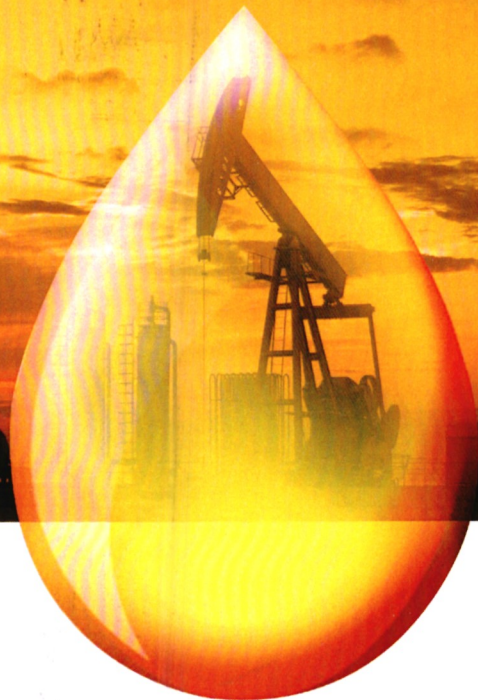
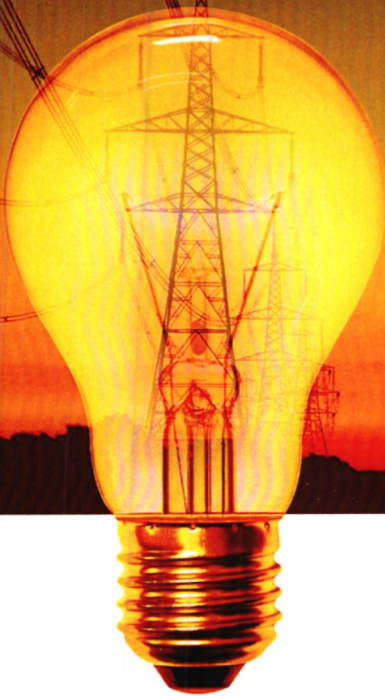


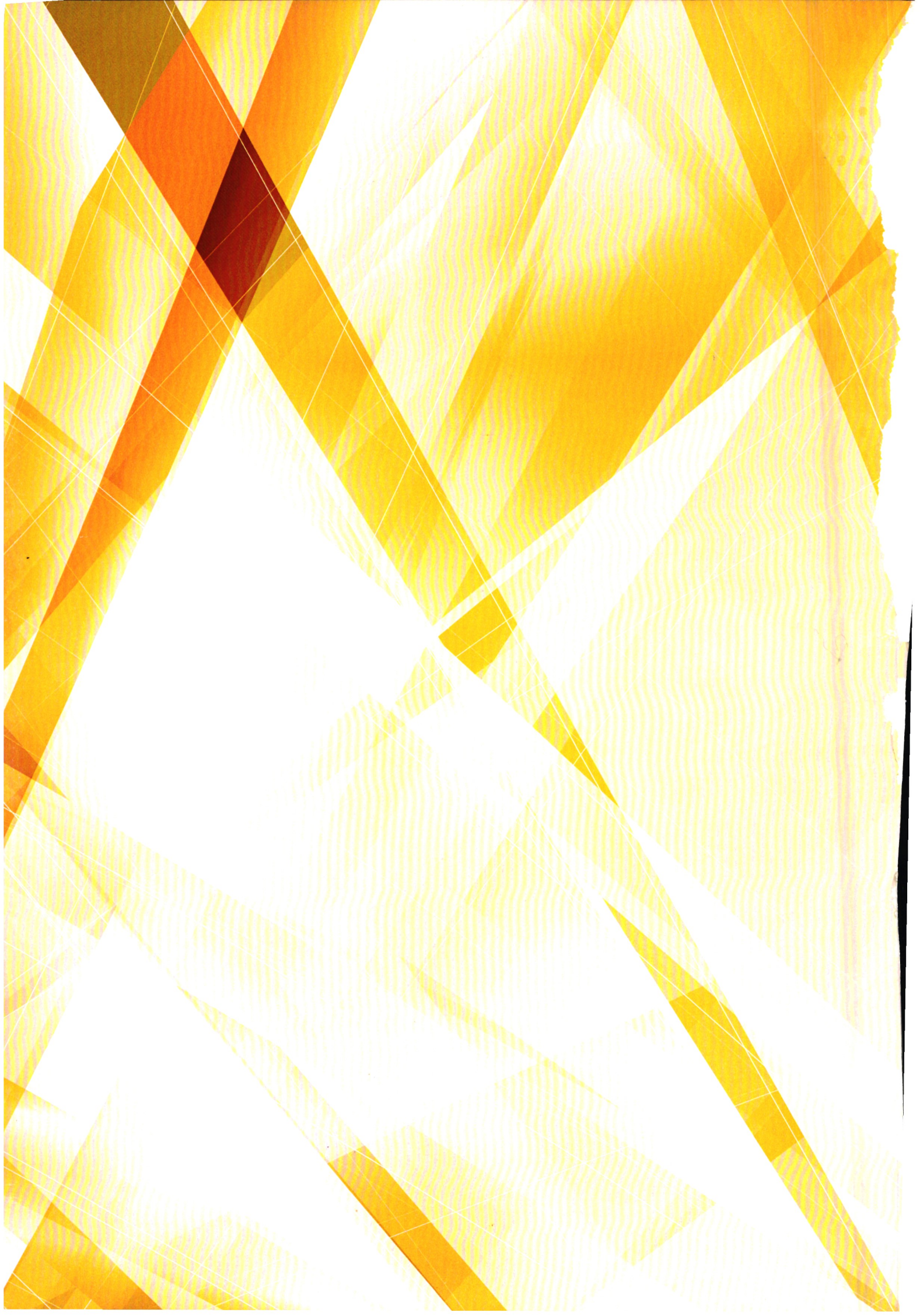


REPUBLIC OF KENYA  
MINISTRY OF ENERGY AND PETROLEUM

POWERING KENYA  
EMPOWERING DREAMS



PERFORMANCE REPORT  
FOR PRESENTATION TO PARLIAMENT  
AS PER PROVISIONS OF ARTICLE 153(4)(b)  
OF THE CONSTITUTION OF KENYA



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# Remarks by the Cabinet Secretary Ministry of Energy and Petroleum



**Mr. Davis Chirchir**

Energy has been singled out as one of the key enablers of the Vision 2030. The Jubilee Manifesto further enumerates the importance of creating a reliable energy infrastructure to enable the private sector to plan and invest for growth. Energy security therefore remains a matter of national priority. My Ministry is also alive to the fact that expensive energy hinders the competitiveness of our country by raising the cost of doing business. In this regard energy accessibility and cost are key priorities in my Ministry. 'A Country Doing Business Index' published by World Bank as a tool of measuring a country's sectorial competitiveness is also a key area we are paying attention to. The index rating for Kenya for the time taken to connect new electricity customers for the year 2012/13 was 163 days which my Ministry is working to bring to under 40 days.

To address the above three factors, my Ministry in September 2013 launched the road map for the 5000+ MW project for transforming Kenya in 40 months. Through this initiative, in addition to scaling up power generation, we will be focusing on reducing the cost of power by over 40% for industrial customers and domestic customers translating to the increased competitiveness for our economy.

This roadmap, has 280 MW new geothermal power generation at Olkaria (II) and (IV) which is expected to be commissioned between July and November 2014 at a very competitive tariff of US cents 7.2. An additional 100 MW new geothermal power generation contract has been awarded with a power purchase agreement at a tariff of US cents 7.0 signed for delivery to the grid by June 2015. Investors have also been shortlisted for the 700 MW LNG-fired power plant at Dongo Kundu, Mombasa and the 960 MW coal fired power plant at Lamu, whose tender progress is at the final stages of award.



As an immediate measure to address cost of power, my Ministry retired Aggreko 90MW expensive emergency power at Embakasi in November 2013.

To ensure accessibility to electricity, a total of 376,000 new electricity consumers were connected to the grid against a target of 450,000 as at end of Financial Year 2013/14. This represents a 23% increase from the 2012/2013 Financial Year (FY) achievement of 305,000 connections. We are also in the process of electrifying all public primary schools by end of the 2014/15 FY. A total of 5000 primary schools will have been electrified by the end of Financial Year 2013/14, with 4397 of the schools connected to the grid and 603 powered using solar PV, in a program to support the Primary Schools Laptop Project. It is important to support this programme, which will also mark a major milestone towards the Jubilee Government's agenda of ensuring every Kenyan has access to electricity by year 2020.

My Ministry is keen to support business and therefore in addition to providing power, we are keen to guarantee the quality of power both to our industrial and domestic users. We are therefore working actively to enhance transmission infrastructure and modernize distribution infrastructure. In this regard, over 4,200KM of various transmission lines whose funding has been secured are at various stages of construction. During the period under review, 315KM of transmission lines have been completed and 3056KM are under implementation.

To ensure uptake of the power developed under the 5000 MW+ project, we have established a demand committee, which is working closely with other Ministries as well as the private sector to generate new demand as well as audit the current/existing demand. We have identified and are working with, among others, the Ministry of Industrialization and Enterprise Development to create industrial parks close to power generation and transmission sites including:

- Olkaria and Menengai in Nakuru County
- Isinya in Kajiado County
- Lessos in Nandi County
- Dongo Kudu and Mariakani in Mombasa County

Other counties where industrial parks are being identified include; Kisumu, Lamu and Wajir.

We are also working closely with the Ministry of Transport and Infrastructure to ensure adequate and reliable power for the standard gauge railway line, as well as, provision of power for the other projects under the LAPSSSET program.



Kenya has recently recorded tremendous success in oil and gas exploration. Recently, four discovery oil wells were drilled by Tullow Kenya BV namely; Ekales, Ageta, Amosing and Ewoi in Lokichar sub basin. These have raised the country's recoverable oil reserves from 300 million barrels to 600 million barrels. Offshore in the Lamu basin we have recorded drilling success with the establishment of an active hydrocarbon system. We are confident that it is a matter of time before world-class hydrocarbon discoveries are recorded in offshore Kenya.

My Ministry is working closely with oil and gas exploration companies to support the drive towards positioning Kenya as a global player in energy supply. We have thus supported Tullow to speed up its exploration campaign. In this regard, Tullow has already commenced work on a commercialization plan, which will culminate in the field development plan by last quarter of 2015. My Ministry is also preparing to advertise an Expression of Interest for the crude oil pipeline from Lokichar to Lamu.

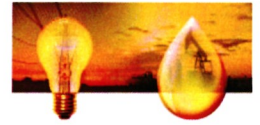
Alongside these oil development plans we are committed to rolling out social programmes aimed at ensuring that the communities where the discoveries have been made do benefit from the resource.

