	
Vote Function Cost (UShs bn)	<i>N/A</i>	15.546	N/A	<u>19.498</u>	26.054	131.191	
VF Cost Excluding Donor	3.763	7.024	2.536	7.024	N/A	N/A	
Vote Function:0304 Petroleum Supp	ly, Infrastructur	e and Regulatio	on				
Number national reserves of fuel reserves operational	1	1	0	1	2	4	
- Number of studies on petroleum refinery and processing	0	2	1	2	2	1	
- Number of KMs of oil pipeline completed.	Not reported	225	0	225	800	1000	
- The capacity of fuel depots completed (Millions of litres)	0	30 Mn	0	10 Mn	20 Mn litres	40 Mn litres	
Vote Function Cost (UShs bn)	0.653	0.938	0.330	0.938	1.135	1.927	
Vote Function:0305 Mineral Explore	tion, Developme	ent & Productio	on				
Amount of Non Tax Revenue generated (UGX billion)	3.3	6.03	2.01	6.2	7	8	
-Number of mining site inspections	Not reported	6	6	8	12	12	
-Number of artisans licenced	Not reported	600	175	<u>600</u>	600	700	
Vote Function Cost (UShs bn)	N/A	23.856	N/A	10.786	16.051	1.823	
VF Cost Excluding Donor	1.325	2.489	0.428	1.489	N/A	N/A	
Vote Function:0349 Policy, Planning							
Vote Function Cost (UShs bn)	1.100	1.244	0.420	1.243	1.663	2.377	
Cost of Vote Services (UShs Bn) Vote Cost Excluding Donor	N/A 236.680	698.931 <i>362.190</i>	N/A 51.558	482.460 142.009	670.999 N/A	538.922 N/A	

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Cost of Sector Services (UShs Bn)	N/A	698.931	N/A	482.460	670.999	538.922
Sector Cost Excluding Donor	236.680	362.190	51.558	142.009	N/A	N/A

* Excludes taxes and arrears; NB Table S5.1 at the end of this section provides more details of outputs planned for 2009/10 and achievements in the first half of 2008/09

2010/11 Planned Outputs

Energy Planning, Management & Infrastructure Development:

The construction of the Bujagali Hydro power project (250MW) will continue as scheduled with the first turbine expected to be complete. The sector will ensure commencement of the new feasibility study for the development of the Karuma Hydro power project (about 700 MW) as well as the feasibility study for development of Isimba hydro power project (100MW). Complete the RAP for Nkenda - Mbarara. Draft Sustainable Management Plan for Kalagala Offset in place. Put in place the Energy Conservation Act and Principles.

Under renewable energy, the sector will disseminate information on the use of biogas, improved efficiency stoves to cater for the rural energy requirement and production of electricity from municipal waste and sale of power to the grid. Dissemination of 200,000 household stoves and 200 institutional stoves in order to reduce wood fuel requirements by 30%. Dissemination of 200 solar PV and 100 solar water heaters. Construct 5000 bio-gas digesters; 40 institutions will be electrified with solar PVs . Completion of Bwindi MHP, Suam (Bukwa) and Fofo (Moyo) and finalise the feasibility study for Nyalit. The sector will also finalise the development of other renewable energy projects which are currently under construction namely: Mpanga 18MW small hydropower project in Kamwenge district, Buseruka 10MW small hydropower project in Hoima District, Ishasha 6MW in Kanungu District. Government is still working on the cross boarder issues with Tanzania for the construction of Kikagati 10MW project.

In the F/Y 2010/11, government will complete the upgrading of the Tororo-Lira transmission line, feasibility studies for Karuma - Kampala and Karuma - Lira transmission lines; rehabilitation of MHP Maziba, upgrading Entebbe-Mutundwe, grid extension West Nile to Pakwach and Koboko, Olewa and Mvepi MHP. Plans for a high voltage transmission line (132KV) from Opuyo (Soroti) to supply Katakwi, Moroto, Katikekile, Amudat, Nakapiripirit and Namalu shall commence. Furthermore, the extension of Gulu-Adjumani-Moyo line shall be implemented.

The sector will ensure promulgation of regulations and codes required to operationalise the Atomic Energy Act 2008. Establish a national programme for radiological protection of workers occupationally exposed to radiation. Update the inventory of nuclear and radioactive materials and security categorisation of radioactive sources in Uganda. Establishment of a National strategy for managing radioactive materials.

Petroleum Exploration and Development:

The Vote Function will spearhead the implementation of the Early Production Scheme (EPS) in form of an Integrated Power Project (IPP) which will use gas generated from the Nzizi discovery in Kaiso – Tonya and crude oil from Extended Well Testing (EWT) to produce power. Promotional packages and web based promotion will be developed. Four (4) international conferences will be attended and at least 1 PSA signed. Acquisition of 200 line km of geophysical data.

Geological and geochemical mapping of 50 sq.kms in the Albertine Graben will be carried out. The petroleum law will be formulated and regulations and guidelines developed for the upstream activities. Creation of new institutions like the Petroleum Authority, Directorate of Petroleum and the National Oil Company will commence and new management will be put in place for commencement of petroleum production, refining and utilisation. Exploration drilling will continue to be carried out in Exploration Areas 1, 3A, 4B and 5. Appraisal programs including acquisition of 3D seismic data and drilling of appraisal wells will be carried out in EA1 and EA2. Development planning will continue for the Kingfisher and Mputa fields and will commence for the Kasamene field. Integrated Power Project, using gas from Nzizi

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field and crude oil from extended well testing will commence. A taskforce for the dissemination of information and communication strategy for the oil and gas sector will be established. Procurement of office equipment, computers, printers and software maintenance will be done. During the FY2010/11, the following activities shall be key priorities for the Petroleum exploration sub-sector:

i) Promotion of the country's petroleum potential and licensing, through enhanced data management system and resource assessment

ii) Initiate and formulate petroleum policy and legislation

iii) Capacity Building for the oil and gas sector

iv) Monitoring Upstream Petroleum Activities

v) Development and Implementation of a Communication strategy for the Oil and Gas Sector in the country.

Vi) Participate in Regional initiatives

vii) Assist Petroleum Refining programs.

A legal framework for midstream activities will be developed and a well defined midstream organizational structure developed. Regulations developed for operations of refineries as well as an operational monitoring system for refineries.

Under the petroleum Supply sub-sector (Down stream), Government plans to acquire a robust NPIS data processing system. In addition, it is planned that 15 new companies and 18 new stations will be licensed. Complete land evaluation and acquisition from Malaba - Kampala and start construction of the oil pipeline. EPS agreements finalized and implementation starts.

Under Geological survey and mines, the sector will continue the licensing of mineral exploration and mining and attraction of investors. Continued monitoring of mining activities in the country and training of small artisanal miners.