On coal resources development, the Ministry successfully signed a benefits sharing agreement on December 23, 2013 with the host community paving the way for coal mining to start in Blocks C and D of Mui basin in Kitui County.

Upgrade of the existing petroleum infrastructure is also underway with the construction of line 5 (Mombasa – Nairobi) pipeline set to commence in June 2014 to replace the aged line 1. The petroleum storage capacity in Nairobi is also set to double with additional tankage being constructed.

We have now instituted a number of initiatives aimed at streamlining the downstream petroleum sector. This includes tightening the licensing requirements to ensure only companies that are able to operate within the stringent safety and technical thresholds of the petroleum subsector are licensed to operate in the country. We have also proposed a number of measures including fiscal breaks to support private investment in petroleum infrastructure such as storage and retail petrol stations.

Following the proposed exit by Essar from Kenya Petroleum Refineries Limited, we are now exploring different alternatives for reviving the refinery including potentially converting it into a storage facility to meet the challenge of inadequate storage for strategic and operational stocks in the country.



Legal and institutional reforms remain key to ensuring that the country realizes lasting benefits from its oil and gas resources as well as to ensure an effectively organized energy sector. Thus, alongside drafting the Energy Policy and revising the Energy Act, we have sought support from the World Bank under the Kenya Petroleum Technical Assistance Project (KEPTAP). KEPTAP has been designed as an early measure strategy to build capacity and put necessary structures and institutions in place within the existing but limited window of time prior to commencement of development and production. KEPTAP is based on the following four major components of reforms and capacity building for the country's petroleum sector:

- Petroleum sector reforms and capacity building
- Revenue and investment management
- Sustainable impact of the oil and gas industry
- Project management

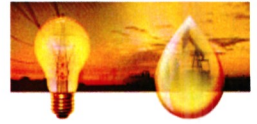
To enhance productivity and achieve success for our projects my Ministry has rolled out a robust performance management as well as project monitoring framework. In this regard, the Ministry, together with the parastatals under it, negotiated and signed performance contracts, which have been cascaded across all levels. We have also instituted a robust project management framework where the Ministry and its parastatals have developed Gantt charts on the basis of which we track project implementation fortnightly. The Gantt charts are provided as an annex to this report.

The Ministry uptake on the exchequer budget allocation 2013/14 FY has improved from 72% and currently stands at 91%. We expect that with support from Treasury outstanding amounts will be disbursed by the end of this Financial Year which will bring disbursements close to 100%.

It is now my pleasure to invite you to read this report which enumerates our achievements in the Energy sector for this 2013/2014 Financial Year.

Mr. Davis Chirchir

**CABINET SECRETARY**



# 1.0 July 2013–June 2014 Report for the Ministry of Energy and Petroleum



**Eng. Joseph Njoroge, MBS**

The performance and achievements by the Ministry of Energy and Petroleum Headquarters in both the oversight and implementation role is as per details below



S/No.	Project Name	Implementation Status	Remarks/Challenges
<b>KENYA ELECTRICITY GENERATING COMPANY</b>			
1.	<b>Olkaria IV – 140MW Geothermal Power Project</b>	<p>i) Design, manufacturing and shipping of major equipment completed;</p> <p>ii) Electrical and Mechanical assembly for STG 1 at final testing phases with Pre commissioning activities in progress.</p> <p>iii) Installation of the STG unit 2 in progress;</p> <p>iv) Erection of structures at substations and Transmission line towers erection in progress. Commissioning to start in next quarter;</p> <p>v) Piling, installation of supports for steam pipelines and construction of separator stations in progress.</p> <p>vi) Project completion stands at 97%.</p> <p><b>The Lot D (Infrastructure works):</b></p> <p>a) The 10km Road from Olkaria I-Olkaria IV completed;</p> <p>b) Resettlement Action Plan (RAP) – Construction of RAP houses at advanced stage with a completion date of April 2014.</p>	<p>Unit 1&amp;2 Scheduled for commissioning in June &amp; July 2014</p> <p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>- Wayleave acquisition</li> <li>- Local Community issues which continue to be handled as the project progresses</li> <li>- Transmission Line and Substation contract 3 month behind schedule;</li> <li>- Delay in Commissioning of Suswa Substation and Completion of Suswa-Isinya line has potential to affect dispatch of power for Unit 2.</li> <li>- Delay in substation has led to redesign of alternative power evacuation route.</li> </ul>
2.	<b>Olkaria I – 140MW Geothermal Power project</b>	<p>i) Tendering, award and approval completed;</p> <p>ii) Design, manufacturing and shipping of major equipment completed;</p> <p>iii) Structural concrete works, steel erection, cladding, plastering works, painting, fencing works in progress;</p> <p>iv) Installation of the STG unit and inner casing ongoing;</p> <p>v) Power house steel erection at 50% Structural steel works and partition masonry walling 90%.</p> <p>vi) Erection of structures at substations and Transmission line towers erection in progress. Commissioning to start in next quarter;</p> <p>vii) Piling, installation of supports for steam pipelines and construction of separator stations in progress.</p> <p>viii) Project completion stands at 85%</p> <p><b>The Lot D (Infrastructure works):</b></p> <p>a) Geothermal Complex: Construction in progress with a completion date of September 2014;</p>	<p>Unit 4&amp;5 Scheduled for commission in August &amp; October 2014.</p> <p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>- Wayleave acquisition</li> <li>- Local Community issues which continue to be handled as the project progresses</li> <li>- Transmission Line and Substation contract 3 month behind schedule;</li> <li>- Delay in Commissioning of Suswa Substation and Completion of Suswa-Isinya line has potential to affect dispatch of power which is a KETRACO responsibility.</li> </ul>



S/No.	Project Name	Implementation Status	Remarks/Challenges
<b>KENYA ELECTRICITY GENERATING COMPANY</b>			
3.	<b>Ngong I Wind Phase II – 6.8MW</b>	<ul style="list-style-type: none"> <li>i) Financial closure was achieved in February 2013 and commencement for this contract was achieved on 13th March 2013;</li> <li>ii) Road network and civil works design at advanced stage with 6 out of 8 WTG foundations concreted;</li> <li>iii) Design, manufacturing and FAT and shipment of all major components completed;</li> <li>iv) Substation works in progress;</li> <li>• Project completion stands at 68%.</li> </ul>	<p>Early targeted completion date is March 2014 while the Contractual date is September 2014.</p> <p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>- Delay in conclusion of financing agreement has delayed the project for over 2 years.</li> <li>- Community issues affected access to site.</li> </ul>
4.	<b>Ngong II Wind – 13.6MW</b>	<ul style="list-style-type: none"> <li>i) Financial closure was achieved, Advance payment paid in March 2013 and commencement for this contract was achieved on 13th March 2013;</li> <li>ii) Foundation excavation completed and steel fixing works in progress;</li> <li>iii) Bulk excavations for Road networks and site platforms completed.</li> <li>iv) Equipment manufacturing in progress and shipment has started;</li> <li>v) Project completion stands at 33%</li> </ul>	<p>Target completion date is September 2014.</p> <p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>- Delay in conclusion of financing agreement has delayed the project for over 2 years.</li> <li>- Community issues affected access to sit</li> </ul>
5.	<b>Drilling - 80 Wells Contract</b>	<p>Contract signed and drilling commenced</p> <ul style="list-style-type: none"> <li>i) Thirty four (34) wells have drilled to completion under 80-wells Contract;</li> <li>ii) Five (5) wells are currently under drilling at various depths.</li> </ul>	



S/No.	Project Name	Implementation Status	Remarks/Challenges
<b>Geothermal Development Company(GDC)</b>			
6.	<b>Menengai Geothermal Project. Phase 1</b>	<ul style="list-style-type: none"> <li>- Surface study 100%</li> <li>- Project Financing 75%</li> <li>- Drilling 25%</li> <li>- Investor Engagement 25%</li> <li>- Steam Gathering System –Tendering process 50% complete</li> <li>- ESIA 100%</li> <li>- Feasibility study 100%</li> </ul>	
<b>KENYA ELECTRICITY TRANSMISSION COMPANY(KETRACO)</b>			
7.	<b>Kilimambogo - Thika - Githambo Line Construction of 17km double circuit 132kV line, 50km 132kV line, 2x23MVA 132/33kV sub-stations at Mang'u and Githambo</b>	Project completed	<ul style="list-style-type: none"> <li>i. Way leaves acquisition due to increasing land values</li> <li>ii. Vandalism of tower members</li> </ul>
8.	<b>Thika-Nyaga line 20km 132kV line, 23 MVA 132/33 sub-station works at Kiganjo (Nyaga)</b>	Project completed	<ul style="list-style-type: none"> <li>i. Way leaves acquisition due to increasing land values</li> <li>ii. Vandalism of tower members</li> </ul>
9.	<b>Mombasa - Nairobi Line Construction of 220/400kV 482km line with sub-stations extension works at Rabai and Embakasi substations.</b>	Conductor stringing, line construction and upgrading of Embakasi and Rabai substations are in progress.	<ul style="list-style-type: none"> <li>i. Way leaves acquisition due to increasing land values</li> <li>ii. Access from state corporations</li> </ul>
10.	<b>Rabai - Malindi-Garsen - Lamu Construction of 320km 220kV line, 3 No. 23 MVA sub-stations at Malindi, Garsen and Lamu</b>	Conductor stringing completed and commissioning tests for the line and sub-station is on-going.	



S/No.	Project Name	Implementation Status	Remarks/Challenges
<b>KENYA ELECTRICITY TRANSMISSION COMPANY(KETRACO)</b>			
11.	<b>Nairobi Ring 220kV substations at Koma Rock, Athi River, Isinya and Ngong Construction of 3No.2x 200 MVA 220/66 KV substation at Athi River, Isinya, Koma Rock and Ngong'</b>	Lines construction – tower erection and substations civil works are in progress. Compensation for structures is completed.	
12.	<b>Suswa-Isinya line Construction of 100km 400kV double circuit line</b>	Lines construction – tower erection and substations civil works are in progress. Compensation for structures is completed.	
13.	<b>Suswa Substation Construction of 2x350 MVA 400/220 kV substation at Suswa.</b>	Contract awarded and Site access handed over to contractor. Design and equipment testing are on-going	
14.	<b>Eastern Electricity Highway (Ethiopia - Kenya) Construction of 612km 500kV HDVC bipole, convertor substation and 400/220kV sub-station.</b>	Engineering supervision consultant procured. Detailed design and preparation of bid documents completed. Procurement of EPC contractors is in progress. Valuation of both land and structures on the ROW completed. Documents prepared in readiness for gazettelement of the right of way through the National Land Commission	
15.	<b>Olkaria I- Suswa &amp; Olkaria IV- Suswa Construction of 20 km and 25 km 220kV double circuit lines and substation at Suswa</b>	Consultant and contractor procured. Line construction - tower foundations civil works and tower erection are in progress.	
16.	<b>Kenya Electricity Expansion Project (KEEP): Kindaruma-Mwingi-Garissa Construction of 250km 132kV Line and 2x23MVA and MVA sub-stations at Garissa and Mwingi</b>	Lines and sub-stations construction and tower foundations civil works, compensation for structures and design of civil and electrical works are in progress.	



S/No.	Project Name	Implementation Status	Remarks/Challenges
<b>KENYA ELECTRICITY TRANSMISSION COMPANY(KETRACO)</b>			
17.	<b>KEEP: Eldoret-Kitale Construction of 60km 132kV line, with 1 x 23MVA substation at Kitale.</b>	Lines and sub-stations construction and tower foundations civil works, compensation for structures and design of civil and electrical works are in progress.	
18.	<b>KEEP: Kisii - Awendo Construction of 44km 132kV line, No. 1 23 MVA sub-station</b>	Lines and sub-stations construction and tower foundations civil works, compensation for structures and design of civil and electrical works are in progress.	
19.	<b>Olkaria - Lessos - Kisumu 286 km, 220kV double circuit line, 1 No. 90MVA sub-station</b>	Lines and sub-stations construction and tower foundations civil works, compensation for structures and design of civil and electrical works are in progress.	
<b>RURAL ELECTRIFICATION AUTHORITY (REA)</b>			
20.	<b>Implement solar PV power in 10 institutions far from the grid, technical transfer from JICA to REA</b>	Lot 1 is implemented and under monitoring, Lot 2 is awaiting tender award.	
21.	<b>Ensure connection of electricity to new customers</b>	114,722 new customers were connected to electricity against a target of 100,000 in the first and second quarter.	
22.	<b>Rural Electrification Program</b>	<ul style="list-style-type: none"> <li>It is estimated that out of a total of 21,000 public primary schools only about 10,938 (48%) have access to electricity while a balance of 11,062 (52%) are yet to be supplied with electricity.</li> <li>The focus of the Authority in the financial years 2013/14 and 2014/15 is to supply electricity/connect all the un-electrified primary schools to provide the necessary infrastructure for the class one laptop implementation programme.</li> <li>Tender for the supply and installation of solar Pvs in the 215 schools has been evaluated and will be awarded by the end of January 2014.</li> </ul>	Delay in delivery of materials due to long lead time, hence delay in project implementation and commissioning e.g. shortage of 33KV transformers is has caused delays in commissioning of projects



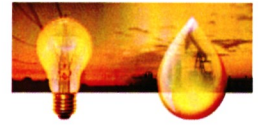
S/No.	Project Name	Implementation Status	Remarks/Challenges
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RURAL ELECTRIFICATION AUTHORITY (REA)

23.	<b>Five new isolated diesel power stations at Kamoliriban, Kotulo Khorondile, Maikona and Lokiriama</b>	<ul style="list-style-type: none"> <li>Civil and mechanical works for all the five stations have been awarded are expected to commence in February 2014 with a completion target of end of June 2014.</li> <li>REA has awarded contracts for the installation of solar Pvs at four (4) isolated power stations that is 50 KW Solar PV hybrid for Rhamu, 50 KW Solar PV hybrid for Takaba, 80 KW Solar PV hybrid for Laisamis, and 30 KW Solar PV hybrid for Eldas. The installations are expected to be completed by end of June 2014 and eventually reduce the operational cost of the stations.</li> </ul>	Delay in delivery of materials due to long lead time, hence delay in project implementation and commissioning e.g. shortage of 33KV transformers is has caused delays in commissioning of projects
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MINISTRY OF ENERGY AND PETROLEUM

24.	<b>Monitor, supervise and report on the results of drilling oil exploration wells</b>	<p>The Ministry continued to monitor, supervise and report on the results of oil and gas exploration activities in the country as below.</p> <p><b>ETUKO-WELL</b> Etuko well was spud on 11th May, 2013. It was drilled to a total depth of 3,100m. It encountered approximately 45 m of net pay thickness in shallower Auwerwer (Upper Lokhone Sandstone) reservoir and 50m of potential net pay in Lower Lokhone Sandstone. The well was drilled in Block 10B3.</p> <p>Etuko prospect is the first test of the basins Flank Play in the eastern part of the basin.</p> <p><b>EKALES-WELL</b> Ekales well was spud on 22nd July, 2013. It is located in Block 13T. It was drilled to a total depth of 1454 m. It encountered net pay zone of 60m to 100m in the Upper Lokhone Sandstone reservoirs. Future Drill Stem Testing (DST) aims to confirm productivity of these zones.</p> <p><b>AGETE-1 WELL</b> The well was spud on 26th September, 2013. It is in Block 13T. It was drilled to a total depth of 1930m. It encountered moveable oil with an estimated 100m of net oil pay in good quality sandstone reservoirs.</p>	
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S/No.	Project Name	Implementation Status	Remarks/Challenges
MINISTRY OF ENERGY AND PETROLEUM			
		<p><b>BAHASI-1 WELL</b> The well was spud in October 2013. It is situated in Block 9 and is operated by Africa Oil. It was drilled to a total depth of 2900m. It encountered metamorphic basement at 2850m. A thick section of Tertiary and Cretaceous interbedded sands and shales were encountered with only minor shows of gas throughout the section. The well was plugged and abandoned.</p> <p><b>AMOSING-1 WELL</b> Amosing-1 well was spud on 5th January, 2014. It was drilled to a total depth of 2101m. It encountered a potential net pay zone of 160m to 200m. It is located in Block 10BB, 7km South-West of Ngamia-1 well. The net pay in Amosing Well significantly exceeds pre-drill expectations.</p> <p><b>EWOI-1 WELL</b> Ewoi-1 well was spud on 28th December, 2013. It is located in Block 10BB. Ewoi-1 well encountered potential net pay thickness of 20m to 80m. This discovery continues to de-risk the basin Flank Play that was opened by Etuko-1.</p>	
25.	<b>Coal Exploration in the Karoo System</b>	The Ministry has prepared contracts for private firms to tender for exploratory drilling for coal in both Kilifi and Kwale counties	
26.	<b>Coal Exploration in Meru/Isiolo</b>	The Ministry has identified and established access to six coal exploratory drilling sites.	
27.	<b>Support of Coal development</b>	<p>The Ministry has</p> <p>i. Advertised Expression of Interest for establishment of the 900 – 1000 MW Lamu Coal Plant which closed on 25th October, 2013. Twenty Six submissions were received out of which Ten firms were pre-qualified to proceed to the next stage, i.e. Request For Proposals (RFP).</p>	



S/No.	Project Name	Implementation Status	Remarks/Challenges
<b>MINISTRY OF ENERGY AND PETROLEUM</b>			
		<ul style="list-style-type: none"> <li>ii. Conducted four workshops and a series of meetings for Kitui County Local Community Leaders to build consensus for signing of the Blocks C and D Benefit Sharing Agreements. The public ceremony for signing the documents was held in Mwingi on 23rd December, 2013 and was attended by among others three Cabinet Secretaries, Kitui Senator, two Governors, former Vice President and Members of Parliament from Kitui County.</li> <li>iii. Established a regional office at Mathuki for the purpose of coordinating coal development activities in Mui Basin;</li> <li>iv. Provided logistic support to Officers of the Ministry of Land, Housing and Urban Development engaged in ongoing Land Adjudication and Registration in the areas covered by the coal project; and,</li> <li>v. undertook 29 sensitization sub-locational meetings to prepare the local community on the expected activities, which include fast tracking of the land issues and awareness of the Sub-County Resettlement and Compensation Committee (SCRCC) formation.</li> </ul>	
28.	<b>Geothermal Exploration in Morendat-Malewa area</b>	The Ministry carried out Geological, Geophysical and Geochemical Surveys and completed delineation of the Morendat-Marewa geothermal prospects.	
29.	<b>Monitor, Supervise and report on Geothermal Development</b>	<p>During the period under review, the Ministry:-</p> <ul style="list-style-type: none"> <li>i. Monitored and supervised ongoing geothermal resources development by Geothermal Development Company (GDC) at Menengai, Kenya Electricity Generating Company (KenGen) at Olkaria, Africa Geothermal International Limited (AGIL) at Longonot and Marine Power Generation at Akiira -Mt. Margaret;</li> <li>ii. Led an Inter-Ministerial Team in a survey and later a detailed audit of the local community (Masai) households affected by the attempted eviction from Ngati Farm;</li> <li>iii. Processed permits, Treasury exemptions and contracts payments in support of GDC and KenGen;</li> </ul>	



S/No.	Project Name	Implementation Status	Remarks/Challenges
MINISTRY OF ENERGY AND PETROLEUM			
		iv. Took part in meetings for resolving Community issues affecting geothermal resource development by KenGen in the Olkaria area; and,	
30.	<b>Conduct Investment-Grade Energy Efficiency Audits</b>	During the period under review two (2) Investment-Grade Energy Efficiency Audits at Iber Africa and Masinde Muliro University and one (1) General Investment Audit at Kenya Water Institute office Block were undertaken.	
31.	<b>Installation of wind Energy storage facility in Marsabit.</b>	The following has been achieved: <ul style="list-style-type: none"> <li>• Kenya power initiated processes of advance payments to the contractor.</li> <li>• Once advance payment is effected the project will be completed in six months.</li> </ul>	
32.	<b>Installation of wind component to existing solar water pumping systems in ASAL areas.</b>	16 WIND components were installed to existing solar water pumps supervised, tested and commissioned. The project is complete.	
33.	<b>Installation of locally made wind water pumps in ASAL areas.</b>	The target for the FY was to construct 4 locally made wind pumps installed in ASAL areas. So far the following have been achieved <ul style="list-style-type: none"> <li>• Site identification done.</li> <li>• Contract period extended</li> <li>• Work to begin January 2014.</li> </ul>	
34.	<b>Installation of wind masts and data loggers</b>	<ul style="list-style-type: none"> <li>• Tender documents prepared, advertised and awarded.</li> <li>• Awaiting contract signing.</li> </ul>	
35.	<b>Analysis of wind data and preparation of wind energy development.</b>	Final report prepared and submitted.	