Medium Term Plans Energy Sub-sector

On Electricity Generation Capacity, following the acute power shortages that the country experienced in 2006, which was largely caused by the prolonged draught and delays in developing a new hydropower project, government formulated and implemented a short, medium, and long term strategy for meeting the country's electricity supply needs. The strategy which was instituted to address this problem has resulted into a marked improvement in the supply situation. Load shedding, which had affected several sectors of the economy, has been significantly contained. In the FY 20010/11, Government will continue implementing key priority projects in the Energy Sector. These include the development of new generation and transmission infrastructure, and increased access to modern energy services through Rural Electrification.

On the development of generation and transmission infrastructure, government will largely focus on supervising the completion of the Bujagali Hydropower project; accomplish a detailed feasibility study of the expanded Karuma Hydropower project, and promote the development of other large scale hydropower projects like Isimba, and Ayago as well as thermal power generation using locally produced gas and oil products. On the issue of the transmission infrastructure, government has embarked on the Bujagali Interconnection project; Mbarara – Nkenda 132 Kv line; Kaiso Tonya – Fortportal – Nkenda 132 Kv line; Opuyo – Moroto 132 Kv line; Karuma – Kawanda 400 Kv line; Karuma – Oluiyo 132 Kv line; Tororo –Opuyo – Lira 132 Kv line; and Mutundwe – Entebbe 132 Kv line. A 33 Kv distribution line will be constructed from Mbale – Nakapiripirit - Moroto. Other Regional interconnection projects are; Bujagali – Tororo – Lessos (Kenya) 220 Kv line; Mbarara – Mirama – Birembo (Rwanda) 220 Kv line; Masaka – Mwanza (Tanzania) 220 Kv line; Nkenda – Beni – Rutshuru and Beni – Bunia 220 Kv (DRC) These projects will have a lasting impact in addressing the energy supply problems in the country, while at the same time addressing energy pricing issues.

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Petroleum Supply, Infrastructure & Regulation

- i) Petroleum Policy Development, Regulation and Monitoring
- ii) Management and Monitoring of petroleum supply Industry
- iii) Maintenance of National Petroleum Information System
- iv) Operational Standards and laboratory testing of petroleum products
- v) Development of Petroleum Refinery and Processing
- vi) Kenya Uganda Rwanda Oil pipelines
- vii) Development of Strategic National Petroleum Reserves

Mineral Exploration, Development & Production

- To provide basic geo-scientific information for the development of the mineral sector.

- To train and retain professional and skilled human resource.
- To promote optimal use of minerals and mineral trade for social improvement of the people.
- To provide technical services in the field of geosciences to guide national planning and development.
- -To ensure best mining practices and accountability.
- To promote mineral value addition and trade to increase revenues.

- To promote the gazetting of geosites and geoparks.Government also plans to put in place an earthquake administration policy, expand the network of operation centres, design an earthquake disaster management plan, and equiping the research laboratories

Unit Costs for Key Services

The costing assumption for power generation varies from small to large hydropower projects. The costs for the small mini hydro ranges between US\$ 3.5 million to US\$ 5 million while for large power projects varies between US\$ 2.1 million to US\$ 4.9 million.

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

Unit Cost Description	Actual 2008/09	Planned 2009/10	Proposed 2010/11	Costing Assumptions and Reasons for any Changes and Variations from Plan
Vote: 017 Ministry of End	ergy and Minera	l Development	t	
Vote Function:0301 Energ	y Planning,Mana	gement & Infra	astructure Dev	't
Unit cost per MW of Renewable Energy projects	0	2,307,692	3,000,000	The costs for the small mini hydro ranges between US\$ 3.5 million to US\$ 5 million. Buseruka(10MW), Mpanga(18MW) & Ishasha (6MW) Expected by June 2010. - Costs of materials vary overtime. - Cost vary for different locations and geology features
Unit cost per KM of Rural Electrification lines covered	not reported	62,621	62,621	Cost per kilometre of distribution and transmmission line varies between US\$ 25,000 to US\$ 35,000. Cost variation due to: - - Varrying cost of materials overtime - Differnces in places of origin for the materials
Vote Function:0302 Large	Hydro power inf	rastructure (Er	ergy Fund)	
Unit cost per MW generated	not reported		7,063,000	The costs for large power projects varies between US\$ 2.1 million to US\$ 4.9 million.

(iii) Plans to Improve Sector Performance

Energy Planning, Management & Infrastructure Development

Government will continue implementing key priority projects in the Energy Sector specifically increasing

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the generation capacity and transmission infrastructure; increase / improve access to modern energy services through Rural Electrification and Renewable Energy development.

Petroleum Exploration and Promotion

Oil and Gas Policy

The National Oil and Gas Policy which was approved by Cabinet in January 2008 provides the guiding principles in the petroleum value chain and institutional framework for prudent management of resources and oil revenues. The principles of the oil and gas Resource Management law which were submitted to Cabinet were also approved and cabinet asked the Ministry of Justice and constitutional Affairs to commence preparation of draft bill. Special attention is also drawn in areas of environmental protection and conservation, Occupation Health and Safety, Infrastructure development like roads and physical planning among others.

Implementation of the National Oil and Gas Policy requires strong coordination since development of the oil and gas sector requires a multi-sectoral approach. While the Energy and Mineral Development sector is moving the coordination process forward, other government institutions/Agencies should fulfill their mandates and implement their roles for the success of the oil and gas sector. The roads sector is very important particularly the roads which are critical to the Exploration Areas. The Ministry of Works and Transport should embark on the following routes that ease access to exploration areas namely :- Tonya -Kaiso via Kisinja camp (21 kms); Kabwoya game reserve gate - Kyehoro - Kaiso (15 kms); Katunguru to the Bwambara - Rukungiri Y-junction (56 kms); from the Y-junction to Kihihi junction (24 kms) inclusive of the badly corroded Kaizi bridge; the Pakwach to Rhino Camp route (84 kms) or the Okello to Rhino route (52 kms) inclusive of the four bridges in this area which need immediate strengthening and a road directly across the Balala swamp (30 kms) or north from Biliefe to Noko to Obongi (92 kms). The other roads for enhancing oil development and tourism are in the Western Rift Valley Zone namely Ishasha -Katunguru (86 kms); Rukungiri - Kigezi WR - L.Edward fishing village (51 kms); access roads to fishing villages from the main road i.e. Kasenyi (12 kms), Hamukungu (17 kms), Kahendero (20 kms); access road to Mweya and Katwe(55 kms); Kyegegwa-Katonga-Kamwenge-Fort Portal (139 kms); Kamwenge-Rwimi (54 kms); Kasese-Nyakalengijo (18 kms); Fort Portal -Bundibugyo-DRC border (90 kms); Karugutu-Ntoroko (49 kms); Karugutu-Rwebisengo-Ntanda (66 kms) while the Kigezi Tourism zone routes are Kisoro-Mgahinga National Park headquarters (13 kms); Access road to Ntebeko (36 kms); Kabale-Ruhija-Buhoma (49 kms); Butogota-Kihihi (17 kms); Rukungiri-Kihihi-Ishasha (68 kms); and the Murchison Falls zones are:- Kyenjojo-Hoima (137 kms); Kabwoya-Hoima (51 kms); Hoima-Masindi (52 kms); Hoima-Para (106 kms); Masindi-Para (63 kms); Para-the Falls site (10 kms); Para-Packach (26 kms); Para-Karuma (92 kms); Packach-Ajai-Arua (94 kms); Nebbi-Ajai (29 kms); Ajai-Rhino Camp-Arua (79 kms) and Adjumani-East Madi (37 kms).

Petroleum Supplies and Distribution

Midstream Activities

The discovery of the petroleum reserves in the Albertine Graben necessitated the fast-tracking of the production activities and consquent refining of the crude. In this respect, a Midstream Unit was established to specifically promote, monitor and regulate the midstream petroleum activities (crude oil sales, crude oil transportation, refining and pricing of locally refined products). Over the medium-term, priority will be put in developing capacity of this Unit among others.

Strategic Fuel Reserves; in addition to Jinja Storage Tanks, Government plans to build four new regional storage facilities in Nakasongola, Gulu, Mbale and Kasese. Government will stock these facilities to ensure that the country's fuel security is assured. The storage facilities will be integrated in the country's pipeline

Sector Summary

network with the intention of linking them to Albertine Graben oil fields in western Uganda.

Mineral Exploration, Development & Production

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

Table S2.4: Specific 201	0/11 Actions and Medium	Term Strategy to Impro	ve Sector Performance
2009/10 Planned Actions:	2009/10 Actions by Dec:	2010/11 Planned Actions:	MT Strategy:

2009/10 Planned Actions:	2009/10 Actions by Dec:	2010/11 Planned Actions:	MT Strategy:
Sector Performance Issue: D	ifficulty in accessing development	nt finance by the Private sector	
Vote: 017 Ministry of Energy	and Mineral Development		
Vote Function: 0301 Energy F	Planning,Management & Infrastru	cture Dev't	
Attract/ encourage private sector participation.	Private sector participation has been promoted especially in the areas of increasing Hydro Power generation capacity eg Bujagali, Bugoye, Mpanga, Ishasha, Buseruka and many other small dams.	- Set up a company (Uganda Energy Company) to promote and develop funding options for energy projects.	- Support the Uganda Energy Company to promote investment in energy busines.
Vote Function: 03 02 Large Hy	vdro power infrastructure (Energy	Fund)	
Attract Development Finance	More efforts have been geared towards Attraction of Development Finance espcially through the PPP arrangement to build big dams such as Karuma, Ayago, Isimba	Build the Energy Investment fund to provide government equity in partnership with the private sector.	Energy Fund utilised in partnership with the Private sector.
- Fasttrack the study and the development of large hydro power projects.	Feasibilty study for Karuma (700MW) and Isimba (100MW) in Progress which will lead to the proper deisgn and construction of the dams	Continue supervising the development of Bujagali hydro power project Achieve finacial closure for Karuma Power Project Package Isimba Power Project for development	Undertake the development of Karuma and other hydro power projects.
Sector Performance Issue: H	ligh electricity generation costs a	and energy loss levels	
Vote: 017 Ministry of Energy	and Mineral Development		
Vote Function: 03 02 Large Hy	dro power infrastructure (Energy	Fund)	
- Compensate for land acquisition for new power projects.	Compensate for land acquisition for new power projects shall be after the feasibility studies now in progress.	Compensate land owners for the development of transmission lines	Undertake construction of power transmission and distribution infrastructure
Sector Performance Issue: In	nadequate Fuel Reserves		
Vote: 017 Ministry of Energy	and Mineral Development		
Vote Function: 03 04 Petroleur	m Supply, Infrastructure and Regu	lation	

Sector Summary

2009/10 Planned Actions:	2009/10 Actions by Dec:	2010/11 Planned Actions:	MT Strategy:
- Kenya-Uganda oil pipeline construction commences -Reactivate the southern route	-RAP and Compensation for Land to pave way for the Kenya-Uganda oil pipeline construction yet to start -Reactivation of the southern route is underway after assessment of the cost of transportation	 Continue dialogue with Government of Kenya Expedite the development of the Kenya - Uganda Oil Pipeline 	 Complete and commission the Kenya-Uganda oil pipeline. Work out modalities for using the southern route Develop and stock the fuel reserves and connect them to the pipeline network. Develop and utilise national strategic reserves
Present a budgetary request for restocking	Presented a budgetary request MoFPED for refurbishing , construction and stocking 4regional reserves. GoU also initiated a procurement process for PPP arrangement with to run the Jinja Storage Tanks(JST)	 Develop regional fuel resrves Capacity building 	Continued Restocking Capacity building
Sector Performance Issue: Lo	ow access to modern energy serv	vices	
Vote: 017 Ministry of Energy	and Mineral Development		
Vote Function: 03 03 Petroleum	n Exploration, Development & Pr	oduction	
Strengthen institutional capacity for the oil and gas sector	Technical Staff retrained including some MPs who attended the confrerences on oil and Gas in India and USA	 Present a case for additional funding with the MoFPED Source funding from development partners 	Continued strengthening of the institutional capacity
The commencement of the formulation of the Oil and Gas Resource Management law which will be submitted to Cabinet for approval and thereafter, the drafting of the new law.	Drafting of oil and gas Resource Management bill continued. Two Petroleum Law working group meetings held.	- Enact the oil and gas resource management Law and the Revenue management Law	Continue the implementation of the oil and gas policy

S3 Proposed Budget Allocations for 2010/11 and the Medium Term

This section sets out the proposed sector budget allocations for 2010/11 and the medium term, including major areas of expenditures and any notable changes in allocations.

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

		20	2009/10		MTEF Budget Projections		
	2008/09 Outturn	Appr. Budget	Spent by End Dec	2010/11	2011/12	2012/13	
Vote: 017 Ministry of Energy and Mineral Development							
0301 Energy Planning, Management & Infrastructure Dev't	N/A	466.067	N/A	446.675	434.816	193.520	
0302 Large Hydro power infrastructure (Energy Fund)	109.280	191.280	0.000	3.320	191.280	208.083	
0303 Petroleum Exploration, Development & Production	N/A	15.546	N/A	19.498	26.054	131.191	
0304 Petroleum Supply, Infrastructure and Regulation	0.653	0.938	0.330	0.938	1.135	1.927	
0305 Mineral Exploration, Development & Production	N/A	23.856	N/A	10.786	16.051	1.823	
0349 Policy, Planning and Support Services	1.100	1.244	0.420	1.243	1.663	2.377	
Total for Vote:	N/A	698.931	N/A	482.460	670.999	538.922	
Total for Sector:	N/A	698.931	N/A	482.460	670.999	538.922	

* Excluding Taxes and Arrears

(i) The Total Budget over the Medium Term

In the FY 2010/11, the overall budgetary allocations to the Sector is UGX 499.167 Bn, of which UGX 1.88 Bn is Wage Recurrent, UGX 6.17 Bn is Non Wage Recurrent, UGX 133.96 Bn is Domestic Development, while UGX 340.45 Bn is donor development funding. It is therefore important to note that the budgetary

Sector Summary

allocations for wage remained the same as for the FY 2009/10, while the non-wage recurrent component increased by UGX 3 Bn.