S/No.	Project Name	Implementation Status	Remarks/Challenges
MINISTRY OF ENERGY AND PETROLEUM			
36.	<b>Development and distribution of energy conservation and efficiency brochures</b>	<ul style="list-style-type: none"> <li>• Feed-in Tariff brochures developed and submitted to the printer.</li> </ul>	
37.	<b>Solar technology</b>	<ul style="list-style-type: none"> <li>• Tenders for 66 institutions awarded and works to commence in January 2014.</li> <li>• Works under Spanish funded tender commenced in Kajiado/Narok.</li> <li>• Distribution of the 100 solar demonstration kit done.</li> </ul>	
38.	<b>RESEARCH &amp; DEVELOPMENT. Small Hydros Development One (1) community will be assisted in developing and installing small hydro power project.</b>	<ul style="list-style-type: none"> <li>• The prototype turbine has been assembled and tested with the generator at NMC.</li> <li>• An LPO issued to ASP for fabrication of the penstock.</li> <li>• Excavation for the canal complete.</li> <li>• Construction of the canal awaiting fall in river water levels.</li> </ul>	
39.	<b>Development of national small hydro power Atlas</b>	<ul style="list-style-type: none"> <li>• A consultative critique workshop held on 24th October, 2013 at KSMS.</li> <li>• Fourth interim progress report submitted by the consultant and is being analysed.</li> </ul>	
40.	<b>Energy Efficiency Project.</b>	<ul style="list-style-type: none"> <li>• Tender re-advertisement done and evaluation completed in December 2014.</li> <li>• Awaiting deliberation by MTC.</li> </ul>	
41.	<b>Installation of pilot biogas digester at Kaimosi College and Completion of pilot project on production of biogas using flower waste in Eureka Holdings Ltd., Thika and P.J. Dave Flowers Ltd., Isinya.</b>	<ul style="list-style-type: none"> <li>• Tender evaluation done and contract awarded for Kaimosi Teachers College. Works to start January 2014.</li> <li>• Constructions completed, data collection and testing by the trained personnel in Eureka Holdings Ltd and P.J Daves Flowers Ltd biogas plants on going and the system reported to be doing well.</li> </ul>	
42.	<b>Support K.A.M to undertake Energy Efficiency projects.</b>	<ul style="list-style-type: none"> <li>• 8 General Audits undertaken</li> <li>• 3 Investment Grade Audit undertaken</li> </ul>	

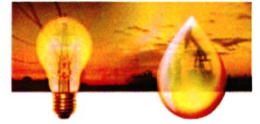


S/No.	Project Name	Implementation Status	Remarks/Challenges
MINISTRY OF ENERGY AND PETROLEUM			
43.	<b>Documentation of Renewable Energy Activities</b>	<ul style="list-style-type: none"> <li>Tender re-advertised and 13 responsive bidders realized.</li> <li>RFP to be opened on 8th January 2014.</li> </ul>	
44.	<b>Re-forestation of upper tana</b>	<p>Works on Sondu Miriu catchment started in Chepalungu, Ndoinet and Saino as per the contracts timelines. Community mobilization completed in all sites and sites preparation in readiness for March/April planting ongoing.</p> <ul style="list-style-type: none"> <li>Works for upper tana phase I &amp; II ongoing as per timeline</li> </ul>	
45.	<b>Testing of institutional &amp; domestic cookstoves performance.</b>	<ul style="list-style-type: none"> <li>10 cockstoves varieties tested.</li> <li>3 best performing varieties identified.</li> <li>Standard and regulation development for cookstoves in Kenya to be developed.</li> </ul>	
46.	<b>Youth and Women Empowerment</b>	<p>The Ministry has progressively involved a total of 14 youth interns (11 females and 2 males) from Various institutions and attached them to various Ministry' departments. A total of 132 youth (69 males and 63 females) were on apprenticeship in various renewable energy centres. In addition, tenders worth Kshs.1 4,408,479 were awarded to 105 enterprises owned by youth, women and persons with disabilities.</p>	
47.	<b>Fulfilment of Performance Contract to Downstream Institutions</b>	<p>The Ministry cascaded performance contracts to all its Agencies.</p>	
48.	<b>Ease of Doing Business</b>	<p>The Ministry during the period:</p> <ol style="list-style-type: none"> <li>Ensured that relevant approvals are granted within 30 days,</li> <li>Provided relevant information to investors within 14 days of their requests.</li> <li>Paid all taxes due to government and enforced all the contracts.</li> <li>Continued putting in place a plan to facilitate reduction of electricity cost over the next few months.</li> </ol>	



# Reports by Parastatals Under the Ministry of Energy and Petroleum

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# KENYA PIPELINE COMPANY LTD



JUNE 2014

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## 1. Introduction

KPC plays a key role in the petroleum supply chain through transportation of bulk petroleum products imported at the Port of Mombasa to the hinterland. In the past one year, the Company has operated efficiently and safely, albeit with a few challenges. KPC's financial performance over the last three years has also been good as the Company continue to post increasing profitability.

The rising economic growth in the countries within the region and expected increase in demand for petroleum products will result in even higher business and turnover for the Company. KPC will continue to expand the system's capacity to meet the growing demand for petroleum and ensure security of supply of petroleum products in the country.

This paper presents the Company's performance, challenges faced and the key projects being implemented.





## 2. Performance

### 2.1 Throughput Performance

The Company recorded a marked increase in throughput over the last three years from 4,149,757m<sup>3</sup> in 2010/11 to 5,055,838m<sup>3</sup> in 2012/13, an increase of 22%. A total volume of 5.649 million m<sup>3</sup> is expected at the end of the current financial year, which will be about 11.7% higher than 2012/13 performance.

Table 1 below depicts throughput performance for the last 3 years and 2013/14 half year performance.

**Table 1: Throughput Performance**

Destination	2009/10	2010/11	2011/12	2012/13	Forecast 2013/14
SLocal	3,133,832	3,073,460	3,031,590	3,086,607	3,628,977
Transit	1,183,607	1,076,297	1,504,507	1,969,231	2,020,253
<b>Total</b>	<b>4,317,439</b>	<b>4,149,757</b>	<b>4,536,097</b>	<b>5,055,838</b>	<b>5,649,230</b>

The Mombasa-Nairobi pipeline operated at an average throughput flow rate of 627m<sup>3</sup>/hr during the first half of 2013/14, up from 598m<sup>3</sup>/hr and 534m<sup>3</sup>/hr recorded in 2012/13 and 2011/12 respectively.

With a total throughput of 3.1 million m<sup>3</sup>, KPC transported about 82% of the petroleum products consumed in the Kenyan hinterland in 2012/13 FY estimated at 3.8 million m<sup>3</sup>. The Company also transported 90% of the transit products received through the Port of Mombasa estimated at 2.18million m<sup>3</sup>. This has minimised the number of road oil trucks transporting petroleum products for long distance.

### 2.2 Financial Performance

The Company has recorded increasing profitability over the years. In 2012/13, the oil transportation income increased by 12% from Kshs.16.5 billion realized in 2011/12 FY to Kshs.18.5 billion, while Profits Before Tax increased from Kshs.7.85 billion to Kshs.8.05billion.

Table 2 below depicts the Company's financial performance for the last 3 years.

**Table 2: Financial Performance in Kshs. '000**

Item Description	2010/11	2011/12	2012/13	Latest Forecast 2013/14
Oil Transportation Receipts	13,784,556	16,480,628	18,487,064	21,083,019
Other Income	271,512	980,141	309,403	509,287
Total Income	14,056,068	17,460,769	18,796,467	21,592,306
Total Expenditure	7,592,748	9,609,941	10,747,678	13,031,237
Profit Before Tax	6,513,846	7,850,828	8,048,789	8,561,069
Tax/ tax Provision	1,991,889	2,237,381	1,843,274	2,568,321
Profit After Tax	4,521,957	5,613,447	6,205,515	5,992,748

The Revenue and Profit Before Tax expected from the operations during the FY 2013/14 is Kshs. Kshs.21.1 billion and Kshs.8.6billion respectively.

### 3. Key Projects

The main projects being implemented by the Company are the following:

- i. Replacement of the Mombasa-Nairobi Pipeline.
- ii. Construction of a Parallel Pipeline from Sinendet to Kisumu.
- iii. Construction of additional storage tanks at the Nairobi Terminal.
- iv. Construction of additional Jet A-1 Tanks/Depot for JKIA.
- v. Construction of additional loading arms in Eldoret.
- vi. Development of Liquefied Petroleum Gas (LPG) Storage & Bottling Facility in Nairobi.

Highlights of these projects are presented below:

#### 3.1 Replacement of the Mombasa-Nairobi Pipeline (Line 5)

The Mombasa-Nairobi pipeline has been in operation for over 35 years and requires rehabilitation to maintain its integrity. KPC intends to replace the pipeline with a larger diameter to meet projected demand up to year 2044 and ensure sustained, reliable and efficient transportation of petroleum products in the region.



KPC engaged a consultant in June 2012, to carry out Consultancy Services (Design, ESIA and construction supervision). KPC intends to procure a contractor to carry out construction works. 13 firms have been prequalified and will be issued with the tender documents in February 2014.

The project is expected to cost Kshs50billion and will be financed through internally generated funds and bank loans.



### Project Implementation Timelines:

Proposed Line I Replacement Project (Line 5)

Item No.	Activity	Start	Finish
1	Commencement of consultancy services	14/05/2012	21/06/2012
2	Preliminary Designs	22/06/2012	27/08/2013
3	EIA Study	20/09/2012	26/02/2014
4	Detailed Designs and Tender Documents	04/08/2013	02/03/2014
5	Procurement of Contractor	01/02/2014	27/06/2014
6	Construction	28/06/2014	26/06/2016



### 3.2 Construction of a Parallel Pipeline from Sinendet to Kisumu

KPC intends to construct a parallel pipeline from Sinendet to Kisumu to increase supply of product to Kisumu and thereby optimally utilize the Depot's facilities, enhance flexibility and optimization of Line 4 and increase the Company throughput and revenue. The project is to implemented through an EPC contract. Project is at tender formulation stage.

#### Project Implementation Timelines:

Construction of Parallel Pipeline from Sinendet to Kisumu

Item No.	Activity	Start	Finish
1	Tender Documentation by KPC	01/10/2013	18/01/2014
2	Tendering Process	19/01/2014	29/03/2014
3	Tender Evaluation	30/03/2014	14/05/2014
4	Contract Award	15/05/2014	29/06/2014
5	Construction	30/06/2014	22/05/2016

### 3.3 Construction of Additional Storage Tanks in Nairobi

KPC intends to enhance storage capacity for the fast moving products; Automotive Gas Oil (AGO) and Motor Spirit Premium (MSP). The project will involve construction of 2 No. AGO tanks, 1No. AGO/MSP swing tank and 1 No. MSP tank at Nairobi Terminal each with gross capacity of 33,366m<sup>3</sup>.