(ii) The major expenditure allocations in the sector

The vote function for Energy Planning, Management and Infrastructure Development has the largest budgetary allocation within the sector amounting to UGX 446.67 Billion which is 93% of the total sector budget. This is followed by the vote function for the Petroleum Exploration, Development & Production with UGX 19.48 Billion which represents a share of 4% percent of the total sector budget. The other vote functions have the balance shared amongst themselves.

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

The total sector budgetary ceiling for the FY 2010/11 is UGX 482.46 bn compared to UGX 698.93 bn for the FY 2009/10, this reduction is due to the non allocation to the Energy Investment Fund and Mputa Interconnection project, which contributed approximately 60 percent of Government allocation to the sector. The wage and non-wage recurrent budgets have remained the same as for the FY 2009/10 allocations. Over the Medium term, there is no provision for the Energy Investment Fund. This is a critical ommission, especially given the development in Karuma power project. Major reallocations from last financial year, in addition to justifications and the impact this will have on performance are reflected in the table below:

Proposed changes in 2010/11 Allocations and Outputs from those planned for in 2009/10:	Justification for proposed Changes in Expenditure and Outputs
Vote: 017 Ministry of Energy and Mineral Develop	oment
Vote Function:0353 Energy Planning, Management &	
Output: 03 01 53 Cross Sector Transfers for EF	
	This amount will be transferred to other government institutions
Transfers to other implementing agencies for scaling up ERT 2	implimenting ERT phase 2
Vote Function:0372 Petroleum Exploration, Developm	nent & Production
Output: 03 03 72 Government Buildings and Ad	
	The donor development budget under which the item was budgeted for
Completion of the construction of the Administration	
block and Laboratory buildings.	put under unfunded priorities. This amount is the cost of building office
	accommodation and laboratory space under the oil and gas policy
This provision is not in the MTEF allocation. It was	implementation
tool error.	
Vote Function:0304 Petroleum Exploration, Developm	nent & Production
Output: 03 03 04 Monitoring Upstream petrole	
Change in Allocation (UShs Bn) 2.234	This increased allocation is in view of the new discovery wells being made
Extended well flow test to commence during	in the sector. In addition, it is planned that extended well flow test will be
FY2010/11	undertaken.
Vote Function:0305 Energy Planning,Management &	Infrastructure Dev't
Output: 03 01 05 Atomic Energy Promotion and	
	Monitoring and regulation of Atomic energy application and use will be
The operations of the Atomic Energy Council,	stepped up
especially increased monitoring of the applications of	
atomic energy will be undertaken	
Vote Function:0303 Energy Planning, Management &	Infrastructure Dev't
Output: 03 01 03 Renewable Energy Promotion	
• · · · · · · · · · · · · · · · · · · ·	The donor component of this output is scheduled to close at the end of FY
It is hoped that this output will be achieved under	2010/11. The output is planned to be achieved under the framework of ERT
ERT 2	2.
Vote Function:0302 Mineral Exploration, Developmen	nt & Production
Output: 03 05 02 Institutional capacity for the	
	The capcity development was largely being undertaken using donor
The Instutional capacity development was largely	development funding. This funding will be closing.

Table S3.2: Major Changes in Sector Resource Allocation

Sector Summary Proposed changes in 2010/11 Allocations and Outputs from those planned for in 2009/10:	Justification for proposed Changes in Expenditure and Outputs
undertaken using donor funding, in the medium ter	
his funding is decreasing.	
ote Function:0372 Energy Planning,Managemen	at & Infrastructure Dev't
Dutput: 03 01 72 Government Buildings and	
	995 The cost of the Feasibility studies for Karuma has already been provided
The cost of the Feasibility studies for Karuma has	for during the FY 2009/10
lready been provided for during the FY 2009/10.	
/ote Function:0375 Petroleum Exploration, Devel	lopment & Production
Dutput: 03 03 75 Purchase of Motor Vehicle	
	450 This was an error in the tool. This has since been corrected.
The donor funding of UGX 10 Billion was erroned	bus.
Vote Function:0372 Large Hydro power infrastrue	cture (Energy Fund)
Dutput: 03 02 72 Government Buildings and	
Change in Allocation (UShs Bn) -11.	<mark>.680</mark> The cost of the feasibility study for Karuma has already been provided for
The cost of the Feasibility studies for Karuma has	during the FY2009/10
lready been provided for during the FY 2009/10	
Vote Function:0303 Mineral Exploration, Develop	oment & Production
	lopment, production and value-addition promoted
	030 This output has largely been achieved. The funding was largly donor
This output has largely been achieved, the funding	development.
vas largely donor development.	- However, the Airborne data requires interpretation and desssimination to investors, More geochemical & seisimic surveys, digitalising all survey maps equipment and promtion of the minerals to potential investors. This funding gap still exists
Vote Function:0352 Energy Planning,Managemen	
Dutput: 03 01 52 Thermal and Small Hydro	
	133 Cheaper sources of energy from renewables and HFO are planned to
The change will not reduce the energy supply, rath	
t is planned that cheaper energy options will come	
on board especially from renewables and HFO	
Vote Function:0304 Energy Planning,Managemen	
Output: 03 01 04 Increased Rural Electrific	
	998 The donor component is expected to reduce. This call for increased
The reduction is largely donor contribution.	government budgetory allocation to this output
Iowever, it is hoped that government allocation w be increased for the achievement of this output	ш
Vote Function:0351 Large Hydro power infrastruc	atura (Fnarmy Fund)
Dutput: 03 02 51 Increased power infrastruct	
	280 There is no provision for the Energy Investment Fund for the MTEF period
No provision for the Energy Investment Fund for t	
MTEF period	
* Excluding Taxes and Arrears	

* Excluding Taxes and Arrears

S4: Sector Challenges for 2010/11 and the Medium Term

This section sets out key outputs in 2010/11 and the medium term which the sector has been unable to fund in its spending plans.

Challenges in the Energy Sector

High costs of power generation remains a major challenge to the sector.

The fluctuating / unpredictable international oil prices have a heavy impact on the power tariff. This is a cardinal issue which, for the time being, should be addressed through frugal and efficient use of the available electricity.

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Power system losses both technical and commercial are another challenge to the sector. Currently, the losses stand at about 35 percent. The technical losses are being addressed through rehabilitation and refurbishment of the distribution line network. However the commercial losses which are primarily caused by power thefts pose the biggest threat to the electricity industry in the country.

Over the years there has been poor regulation of atomic energy applications in the country, this has been mainly due to insufficient funding.

Challenges in the Petroleum Exploration and Development

The increase in operations for the oil companies are overstretching the existing manpower to the extent of undermining the efficient delivery of results. However, efforts are underway to expand PEPD but the expansion will be limited by the available office accommodation as well as manpower.

Implementation of the National Oil and Gas Policy requires strong coordination since the development of the oil and gas infrastructure and institutions requires a multi-sectoral approach. While the Ministry of Energy and Mineral Development is spearheading the coordination process forward other government institutions have serious human and financial constraints to implement their roles. Special attention is needed in areas of environmental protection and conservation, Occupation Health and Safety, Infrastructure Development like roads and Physical planning among others.

Challenges in the petroleum supply chain

The over reliance on the Kenyan route sometimes pauses a big challenge to the entity. The Tanzanian route, however, has not been in use for a long time and oil companies are reluctant to use it due to its limited infrastructure facilities and also being more expensive. The main challenge remains putting in place the necessary modalities to ensure that the southern route remains active.

Access to Development Finance; the sector has largely been faced with a slow process of leveraging private financing by Development Finance Institutions (DFIs). While government welcomed private sector investments to provide the necessary financing for electricity supply, the DFIs carry out time consuming project reviews which usually delay the projects and may totally derail their implementation.

The delay by Development Partners(Donors) in meeting their obligations sometimes delays the process of project implementation due to unnecessary conditionalities.

Table S4.1: Additional	Output Funding Requests

astructure Dev't
er Components)
e Atomic Energy Council is already operating. There needs to be a ovision for staff salaries, training and operations of the Atomic Energy ouncil and the Nuclear Energy Unit
Regulation lation and Monitoring
is activity is in line Objective 8 of NDP under Oil and Gas sector. PSD newly established Department, new staff have been recruited and need ecialized training in downstream related field to handle the activities of e sector effectively. The staff of the mid stream unit require training the ld of midstream
o n l i i i i i i i i i i i

Sector Summary

Additional Requirements for Funding and Outputs in 2010/11	Justification of Requirement for Additional Outputs and Funding
Funding Requirement (UShs Bn):200.000- Supervision of payments of project affected persons- Supervision of construction works- Joint co-ordination meeting financing	This activity is in line with objective 7 of NDP. The project in this financial year will be in development phase .The current ceiling can not finance the outlined activities.
Output: 0304 03 Maintainance of National Petrole	um Information System
Funding Requirement (UShs Bn):0.150Development of NPISSubscription to at least one international journal e.gPLATTS	This is in line with objective 6. The current allocation can not develop and subscribe to PLATTS. To effectively monitor the oil companies there is need to have a strong database.
Vote Function:0305 Mineral Exploration, Development	t & Production
Output: 0305 05 Licencing and inspection	
Funding Requirement (UShs Bn):0.800This is for increased field inspection, seismologyequipment and operations; and staff development	Additional resources are essential to enhanced generation of Non-tax revenue.

S5: Details of Key Vote Function Outputs Planned for 2009/10

This table below sets out the key outputs under every vote function achieved in the first half of 2009/10 and planned for 2010/11.

Table S5.1: Past and 2010/11 Planned Outputs from Sector Expenditures

Vote, Vote Function Key Output	Approved Budget and Spending a Planned outputs Achieved b				2010/11 Proposed Budget a Planned Outputs	und
Vote: 017 Ministry of Energ	y and Mineral Dev	velopment				
Vote Function: 0301 Energy	Planning,Manage	ment & Infras	tructure Dev't			
Output: 030101 Energy Policy/Plans Dissemination, Regulation and Monitoring	Present the Energy efficiency Bill to Parliament. Sustainable Management Plan for Kalagala in place. ERT11 role out.		Preparation of the EE Bill in Process. Recruitment of the PCU Staff in Process. Draft Sustainable Management Plan in Place - Principles for the Energy Conservation Law developed. Development of the PSIP is process		Principles for the E Efficiency Bill done the PSIP	
Output Cost:	UShs Bn:	1.061	UShs Bn:	N/A	UShs Bn:	0.913
Output Cost Excluding Donor	UShs Bn:	0.294	UShs Bn:	0.106	UShs Bn:	0.913
Output: 030102 Energy Efficiency Promotion	Promortion of energy efficiency technics		Energy Audits completed in NWSC, 100 Schools& Colleges, 6 Universities, 10 Industries, 20 Public Buildings, KCC Street Lighting, 25 Regional Hospitals		Energy Audits com institutions and ind	
Output Cost:	UShs Bn:	3.203	UShs Bn:	N/A	UShs Bn:	2.572
Output Cost Excluding Donor	UShs Bn:	0.382	UShs Bn:	0.138	UShs Bn:	2.572
Output: 030103 Renewable Energy Promotion	Disseminate 200,000 household a stoves, 200 institutional stoves, 200 solar PV and 100 solar water heaters. Development of pico and micro hydropower generation projects.		-Renewable Ene promoted espec home systems a 50,000improved 38 institutional disseminated3 Home Systems, Institutional Sol	ially 40 solar nd 1 household and stoves 360 Solar 35SMEs and 17	Disseminate 200,00 stoves, 200 instituti 200 solar PV and 1 water heaters. Deve micro hydropower g projects.	onal stoves, 00 solar lop pico and
Output Cost:	UShs Bn:	2.299	UShs Bn:	N/A	UShs Bn:	0.587
Output Cost Excluding Donor	UShs Bn:	0.367	UShs Bn:	0.128	UShs Bn:	0.587