The additional tanks will be constructed under an EPC arrangement. Advertisement for procurement of an EPC contractor was done and is closing on 14th February 2014. The cost of the project will be known after procurement of the EPC contractor.





### Project Implementation Timelines:

Construction of Additional Tanks at Nairobi Terminal

Item No.	Activity	Start	Finish
1	Tender Documentation by KPC	01/07/2013	07/11/2013
2	Tendering Process	08/11/2013	14/02/2014
3	Tender Evaluation	17/02/2014	03/04/2014
4	Contract Award	04/04/2014	19/05/2014
5	Construction	20/05/2014	04/11/2016

### 3.4 Construction of Additional Jet A-1 Tanks/Depot for JKIA

The Jomo Kenyatta International Airport is undergoing expansion which will result in an increase in flights. KPC is planning to construct additional Jet A-1 at the Airport to match the needs for the expanding airport. The Project is in the planning stage and discussions are being held with the Kenya Airport Authority.

### Project Implementation Timelines:

Proposed Jet A-1 Depot within Jomo Kenyatta International Airport (Jkia)

Item No.	Activity	Start	Finish
1	Tender Documentation	07/01/2014	28/02/2014
2	Advertisement	03/03/2014	30/04/2014
3	Evaluation	01/05/2014	30/06/2014
4	Contract Award	01/07/2014	31/07/2014
5	Project Implementation	01/08/2014	26/02/2016

### 3.5 Construction of Additional loading arms in Eldoret

In view of the rising demand for petroleum products in the Great Lakes Region, it has become necessary to install additional facilities at Eldoret to cope with the rising number of loading orders and enhance the supply of petroleum products for Western Kenya and the neighbouring countries.



Procurement of a contractor is on-going. The project will be funded through internally generated sources.

### Project Implementation Timelines:

Proposed Bottom Truck Loading Facility at Eldoret Depot (Ps27)

Item No.	Activity	Start	Finish
1	Tender Documentation	01/07/2013	30/09/2013
2	Advertisement	01/10/2013	05/11/2013
3	Evaluation	06/11/2013	30/01/2014
4	Contract Award	31/01/2014	28/02/2014
5	Construction	03/03/2014	30/06/2014
6	Project Implementation	01/07/2014	31/12/2015

### 3.6 Development of Liquefied Petroleum Gas (LPG) Storage and Bottling Facility in Nairobi

The development of the LPG facilities is one of the key flagship projects under the Kenya vision 2030. KPC has undertaken a Feasibility Study on Inland Bulk LPG Storage and Distribution Facilities whose report was received in June 30, 2013.

The overall objective of developing the LPG facilities in the country is to ensure availability and accessibility of LPG at cost effective prices, promote use of LPG as a household fuel among the urban poor and the rural population and enhance socio-economic development.

The project scope will include construction of storage facility with a capacity of 2220MT, Pump Platform; Cylinder Filling Area; Tanker Loading Gantries and other associated facilities. According to the feasibility study report the total cost for proposed development at Nairobi is estimated at USD 22.87 million (Phase I).



### Project Implementation Timelines:

#### Proposed Nairobi Liquified Petroleum Gas Facility

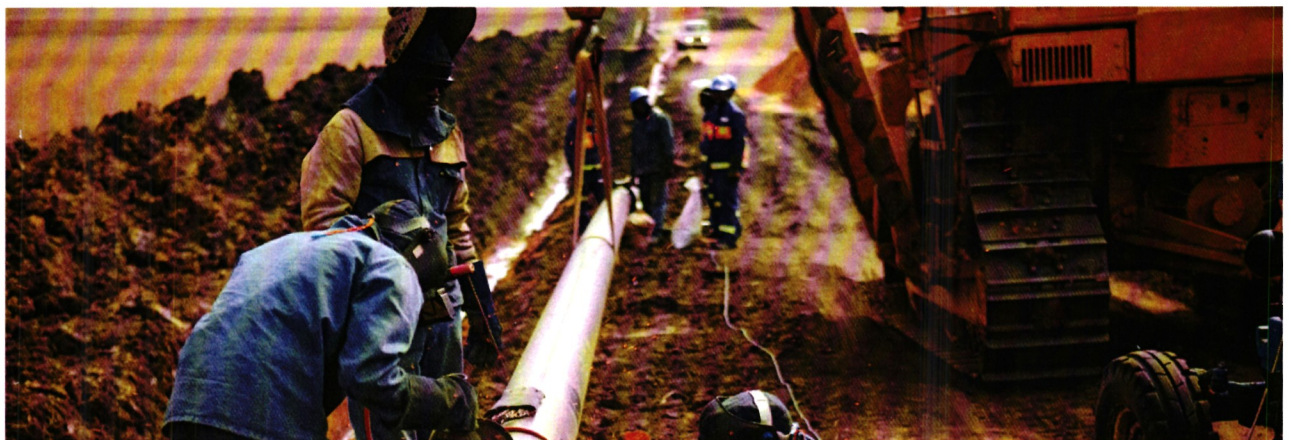
Item No.	Activity	Start	Finish
1	Project Approvals	14/02/2014	03/02/2017
2	Identification and Purchase of Project Site	14/03/2014	28/08/2014
3	Procure a Consultant to prepare tender documents and carry out EIAS	29/08/2014	22/12/2014
4	Undertake ESIA, Prepare Designs and Tender documents for EPC Contractor	05/01/2015	03/04/2015
5	Prequalification of EPC contractor	06/04/2015	29/05/2015
6	Selection of EPC Contractor	01/06/2015	18/09/2015
7	Project Detailed Design, Procurement of Materials and Construction	21/09/2015	03/02/2017

## 4. Challenges Faced by the Company

### 1. Aged Mombasa – Nairobi pipeline

The Mombasa – Nairobi pipeline is 35 years old and requires a lot of rehabilitation works while some equipment have become obsolete and damaged due to wear and tear.

Proposed Solution: KPC intends to replace the Mombasa – Nairobi pipeline with a larger diameter pipeline to match projected demand up to year 2044.





## 2. Unreliable Power Supply

Power outages and surges lead to unplanned pipeline shutdowns and affect KPC sensitive equipment and as a result affect product supply.

**Proposed Solution:** In the short term KPC has engaged the Kenya Power Management to ensure reliable power supply.

## 3. Unreliable Communication Infrastructures

KPC relies on third parties communication network. In the event of communication failures the operation of the pipeline is slowed because the Nairobi Control Centre (NCC) cannot view the various pipeline operating parameters such as pressure and flow rates.

**Proposed Solution:** KPC plans to lay a fibre optic cable below the new Line 5 Pipeline. KPC is also considering VSAT for communication redundancy.

## 4. Ullage Allocation and Utilization

The current method of ullage sharing uses historical data of the OMC's market sales and pipeline utilisation and limits optimal utilisation of the pipeline capacity leading to slow or stagnated growth in KPC throughput volumes.

**Proposed Solution:** Allow KPC to allocate its system capacity which will consider the Government policy on product supply, regional Governments' requirements and total industry self-declared monthly product demand basis each OMC's self-declared monthly product demand.

## 5. Slow Evacuation of Products from the Pipeline System at Nairobi

The rate of evacuation of products by the OMC's from the system does not match the volume of planned imports. The result in most cases is clogging of the pipeline system leading to lack of ullage at KOSF for imports and stoppage of pipeline operations also due to lack of ullage at the Nairobi, Nakuru and Eldoret Depots.

**Proposed Solution:** KPC require that the OMC's evacuate operational products from the system as per the Government directive of within 10 days for local products and 14 days for transit products.

## 6. Limited Capacity of the Sinendet – Kisumu pipeline (Line 3)

The Sinendet – Kisumu pipeline capacity is limited to delivering 2,400 m<sup>3</sup>/day to Kisumu Depot against a demand of 4,500 m<sup>3</sup>/day, resulting in product grade stock-outs at the depot from time to time.



**Proposed Solution:** KPC plans to construct a spur pipeline off the current Line 4 to enhance the supply capacity to Kisumu Depot.

### 7. Reliance on Single Jetty for Imports

Kipevu Oil Terminal (KOT) handles about 99% of the country's imports. Reliance on a single jetty for offloading exposes the country to supply disruptions in case of a catastrophe.

**Proposed Solution:** There are plans by Kenya Ports Authority (KPA) to relocate the jetty and enhance it to be able to receive four vessels at a time.

### 8. Customs Clearance

Customs clearance processes slow down evacuation of products from KPC system leading to congestion of trucks in the depots resulting in safety and security threats.

**Proposed Solution:** KPC has been continuously engaging KRA to improving clearance procedures. KRA needs to ensure reliability of its systems or provide back-up to ensure business continuity. In the short term, all stakeholders to synchronize the working hour to match KPC 24 hour operations. The initiative requiring upfront duty payment may ease product evacuation from the pipeline system.

### 9. Terrorism Threats and Vandalism of Pipeline facilities

Terrorism and vandalism is a major concern in KPC.

**Proposed Solution:** KPC is installing Integrated Security System in all its installation to enhance security surveillances. In addition, KPC will maintain constant liaison with government security agencies to secure the company facilities.





## 10. Securing KPC's Facilities and Property

These concerns arise due to encroachment of pipeline Right Of Way and facilities.

**Proposed Solution:** KPC is seeking to have the ROW and land where it has facilities delineated to secure pipeline boundaries and facilities. Other proposed measures include, mapping of pipeline by the Ministry of Lands to avoid innocent encroachment and constant Liaison with government security agencies to secure strategic facilities.

## 11. Collateral Financing Arrangements (CFA)

KPC is exposed due to CFA administration in that it is an area which requires expert Collateral Managers. Slow clearance of CFA materials also contribute to the clogging of pipeline system due release procedures.

**Proposed Solution:** KPC is reviewing the arrangement with a view of discontinuing the Company's involvement in the arrangement.