		200	2010/11			
Vote, Vote Function Key Output	Approved Budget and Planned outputsSpending and OutputsProposed BudgetPlanned outputsAchieved by End DecPlanned Outputs			and		
Output: 030104 Increased Rural Electrification			33kV power line done Kawete - Itanda and Bugiri - Iwemba 33 kV power Lines completed Consultant for		Electrification of d headquaters - ERT	
Output Cost:	UShs Bn:	63.928	UShs Bn:	N/A	UShs Bn:	24.930
Output Cost Excluding Donor	UShs Bn:	18.762	UShs Bn:	5.920	UShs Bn:	24.930
Output: 030105 Atomic Energy Promotion and Coordination	Capacity for nucle program built- Re and codes of conc to operationalize Energy Act 2008 promulgated,Nati programme for ra protection worker occupationally ex radiation establish	gulations luct required the Atomic onal diological s posed to	 Capacity for nu programme build Regulations and conduct required operationalize the Energy Act 2008 Promulgated Le sponsored techni projects coordinal 	ling in process. d codes of to e Atomic AEA cal cooperation	Capacity for nuclea program built, The Energy Act 2008 operationalised, Na programme for rad protection workers occupationally exp radiation implemen	Atomic ational iological osed to
Output Cost:	UShs Bn:	0.080	UShs Bn:	0.023	UShs Bn:	1.080
Output: 030151 Membership to IAEA	Biuld capacity for nuclear programme. Promulugate regulations and codes of conduct required to operationalise the Atomic Energy Act 2008. Establish National programme for radiological protectionof workers whose occupations exposed.		- National programme for radiological protection workers occupationally exposed to radiation established Inventory of nuclear and radioactive materials and security categorization of radioactive sources in Uganda updated continuously.		Annual subscriptio made	
Output Cost:		0.030	UShs Bn:	0.003	UShs Bn:	0.030
Output: 030152 Thermal and Small Hydro Power Generation (UETCL)	A topping plant to HFO for electricit		A gas processing plant to be built at Nzizi field in Kaiso - Tonyafor Gas Production		Dual Generators to ,crude oil and HFC electricity generation) for
Output Cost:	UShs Bn:	390.234	UShs Bn:	N/A	UShs Bn:	369.101
Output Cost Excluding Donor Output: 030153 Cross Sector Transfers for ERT (Other Components)	UCC: 800 PP in 1 subcounties, Inter district Headquart	net PoPs at ers, 7 MCTs	UShs Bn: Nil - No expendi December 2009.		UShs Bn: UCC: 800 PP in 15 subcounties, Intern district Headquarte	et PoPs at ers, 7 MCTs
Output Cost: Output: 030175 Purchase of Motor Vehicles and Other Transport Equipment	UShs Bn: 0.000 Purchase 6 motor vehicles				UShs Bn: Purchase 6 Motor	
Output Cost:		0.400	UShs Bn:	0.000	UShs Bn:	0.400
Vote Function Cost VF Cost Excluding Donor	UShs Bn: UShs Bn	474.067 158.315	UShs Bn: UShs Bn	N/A 47.845	<mark>UShs Bn:</mark> UShs Bn	446.675 131.315
					Sous Dit	
Output: 030251 Increased power generation - Largescale Hydro-electric	<i>Lydro power infrastructure (Ener</i> Utilise the energy fund for development of approved priority generation and transmission projects		Consultant to do study for Karuma		- Complete feasibil Karuma - Procure o for Karuma	
Output Cost:		176.280	UShs Bn:	0.000	UShs Bn:	0.000

Vote, Vote Function Key Output	Approved Budget and2009/10Planned outputsSpending and OutputsAchieved by End Dec			2010/11 Proposed Budget an Planned Outputs	nd	
Vote Function Cost	UShs Bn:	191.280	UShs Bn:	0.000	UShs Bn:	3.320
Vote Function: 0303 Petroleu	um Exploration, De	evelopment &	Production			
Output: 030301 Promotion of the country's petroleum potential and licensing	based materials developed. Four international conferences attended and PSA signed. Acquisition of new and infill geological and geophysical data		Analysis and pro (gravity) data ac Tullow Oil in E <i>A</i> undertaken. Pron Brochure update printed. Building Departmental E <i>x</i> Production (E&B commenced.	quired by A1 and EA2, notional d; 200 copies g of the sploration and	Acquire 200 line km Geophysical data. Geological and geocl mapping of 50 sq. km Albertine Graben. Pr packages updated. For international confere attended.	hemical n in the omotional our
Output Cost:	UShs Bn:	0.370	UShs Bn:	0.097	UShs Bn:	0.814
Output: 030302 Initiate and formulate petroleum policy and legislation	Petroleum Law for regulations and gu developed for upst	idelines	Principles of the Law approved. I and gas bill cont	Drafting of oil	Regulations and guid the upstream activitie developed. Petroleum Enacted. Revised M PSA put in place.	es n Law
Output Cost:	UShs Bn:	0.140	UShs Bn:	N/A	UShs Bn:	0.470
Output Cost Excluding Donor	UShs Bn:	0.120	UShs Bn:	0.027	UShs Bn:	0.470
Capacity Building for the oil & gas sector	National expertise for oil and gas developed and maintained (20 staff members trained). Creation of new institutions and commencement of production, under the EPS		taff members trained).Allowance for Project worktion of new institutions and mencement of production,paid. Two members of staff commenced Postgraduate		National expertise for the and gas developed and maintained. Creation of new institutions (The Aut Directorate and National ds Company).	
Output Cost:	UShs Bn:	2.797	UShs Bn:	N/A	UShs Bn:	3.322
Output Cost Excluding Donor	UShs Bn:	2.355	UShs Bn:	1.893	UShs Bn:	3.322
Output: 030304 Monitoring Upstream petroleum activities	Drill exploration wells in EA4B and EA5. Drill more appraisal wellsin EA2 and EA3. Acquire more 2D seisimic data in EA3, EA1, EA5 and EA4. Development of and commencement of oil production under the EPS.		Monitor drilling wells in EA4B a Monitor drilling wells in EA1, EA Monitor the acqu seismic data in E EA4B and EA5. drilling of Ngass well in EA2.	nd EA5. of appraisal A2 and EA3A. uisition of more EA1, EA2, Monitored the sa-2 appraisal	Drilling of Ngara-1 a Wairindi-1 wells more Reviewed documenta approval and consent drilling operation. M development of and commencement of pr of power from gas an	nitored. ation for ts while on onitor the roduction ad EWT.
Output Cost:		0.714	UShs Bn:	N/A	UShs Bn:	2.948
Output Cost Excluding Donor Output: 030305 Develop and implement a communication strategy for oil & gas in the country	UShs Bn: Task force for the of information and communication for gas established		UShs Bn: Communities in areas sensistised officials through Radio talk Show Gas Media team place. Familiaris the exploration a members of the l undertaken.	by Government meetings and s. An Oil and has been put in ation trips to ureas for the	UShs Bn: Taskforce for the dist of information and communication strate oil and gas establishe	egy for the
Output Cost:	UShs Bn:	0.090	UShs Bn:	N/A	UShs Bn:	0.070
Output Cost Excluding Donor	UShs Bn:	0.070	UShs Bn:	0.016	UShs Bn:	0.070

Vota Vota Function	Approved Budge		9/10 Sponding and	Outputs	2010/11 Proposed Budget an	d
Vote, Vote Function Key Output	Approved Budget and Planned outputs		Spending and Achieved by Er		Proposed Budget an Planned Outputs	a
Output: 030306 Participate in Regional Initiatives	4 EAC energy committee meetings held on EAPC 2011 preparations				Four EAC Energy Co meetings held Meetin EAPC 2011 preparat	igs on
			a study visit to I as part of EAC i		and conference held.	
Output Cost:		0.190	UShs Bn:	<i>N/A</i>	UShs Bn:	0.209
Output Cost Excluding Donor		0.180	UShs Bn:	0.042	UShs Bn:	0.209
Output: 030351 Transfer for Petroleum Refining (Midstream Unit)	Not Applicable		Unit. Feasibility study for the refinery commenced.		Institutional Capacity Development activiti Feasibility study repo development of an oi Developers and finar the oil refinery project and selected.	es; ort for the l refinery; nciers for
Output Cost:	UShs Bn:	0.400	UShs Bn:	0.126	UShs Bn:	0.654
Output: 030372 Government Buildings and Administrative Infrastructure	Consultancy for th	econd phase on the Second phase on the Onsultancy for the Data Room Consultancy for the Data Room		ommencement of cor of Oil and Gas Data Office accommodation rooms and Core store Periodic maintenance buildings and the sur	Centre, on, meeting e. e of office	
Output Cost:	UShs Bn:	0.050	UShs Bn:	0.000	environment. UShs Bn:	10.576
Output: 030375 Purchase of Motor Vehicles and Other Transport Equipment	Purchase of Vehicles		Procurement and requisitions for the vehicles commenced and the contract is in place.		Three (3) field vehicl	
Output Cost:		10.660	UShs Bn:	N/A	UShs Bn:	0.210
Output Cost Excluding Donor		0.660	UShs Bn:	0.000	UShs Bn:	0.210
Output: 030376 Purchase of Office and ICT Equipment, including Software	Procurement of assorted IT and Office Equipment		Additional comp Geosoft Softwa renewed		Computer hardware, accessories, Commune equipment and softw procured. Computer hardware, Communic equipment and requir software maintained.	are cation
Output Cost:	UShs Bn:	0.045	UShs Bn:	<i>N/A</i>	UShs Bn:	0.035
Output Cost Excluding Donor		0.035	UShs Bn:	0.024	UShs Bn:	0.035
Output: 030377 Purchase of Specialised Machinery & Equipment	Assorted machine equipment purcha		Air conditioners procured. Soxte Laboratory Equi		Laboratory equipmen conditioners and Geo equipment procured.	
Output Cost:		0.065	UShs Bn:	0.050	UShs Bn:	0.165
Output: 030378 Purchase of Office and Residential Furniture and Fittings	Assorted Office E Furniture purchas	orted Office Equipment and niture purchased		rs for newly s procured and ured. nance of aken.	Furniture including F table, Office and Nat Petoleum Data Centr shelves and racks pro Periodic maintainanc furniture undertaken.	ional e cabinets, ocured e of
Output Cost:	UShs Bn:	0.025	UShs Bn:	0.006	UShs Bn:	0.025
Vote Function Cost VF Cost Excluding Donor	UShs Bn: UShs Bn um Supply, Infrast	17.546 7.024 tructure and R	UShs Bn: UShs Bn egulation	N/A 2.536	UShs Bn: UShs Bn	19.498 7.024
Vote Function: 0304 Petrole						
<i>Vote Function: 0304 Petroleu</i> Output: 030401 Petroleum Policy	Legal framework activities in place	for midstream	Draft Bill for va completed and p		Petroleum bill for va addition prepared and	

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Vote, Vote Function Key Output	Approved Budget an Planned outputs		Spending and Outp Achieved by End D	ec	2010/11 Proposed Budget and Planned Outputs	
and Monitoring	structure. Regulatory framework for operations.		Regulatory framework trainees recruited for the ons. Midstream, Statutory Instrument for Fuel Marking and quality Control (2009) issued, Petroleum Supply Regulations 2009 issued		Midstream regulations developed, Lisensing framework for Midstream activities in place, Stakeho sensitised	
Output Cost:	UShs Bn:	0.231	UShs Bn:	0.072	UShs Bn:	0.231
Output: 030402	Petroleum supply ma	rket	102 facilities inspect	ed	Petroleum supply market	
Management and	operations monitored		countrywide, A Publ		operations monitored.	
Monitoring of petroleum supply Industry	Development of biofu promoted. 1 national Operational, 36 stake engaged on fair comp	l reserve holders petition and	Partnership documen developed for hando to Tamoil and submi PPDA A Cabinet p	ver of JST atted to paper on	Development of biofuels promoted. 1 national reserv Operational, 36 stakeholder engaged on fair competition	rs n and
	free Petroleum supply operations.	y market	stimulating supplies Petroleum products Southern route devel	through the	free Petroleum supply mark operations.	rket
Output Cost:	UShs Bn:	0.264	UShs Bn:	0.095	UShs Bn:	0.264
Output: 030403 Maintainance of National Petroleum Information System	Robust data processin acquired. Improved q industry bulletins		Sales data module up Dec 2009 for most o companies is availab data module updated 2009 - Stocks data re produced up to Dec NPI updated and we	il ile. Imports I up to Dec eports 2009	Robust data processing sys operationalised. Improved quarterly oil industry bullet	
			maintained			
Output Cost:		0.076	UShs Bn:	0.028	UShs Bn:	<u>0.076</u>
Output: 030404 Operational Standards and laboratory testing of petroleum products	Finalise petroleum sta Reduce smuggling ar dilution from % to % 15 newcompanies and stations. 100% of pe tested meeting the sta random spot checks of 2 standard guidelines	nd fuel . License d 18 new troleum undards, 48 carried out,	Sample analysis for 3 samples of petroleum carried out - 5 meetin Technical Petroleum held, Fuel marking a control program inau environmental impac assessment/ project b reviewed	n products ngs of Committee nd quality igurated,16 ct	Reduce smuggling and fuel dilution. License 15 newcompanies and 18 new stations. 100% of petroleur tested meeting the standard random spot checks carried	n s, 48
Output Cost:	UShs Bn:	0.256	UShs Bn:	0.100	UShs Bn:	<u>0.256</u>
Output: 030405 Development of Petroleum Refinery and Processing	A petroluem utilisation place. Study report of refining. Study report chemical development	on full scale t on petro nt. 225	concluded for redesi	neme gning.	A petroluem utilisation plat implemented. Studty report full scale refining. Study re on petro chemical develop	on port
	Kms of oil pipeline C	Completed.	Data on refinery dev potential collected, H operation on refining Study on utilisation Uganda completed	Regional co- g promoted,		
Output Cost:		0.055	UShs Bn:	0.016	UShs Bn:	<u>0.055</u>
Output: 030406 Kenya - Uganda - Rwanda Oil pipelines	Law of Kenya and signed. Complete land acquisition and start construction.		Property Valuation reports for the Malaba-Kampala route completed, Review Implementation & Shareholders Agreements completed, District leadership sensitised on pipeline project		Commence the construction the Kenya - Uganda Oil Pip	
Output Cost:		0.055	UShs Bn:	0.019	UShs Bn:	<u>0.055</u>
Vote Function Cost		0.938	UShs Bn:	0.330	UShs Bn:	<u>0.938</u>
Vote Function: 0305 Mineral		-		. •		·
Output: 030501	15 local Government	s sensitized	Four (4) Local Gove	rnments 1n	15 local Governments sense	itized