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# APPENDIX

KENYA PIPELINE COMPANY LTD  
WORKPLAN



REPUBLIC OF KENYA



PROPOSED BOTTOM TRUCK LOADING FACILITY AT ELDORET DEPOT (PS27) PROPOSED PROGRAMME OF WORKS			KENYA PIPELINE COMPANY			(1ST JUL 2013 - 31ST DEC 2015)																								
ID	Task Name	Duration	Start	Finish	Timeline (2013-2015)																									
1	EXPANSION OF TRUCK LOADING FACILITY	654 days	Mon 7/1/13	Thu 12/31/15	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May		
2	Tender Documentation	66 days	Mon 7/1/13	Mon 9/30/13																										
3	Revision of Tender Documentation for Re-Tender	66 days	Mon 7/1/13	Mon 9/30/13																										
4	Advertisement	26 days	Tue 10/1/13	Tue 11/5/13																										
5	Request for approval to advertise	5 days	Tue 10/1/13	Mon 10/7/13																										
6	Preparation to advertise and publication	5 days	Tue 10/8/13	Mon 10/14/13																										
7	National/ International Advertisement	16 days	Tue 10/15/13	Tue 11/5/13																										
8	Evaluation	62 days	Wed 11/6/13	Thu 1/30/14																										
9	Appointment of Tender Processing Committee	5 days	Wed 11/6/13	Tue 11/12/13																										
10	Technical Evaluation	15 days	Wed 11/13/13	Tue 12/3/13																										
11	Financial Evaluation	14 days	Wed 12/4/13	Mon 12/23/13																										
12	Tender Committee Deliberation	28 days	Tue 12/24/13	Thu 1/30/14																										
13	Contract Award	21 days	Fri 1/31/14	Fri 2/28/14																										
14	Notification of Award	14 days	Fri 1/31/14	Wed 2/19/14																										
15	Negotiation and Contract Signing	7 days	Thu 2/20/14	Fri 2/28/14																										
16	Construction	86 days	Mon 3/3/14	Mon 6/30/14																										
17	Environmental Impact Assessment	86 days	Mon 3/3/14	Mon 6/30/14																										
18	Project Implementation	393 days	Tue 7/1/14	Thu 12/31/15																										

Task: Project Summary, External Tasks, External Milestone, Inactive Task, Inactive Milestone, Manual Task, Manual Milestone, Manual Summary, Manual Summary Rollup, Manual Summary, Start-only, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, Progress, Deadline.

Project: Construction of Additional Ten  
 Date: Wed 3/5/14

KENYA PIPELINE CO LTD      MR. CHARLES TANUI      MANAGING DIRECTOR SIGNATURE: \_\_\_\_\_      DATE: \_\_\_\_\_



REPUBLIC OF KENYA



CONSTRUCTION OF ADDITIONAL TANKS AT NAIROBI TERMINAL EPC CONTRACT PROPOSED PROGRAMME OF WORKS		KENYA PIPELINE COMPANY												(1ST JUL 2013 - 4TH NOV 2016)												
ID	Task Name	Duration	Start	Finish	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	
1	Tender Documentation by KPC	130 days	Mon 7/1/13	Thu 11/7/13																						
2	Preparation of Scope and Specifications	20 days	Mon 7/1/13	Sat 7/20/13																						
3	Preparation of Site Layouts	20 days	Mon 7/1/13	Sat 7/20/13																						
4	Compilation of Tender Document	50 days	Sun 7/21/13	Sun 9/8/13																						
5	Review of Tender Documents and approval	60 days	Mon 9/9/13	Thu 11/7/13																						
6	<b>Tendering process</b>	99 days	Fri 11/8/13	Fri 2/14/14																						
7	Preparation for advertisement and floating of tenders	14 days	Fri 11/8/13	Thu 11/21/13																						
8	International tendering as extended	85 days	Fri 11/22/13	Fri 2/14/14																						
9	<b>Tender Evaluation</b>	48 days	Mon 2/17/14	Sat 4/5/14																						
10	Appointment of Evaluation Committee	1 day	Mon 2/17/14	Mon 2/17/14																						
11	Technical Evaluation	14 days	Tue 2/18/14	Mon 3/3/14																						
12	Tender Committee approval	10 days	Thu 3/6/14	Sat 3/15/14																						
13	Notification for financial opening	7 days	Sun 3/16/14	Sat 3/22/14																						
14	Financial Evaluation	7 days	Sun 3/23/14	Sat 3/29/14																						
15	Tender Committee approval for award	7 days	Sun 3/30/14	Sat 4/5/14																						
16	<b>Contract Award</b>	46 days	Sun 4/6/14	Wed 5/21/14																						
17	Issuance of letter of award	7 days	Sun 4/6/14	Sat 4/12/14																						
18	No Objection to award	14 days	Sun 4/13/14	Sat 4/26/14																						
19	Contract negotiations	7 days	Sun 4/27/14	Sat 5/3/14																						
20	Contract signing	4 days	Sun 5/4/14	Wed 5/7/14																						
21	Notice to commence	14 days	Thu 5/8/14	Wed 5/21/14																						
22	<b>Construction</b>	900 days	Thu 5/22/14	Sun 11/6/16																						
23	Design by the EPC contractor	30 days	Thu 5/22/14	Fri 6/20/14																						
24	Review and approval of designs by KPC	14 days	Sat 6/21/14	Fri 7/4/14																						
25	EIAS by the EPC contractor	60 days	Sat 7/5/14	Tue 9/2/14																						
26	Review of EIA report by KPC	14 days	Wed 9/3/14	Tue 9/16/14																						
27	Finalisation of EIA report and submission to NEMA	7 days	Wed 9/17/14	Tue 9/23/14																						
28	NEMA Licence for the works	45 days	Wed 9/24/14	Fri 11/7/14																						
29	Approvals by local authority namely Nairobi	30 days	Sat 7/5/14	Sun 8/3/14																						
30	Construction of the works	700 days	Sat 11/8/14	Fri 10/7/16																						
31	Commissioning	30 days	Sat 10/8/16	Sun 11/6/16																						

KENYA PIPELINE CO LTD      MR. CHARLES TANUI      MANAGING DIRECTOR SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_



REPUBLIC OF KENYA



**PROPOSED JET A1 DEPOT WITHIN JOMO KENYATTA INTERNATIONAL AIRPORT (JKIA) PROPOSED PROGRAMME OF WORKS** **KENYA PIPELINE COMPANY** **(07TH JAN 2014 - 28TH SEPT 2016)**

Task Name	Duration	Start	Finish	2014												2015												2016												2017											
				Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1 PROPOSED JET-A1 DEPOT WITHIN JKIA	712 days	Tue 1/7/14	Wed 9/28/16	[Gantt bar with KPC logo]																																															
2 Tender Documentation	60 days	Tue 1/7/14	Mon 3/31/14	[Gantt bar with KPC logo]																																															
3 Preparation of Scope and Specifications	12 days	Tue 1/7/14	Wed 1/22/14	[Gantt bar with KPC logo]																																															
4 Preparation of Site Layouts	2 days	Thu 1/23/14	Fri 1/24/14	[Gantt bar with KPC logo]																																															
5 Compilation of Tender Document	45 days	Fri 1/10/14	Fri 3/1/14	[Gantt bar with KPC logo]																																															
6 Review of Tender Document [Legal and Finance]	11 days	Mon 3/17/14	Mon 3/31/14	[Gantt bar with KPC logo]																																															
7 Advertisement	61 days	Tue 4/1/14	Tue 6/24/14	[Gantt bar with KPC logo]																																															
8 Request for approval to advertise	2 days	Tue 4/1/14	Wed 4/2/14	[Gantt bar with KPC logo]																																															
9 Preparation to advertise and publication	3 days	Thu 4/3/14	Mon 4/7/14	[Gantt bar with KPC logo]																																															
10 National/ International Advertisement	56 days	Tue 4/8/14	Tue 6/24/14	[Gantt bar with KPC logo]																																															
11 Evaluation	34 days	Wed 6/25/14	Mon 8/11/14	[Gantt bar with KPC logo]																																															
12 Appointment of Tender Processing Committee	5 days	Wed 6/25/14	Tue 7/1/14	[Gantt bar with KPC logo]																																															
13 Technical Evaluation	7 days	Wed 7/2/14	Thu 7/10/14	[Gantt bar with KPC logo]																																															
14 Financial Evaluation	8 days	Fri 7/11/14	Tue 7/22/14	[Gantt bar with KPC logo]																																															
15 Tender Committee Deliberation	14 days	Wed 7/23/14	Mon 8/11/14	[Gantt bar with KPC logo]																																															
16 Contract Award	23 days	Tue 8/12/14	Thu 9/11/14	[Gantt bar with KPC logo]																																															
17 Notification of Award	14 days	Tue 8/12/14	Fri 8/29/14	[Gantt bar with KPC logo]																																															
18 Negotiation and Contract Signing	9 days	Mon 9/1/14	Thu 9/11/14	[Gantt bar with KPC logo]																																															
19 Project Implementation	534 days	Fri 9/12/14	Wed 9/28/16	[Gantt bar with KPC logo]																																															

Project: Construction of Parallel Pipeline  
Date: Tue 3/4/14

KENYA PIPELINE CO LTD      MR. CHARLES TANUI      MANAGING DIRECTOR SIGNATURE: \_\_\_\_\_      DATE: \_\_\_\_\_



REPUBLIC OF KENYA



**PROPOSED NAIROBI LIQUIFIED PETROLEUM GAS FACILITY PROPOSED PROGRAMME OF WORKS**

**KENYA PIPELINE COMPANY**

**(14th FEB 2014 - 09TH DEC 2016)**

ID	Task Name	Duration	Start	Finish	2014	2015	2016
					Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1	<b>NAIROBI LPG STORAGE AND DISTRIBUTION FACILITIES</b>	<b>736 days</b>	<b>Fri 14/02/14</b>	<b>Fri 09/12/16</b>			
2	Project Approvals	1 mon	Fri 14/02/14	Thu 13/03/14			
3	Purchase of Project Site	120 days	Fri 14/03/14	Thu 28/08/14			
4	Advertise for land	15 days	Fri 14/03/14	Thu 03/04/14			
5	Receive and evaluate offers	45 days	Fri 04/04/14	Thu 05/06/14			
6	Negotiate and procure new site for Project	3 mons	Fri 06/06/14	Thu 28/08/14			
7	<b>Procure a consultant to Prepare tender documents for EPC contractor and carry out EIAS</b>	<b>81 days</b>	<b>Fri 29/08/14</b>	<b>Fri 19/12/14</b>			
8	Invitation to Tender	1 day	Fri 29/08/14	Fri 29/08/14			
9	Receive Bids	30 days	Mon 01/09/14	Fri 10/10/14			
10	Evaluate Bids	30 days	Mon 13/10/14	Fri 21/11/14			
11	TC approval of award of contract	5 days	Mon 24/11/14	Fri 28/11/14			
12	Notification of award of contract	14 days	Mon 01/12/14	Thu 18/12/14			
13	Award of contract	1 day	Fri 19/12/14	Fri 19/12/14			
14	<b>Undertake ESIA, Prepare Designs and Tender Documents for EPC contractor</b>	<b>65 days</b>	<b>Mon 05/01/15</b>	<b>Fri 03/04/15</b>			
15	Undertake Environment and Social Impact Assessment	45 days	Mon 05/01/15	Fri 06/03/15			
16	Prepare Front End Engineering Designs	45 days	Mon 05/01/15	Fri 06/03/15			
17	Prepare Tender Documents	20 days	Mon 09/03/15	Fri 03/04/15			
18	<b>Selection of EPC Contractor</b>	<b>80 days</b>	<b>Mon 06/04/15</b>	<b>Fri 24/07/15</b>			
19	Invitation to Tender	1 day	Mon 06/04/15	Mon 06/04/15			
20	Receive bids	30 days	Tue 07/04/15	Mon 18/05/15			
21	Evaluate bids	30 days	Tue 19/05/15	Mon 29/06/15			
22	Notification of award contract	14 days	Tue 30/06/15	Fri 17/07/15			
23	Award of Contract	5 days	Mon 20/07/15	Fri 24/07/15			
24	<b>Project Detailed Design, Procurement of Materials and Construction</b>	<b>360 days</b>	<b>Mon 27/07/15</b>	<b>Fri 09/12/16</b>			
25	Detailed Design, Procurement, Construction and Commissioning	18 mons	Mon 27/07/15	Fri 09/12/16			