Vote, Vote Function	Approved Budge	2009/10 Budget and Spending and Outputs			2010/11 Proposed Budget a	and
Key Output	Planned outputs		Achieved by Er		Planned Outputs	
Regulation	on mineral policy	mineral policy regulations Mining Districts of Busia, Kasese, Ntungamo and Bushenyi were sensitized on Mineral policy and regulation		on mineral policy regulations		
Output Cost:	UShs Bn:	0.991	UShs Bn:	N/A	UShs Bn:	0.990
Output Cost Excluding Donor	UShs Bn:	0.216	UShs Bn:	0.070	UShs Bn:	0.990
Output: 030502 Institutional capacity for the mineral sector	15 staff trained at UMI,		4 staff trained at UMI, Kyambogo Univ and local workshops for Geological data management.		15 additional staff UMI, Kyambogo U	
Output Cost:	UShs Bn:	4.630	UShs Bn:	N/A	UShs Bn:	2.776
Output Cost Excluding Donor	UShs Bn:	0.160	UShs Bn:	0.054	UShs Bn:	2.776
Output: 030503 Mineral Exploration, development, production and value-addition promoted	Mineral data base maps in the depard digital format, po- limestone and Be Rukungiri, iron o estimated, Report geophysical mapp grothermal resour Buranga, Bundib	rtment in tential for ntonite in re in Kabale t on ping for rces at	- All maps in the department digitised - mineral commodities database of Uganda established - 4 promotional materials disseminated - 1 report Potential for limestone and bentonite in Rukungiri, Iron ore in Kabale estimated - 50 geophisical samples		Mineral potential e the country	stablished in
Output Cost:	UShs Bn:	13.595	UShs Bn:	N/A	UShs Bn:	1.565
Output Cost Excluding Donor	UShs Bn:	0.574	UShs Bn:	0.171	UShs Bn:	1.565
Output: 030504 Health safety and Social Awareness for Miners	700 trained from 17 strategic mining areas in 13 districts		175 people in 13 Mining Districts in 20 communities located in e.g Kasese, Mubende Ntungamo, Bushenyi, Tororo, Moroto and Mbale		600 more people tr 17 strategic mining districts	
Output Cost:	UShs Bn:	1.070	UShs Bn:	N/A	UShs Bn:	1.070
Output Cost Excluding Donor	UShs Bn:	0.284	UShs Bn:	0.090	UShs Bn:	1.070
Output: 030505 Licencing and inspection	600 artisans licen continuous site ir	spections.	50 investor prog 101 licenses issi inspections (Thi undertaken under consultancies in Sustainable Man Mineral Resource	ued and is activity was er various a the ongoing nagement of	600 artisans license continuous site insj	pections.
Output Cost:	UShs Bn:	0.100	UShs Bn:	N/A	UShs Bn:	0.915
Output Cost Excluding Donor		0.000	UShs Bn:	0.000	UShs Bn:	0.91
Output: 030551 Contribution to international organisation(SEAMIC)	3 workshops/mee by senior staff me ministry		5 staff trained at SEAMIC, 3 workshops and meetings attended by senior staff at SEAMIC.		3 workshops/meeti by senior staff men ministry	
Output Cost:	UShs Bn:	0.170	UShs Bn:	<i>N/A</i>	UShs Bn:	0.170
Output Cost Excluding Donor	UShs Bn:	0.125	UShs Bn:	0.031	UShs Bn:	0.170
Output: 030572 Government Buildings and Administrative Infrastructure	Procurement process of civil works for construction and		Procurement process of civil works for construction and renovation of DGSM offices and laboratories is completed.		Commence constru renovation of DGS and Laboratories	
Output Cost:	UShs Bn:	3.300	UShs Bn:	<i>N/A</i>	UShs Bn:	3.300
Output Cost Excluding Donor	UShs Bn:	0.130	UShs Bn:	0.011	UShs Bn:	3.300
Vote Function Cost VF Cost Excluding Donor	UShs Bn: UShs Bn	24.856 2.489	UShs Bn: UShs Bn	N/A 0.428	<mark>UShs Bn:</mark> UShs Bn	10.786 1.489
Vote Function: 0349 Policy, J	Planning and Sup	-	RFP Rudget est	timates RTTR	REP Rudget estim	ates RTTR

Vote, Vote Function	Approved Budget	2009	9/10 Spending and Out	aute	2010/11 Proposed Budget and	
Key Output	Planned outputs	anu	Achieved by End D		Planned Outputs	
Planning, Budgeting and monitoring	PIP and Performand submitted to MoFP submitted to Parlian Progress reports con and submitted to Of Coordinate and sup preperation of the M progress reports. An production	ED. MPS ment. ordinated PM. ervise the MPS and	PIP and Performance submitted to MoFPE submitted to Parliam Progress reports coo and submitted to OP Coordinate and supe preperation of the M progress reports. An production	ED. MPS nent. rdinated M. ervise the IPS and	PIP and Performance plan submitted to MoFPED. M submitted to Parliament. Progress reports coordinat and submitted to OPM. Coordinate and supervise preperation of the MPS an progress reports. Annual r production	PS red the rd
Output Cost:		0.366	UShs Bn:	0.132	UShs Bn:	0.386
Output: 034902 Finance Management and Procurement	LPOs closed on sys Payment accounts s Assets register com reports submitted to Tenders awarded. S HIV workplace pol implemented	submitted. piled and o AG. Staff trained,	LPOs closed on syst Payment accounts su Assets register comp reports submitted to Tenders awarded. St HIV workplace polic implemented	ibmitted. viled and AG. aff trained,	LPOs closed on system. Payment accounts submitt Assets register compiled a reports submitted to AG. Tenders awarded. Staff tra HIV workplace policy implemented	nd
Output Cost:	UShs Bn:	0.285	UShs Bn:	0.106	UShs Bn:	0.264
Output: 034903 Procurement & maintainance of assets and stores	Asset register comp catered for, reports the AG and tenders	submitted to	Asset register compi catered for, reports s the AG and tenders a	ubmitted to	Asset register compiled, u catered for, reports submit the AG and tenders award	ted to
Output Cost:	UShs Bn:	0.170	UShs Bn:	0.056	UShs Bn:	0.170
Output: 034904 Statistical Coordination and Management	Stakeholders sensit production of harm statistics, statistical disseminated and pa available.	onised data	Stakeholders sensitiz production of harmo statistics, statistical of disseminated and para available.	nised lata	Stakeholders sensitized on production of harmonised statistics, statistical data disseminated and package available.	
Output Cost:	UShs Bn:	0.120	UShs Bn:	0.036	UShs Bn:	0.120
Output: 034905 Management of Human Resource	Vacancies submitte salaries paid, staff t appraisals carried o	rained and	Vacancies submitted salaries paid, staff tra appraisals carried out	ained and	Vacancies submitted and f salaries paid, staff trained appraisals carried out.	,
Output Cost:	UShs Bn:	0.061	UShs Bn:	0.021	UShs Bn:	0.061
and Electricity disputes resolved	Annual Report Published, Policy functions facilitated, contributions to international organisations paid and disputes resolved.		Annual Report Publi Policy functions faci contributions to inter organisations paid an resolved.	llitated, rnational	Annual Report Published, Policy functions facilitated contributions to internatio organisations paid and dis resolved.	i, nal
Output Cost:	UShs Bn:	0.242	UShs Bn:	0.070	UShs Bn:	0.242
Vote Function Cost	UShs Bn:	2.144	UShs Bn:	0.420	UShs Bn:	1.243
Cost of Vote Services: <i>Vote Cost Excluding Donor</i>		5 98.931 362.190	UShs Bn: UShs Bn	N/A 51.558		82.460 42.009