Project: Implementation timesheet for 1  
Date: Fri 07/03/14

Task Summary: External Task, Inactive Task, Project Summary, External Milestone, Inactive Milestone, Manual Task, Inactive Milestone, Manual Task

Task Legend: Task, Split, Milestone, Summary

MANAGING DIRECTOR SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

KENYA PIPELINE CO LTD



REPUBLIC OF KENYA



**CONSTRUCTION OF PARALLEL PIPELINE FROM SINENDET TO KISUMU - EPC CONTRACT PROPOSED PROGRAMME OF WORKS** (1st OCT 2013 - 22ND MAY 2016)

ID	Task Name	Duration	Start	Finish	2013	2014	2015	2016
1	Tender Documentation by KPC	110 days	Tue 10/1/13	Sat 1/18/14				
2	Preparation of Scope and Specifications	20 days	Tue 10/1/13	Sun 10/20/13				
3	Preparation of Site Layouts	20 days	Tue 10/1/13	Sun 10/20/13				
4	Compilation of Tender Document	50 days	Mon 10/21/13	Mon 12/9/13				
5	Review of Tender Documents and approval	40 days	Tue 12/10/13	Sat 1/18/14				
6	Tendering process	72 days	Sat 2/22/14	Sun 5/4/14				
7	Preparation for advertisement and floating of tenders	14 days	Sat 2/22/14	Fri 3/7/14				
8	International tendering	56 days	Mon 3/10/14	Sun 5/4/14				
9	Tender Evaluation	46 days	Mon 5/5/14	Thu 6/19/14				
10	Appointment of Evaluation Committee	1 day	Mon 5/5/14	Mon 5/5/14				
11	Technical Evaluation	14 days	Tue 5/6/14	Mon 5/19/14				
12	Tender Committee approval	10 days	Tue 5/20/14	Thu 5/29/14				
13	Notification for financial opening	7 days	Fri 5/30/14	Thu 6/5/14				
14	Financial Evaluation	7 days	Fri 6/6/14	Thu 6/12/14				
15	Tender Committee approval for award	7 days	Fri 6/13/14	Thu 6/19/14				
16	Contract Award	46 days	Fri 6/20/14	Mon 8/4/14				
17	Issuance of letter of award	7 days	Fri 6/20/14	Thu 6/26/14				
18	No Objection to award	14 days	Fri 6/27/14	Thu 7/10/14				
19	Contract negotiations	7 days	Fri 7/11/14	Thu 7/17/14				
20	Contract signing	4 days	Fri 7/18/14	Mon 7/21/14				
21	Notice to commence	14 days	Tue 7/22/14	Mon 8/4/14				
22	Construction	693 days	Tue 8/5/14	Mon 6/27/16				
23	Design by the EPC contractor	30 days	Tue 8/5/14	Wed 9/3/14				
24	Review and approval of designs by KPC	14 days	Thu 9/4/14	Wed 9/17/14				
25	EIAS by the EPC contractor	50 days	Thu 9/18/14	Thu 11/6/14				
26	Review of EIA report by KPC	7 days	Fri 11/7/14	Thu 11/13/14				
27	Finalisation of EIA report and submission to NEMA	7 days	Fri 11/14/14	Thu 11/20/14				
28	NEMA Licence for the works	45 days	Fri 11/21/14	Sun 1/4/15				
29	Approval of railways crossing by KPC	30 days	Thu 9/18/14	Fri 10/17/14				
30	Approval of road crossings by KENHA, KERRA	30 days	Thu 9/18/14	Fri 10/17/14				
31	Approval by Telkom on fibre optic cables	30 days	Thu 9/18/14	Fri 10/17/14				
32	Approvals by local authorities namely Kisumu	30 days	Thu 9/18/14	Fri 10/17/14				
33	Construction of the works	510 days	Mon 1/5/15	Sat 5/28/16				
34	Commissioning	30 days	Sun 5/29/16	Mon 6/27/16				

Task Split Milestone Summary

Project Summary External Tasks External Milestone Inactive Task Inactive Milestone Inactive Summary Manual Task

Duration-only Manual Summary Rollup Manual Summary Start-only

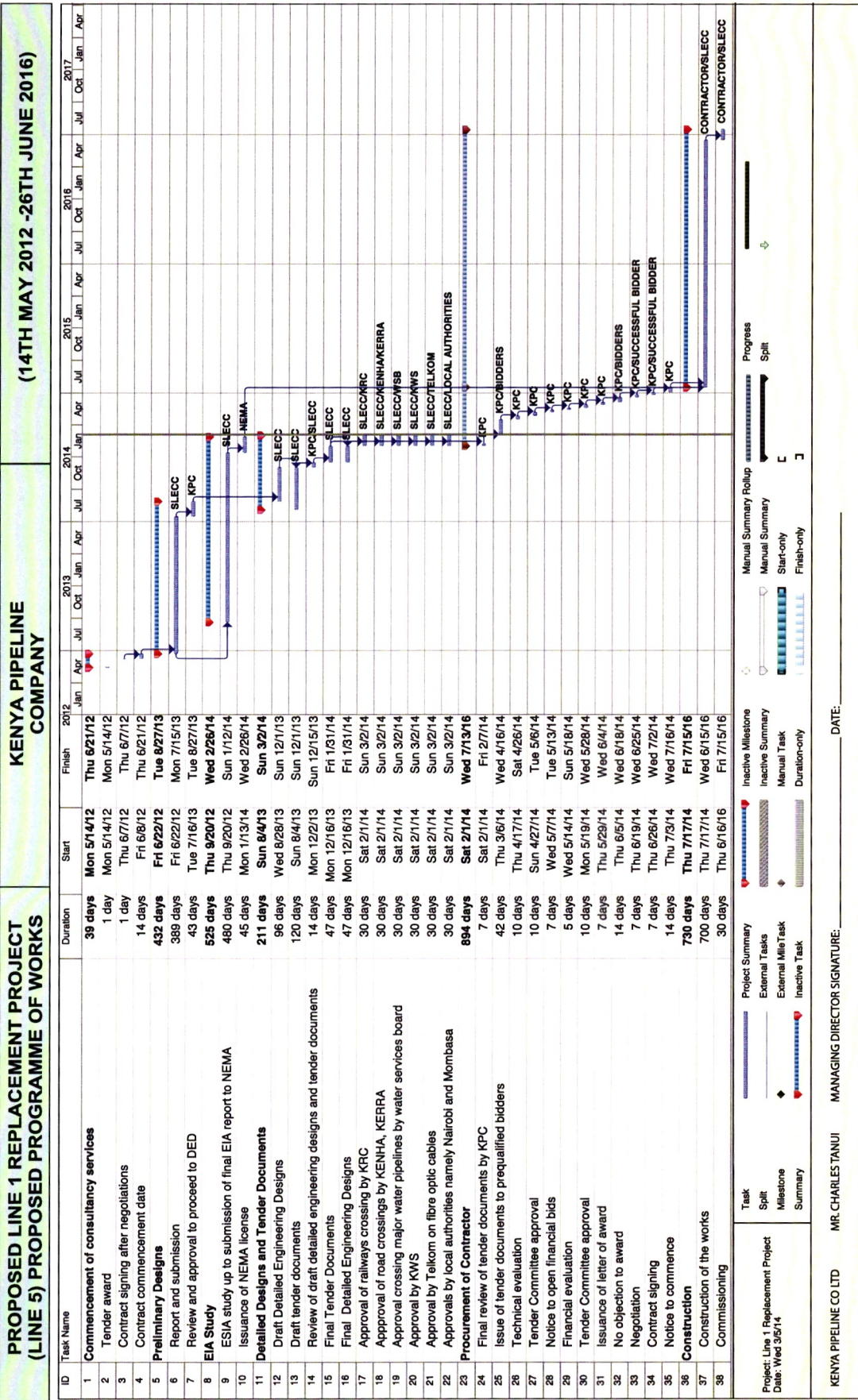
Finish-only Progress Deadline

Project: Construction of Parallel Pipeline  
Date: Tue 3/4/14

KENYA PIPELINE CO LTD MR. CHARLES TANUI MANAGING DIRECTOR SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_



REPUBLIC OF KENYA





# GEOHERMAL DEVELOPMENT COMPANY

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1.	Introduction/Background
2.	Project Design and Implementation Approach
3.	Projects Update <ul style="list-style-type: none"><li>a. 100MW Menengai</li><li>b. 360MW Menengai</li><li>c. 150MW Suswa</li><li>d. 200MW Baringo-Silali</li></ul>
4.	Project Outcome
5.	Benefits of the Project
6.	Project Stakeholders
7.	Parties Involved and Responsibilities
8.	Appendix: Gantt Charts



## 1. Introduction

### 1.2 General Background

Kenya is endowed with a huge potential of high temperature resource estimated at between 7000 to 10000 MWe that largely remains untapped. Geothermal is the least cost (most economic) source of electric power for Kenya. Despite the fact that geothermal is the best option for Kenya and that the Country has had a long geothermal development period spanning over 50 years, only 260 MW is being utilized. This slow development is attributed to the fact that geothermal development requires large upfront financing which the existing public entities may not support by their balance sheets, and high upstream development risks that have deterred private sector participation.

The Ministry of Energy has rolled out programmes for the development of 5000+MW of energy by the year 2016. Under this framework, GDC will develop 810MW of geothermal energy from three geothermal prospects.

### 1.3 Target Projects

The development of the 810MW of geothermal by GDC will be based on the ongoing activities in Menengai and additional works to be commissioned in other projects namely Suswa and Baringo-Silali geothermal fields. The plan is to incrementally develop the 810MW from the different projects over the next 40 months as shown in the tables below.

#### Fast Tracking of Power Generation by Gdc

	Dec-13	Jun-14	Dec-14	Jun-15	Dec-15	Jun-16	Dec-16	Project
	6 Months	12 Months	18 Months	24 Months	30 Months	36 Months	42 Months	Totals
<b>Target Totals</b>			<b>100</b>	<b>60</b>	<b>100</b>	<b>150</b>	<b>400</b>	
Menengai	-	-	100	60	100	100	100	460
Suswa	-	-	-	-	-	50	100	150
Baringo-silali	-	-	-	-	-	-	200	200
Total (Mw)	-	-	100	60	100	150	400	
<b>Cumulative Mw</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>160</b>	<b>260</b>	<b>410</b>	<b>810</b>	



The Government recognizes that it will be difficult to finance the 5000+MW without the participation of both the public and the private investors. GDC will accelerate geothermal development including facilitating entry of Independent Power Producers (IPP) to the sector as a means to mobilize development capital.

In these projects, GDC will develop the steam resource (fuel) thereby shielding the private sector from the resource related exploration risks that have deterred their participation. In addition, GDC will offer the private sector the generation opportunities and in turn enable the sector mobilize private development capital.

---

## 2. Project Design and Implementation Approach

The projects will be undertaken as outlined below;

### 2.1 Infrastructural Development

The infrastructural development phase involves construction of main access roads, establishment of drilling water system including electricity for powering the pumping system, well pads and drilling fluid recirculation ponds. These activities are undertaken by GDC.

### 2.2 Steam Development

Three to four exploration wells will be drilled in each of the prospects to prove steam. The exploration wells will be followed by drilling of appraisal wells after which a feasibility study will be carried out. Positive outcomes of the feasibility studies will lead to drilling of production wells.



This segment of the project will be financed and undertaken by GDC using in-house capability. GDC will develop the steam and own the wells.

### **2.3 Power Plant Construction**

The steam will be provided to independent power producers who will finance, build, own, operate and transfer the power plants for a predetermined period under the Build Own and Operate (BOO) structure. GDC will construct a network of steam gathering pipelines from the various wells that will conduct the steam to the power plants.

### **2.4 Substation and Transmission**

In order to evacuate the power, Kenya Electricity Transmission Company (KETRACO) will construct the transmission line.

The power generated is then expected to be sold to the national offtaker, in this case Kenya Power & Lighting Company Limited. The power generator will enter into a Power Purchase Agreement with the Offtaker.





### 3. 810mw GDC Projects Development Update

The overall objective of this project is to increase the national electricity generation capacity by an additional 810MW from geothermal sources.

#### 3.1 100 MW Menengai

The procurement of the Independent Power Producers (IPPs) started in June 2013 where three IPPs were contracted to develop three power plants of capacities between 33MW and 37MW. The Project Steam Supply Agreement was completed and signed on November 2013. Negotiations between the IPPs and KPLC for Power Purchase Agreement are ongoing

The procurement of an EPC contractor for the Steam Gathering system commenced in August 2013 and was awarded in December 2013. The contractor has began the design and mobilization to site. The construction period for the Steam Gathering system is 10 months will be completed in November 2014.

Environmental and social impact assessment (ESIA) for the project commenced in August 2013 and the ESIA license was issued in in October 2013.

The project Feasibility study was carried out from November 2013 and the final feasibility study report is expected by the end of January 2014.

Drilling for steam commenced in 2011 and to date, a total of 22 wells have been completed and the drilling of 5 other wells is in progress. Out of the drilling, the available steam so far is 70MW in which the well capacities range between 2MW and 13MW. 6 wells are in various stages of heating up and testing. GDC has employed 5 rigs for the drilling at Menengai

#### 3.2 360 MW Menengai

The development of 360MW over the next 40 months in phases as follows;

- 60MW by June 2015
- 100MW by December 2015
- 100MW by June 2016
- 100MW by December 2016

GDC will deploy 6 drilling rigs in the drilling of these wells and the tender documents for the same are under preparation in progress



### 3.3 150MW Suswa

The development of 150MW over the next 40 months in phases as follows;

- 50MW by June 2016
- 100MW by December 2016

Detailed Surface studies were completed in 2013 and the project ESIA in progress. Community engagement framework was established in 2013. Feasibility study relating to drilling is at an advanced stage. The infrastructure works are scheduled to commence in the next financial year. An invitation for expression of interest by the private sector to participate in the development was issued and the proposal will be opened soon.

### 3.4 200MW Baringo-Silali

The 200MW will be developed in the next 40 months by December 2016. Detailed Surface studies have been completed and the Environmental Licence obtained.

Community engagement framework has been established and Land – Approval by Baringo County Government has been obtained. Infrastructure development will commence in January 2014. The Government has secured a loan to commence the work.





## 4. Project Outcome

The following results are expected to be achieved;

- 1) Reduction of perceived resource risks and mobilization of additional funding from the private sector,
- 2) Addition of 810 MW from geothermal to the national grid by 2016, replication of the development model to achieve the target 5,000+MW generation capacity by 2016,
- 3) Increased private sector participation in power generation, and
- 4) Improved livelihoods to the communities around geothermal areas through job creation.

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## 5. Benefits of the project

Geothermal development in Kenya will contribute to increase energy security of the country, enhance firm and reliable base load generation capacity, and promote low-carbon development. The project benefits include;

- 1) **Reduced Electricity Tariffs.** Currently, the country is procuring emergency power at 22 US cents per kilowatt hour. Alternative oil based source of power cost about 16 US cents per kilowatt hour. It is projected that the cost of power from this project will be below 10 US cents per kilowatt hour therefore contributing to lowering the cost of electricity.
- 2) **Job Creation and Income Generation:** The project will enable job creation opportunities enhancing income generation activities.
- 3) **Increased Security:** Geothermal development will enhance security in the areas as a result of the economic activities and social amenities.
- 4) **Forest Conservation:** Displacement of biomass fuel consumption by enhanced access to electricity will contribute to conserve forests that are also serving as water catchment areas.



## **6. Project Stakeholders**

### **6.1 Project Beneficiaries**

The project stakeholders will accrue benefits from the implementation of the project.

#### **6.1.2 The Public**

The country will benefit from the project through the injection of additional competitively-priced electric power to the national grid aimed at meeting public power needs.

#### **6.1.3 GDC**

GDC will accrue revenue from the project which will be re-employed in further geothermal development.

#### **6.1.4 The Private Sector**

The Private Sector will accrue return on investment

#### **6.1.5 Local Community**

There will be job creation and enhanced economic activity for the local community.



## 7. Parties Involved and Responsibilities

**Geothermal Development Company Limited (GDC)** will own and implement the project. GDC will enter into a steam sales/supply contract and may in addition sign an investment contract with the IPPs. In addition, GDC will enter into an agreement with KPLC for compensation of supplied steam and a wheeling contract with KETRACO.

**Ministry of Energy & Petroleum (MOEP)** will offer coordination & supervisory role to all players.

**Energy Regulatory Commission (ERC)** –will ratify the Power Purchase Agreements and the Tariff.

**Kenya Power and Lighting Company (KPLC)** –will enter into Power Purchase Agreements with IPP & offtake the power. In addition, KPLC will enter into a wheeling power contract with KETRACO and a steam compensation agreement with GDC.

**Kenya Electricity Transmission Company Ltd (KETRACO)** –will avail the evacuation facilities and enter into a wheeling contract with KPLC.

**Independent Power Producers (IPPs):** The IPPs will enter into a steam sale agreement and an investment contract with GDC. The IPPs will also enter into a Power Purchase Agreement with KPLC and acquire a generation license from ERC.

**The Government of Kenya (through the Ministry of Finance)** will finance the project through budgetary allocations and support from development partners. It will also provide securities and facilitate guarantees.

# APPENDIX

## GEOHERMAL DEVELOPMENT COMPANY WORKPLAN







REPUBLIC OF KENYA



**5000+MW NATIONAL ENERGY PROJECTS  
GDC 200MW BARINGO SILALI**

**GEOTHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2009	2010	2011	2012	2013	2014	2015	2016	2017
					M	J	J	S	N	J	M	M	J
					M	J	J	S	N	J	M	M	J
84	Construction	120 d	Wed 3/26/14	Wed 7/23/14									
85	PAYMENT MILESTONES	120 d	Wed 3/26/14	Wed 7/23/14									
86	Advance payment (20%)	30 d	Wed 3/26/14	Thu 4/24/14									
87	30% Payment against 50% Progress	60 d	Wed 3/26/14	Sat 5/24/14									
88	20% Payment against 80% progress	90 d	Wed 3/26/14	Mon 6/23/14									
89	30% Payment for Work completion	120 d	Wed 3/26/14	Wed 7/23/14									
90	WATER STORAGE SYSTEM (KSH 200M)	199 d	Wed 12/4/13	Fri 6/20/14									
91	Preparation of RFP Document	21 d	Wed 12/4/13	Tue 12/24/13									
92	Advertisement	0 d	Tue 12/24/13	Tue 12/24/13									
93	Tendering	30 d	Wed 12/25/13	Thu 1/23/14									
94	Evaluation	7 d	Fri 1/24/14	Thu 1/30/14									
95	TC Approval of evaluation report	7 d	Fri 1/31/14	Thu 2/6/14									
96	Notification of award	7 d	Fri 2/7/14	Thu 2/13/14									
97	Contract Negotiations	7 d	Fri 2/14/14	Thu 2/20/14									
98	Contract signing	0 d	Thu 2/20/14	Thu 2/20/14									
99	IMPLEMENTATION	120 d	Fri 2/21/14	Fri 6/20/14									
100	Delivery & installation at site	120 d	Fri 2/21/14	Fri 6/20/14									
101	PAYMENT MILESTONES	120 d	Fri 2/21/14	Fri 6/20/14									
102	Issuance of 70% LC	14 d	Fri 2/21/14	Thu 3/6/14									
103	Advance payment (20%)	30 d	Fri 2/21/14	Sat 3/22/14									
104	30% Payment against 60% Progress	60 d	Fri 2/21/14	Mon 4/21/14									
105	40% Payment against 100% progress	90 d	Fri 2/21/14	Wed 5/21/14									
106	10% Final Payment Upon Acceptance	120 d	Fri 2/21/14	Fri 6/20/14									
107	WATER PIPELINE (KSH 420M)	306 d	Tue 10/1/13	Sat 8/2/14									
108	Preparation of RFP Document	21 d	Tue 10/1/13	Mon 10/21/13									
109	Advertisement	0 d	Mon 1/20/14	Mon 1/20/14									
110	Tendering	30 d	Mon 1/20/14	Tue 2/18/14									
111	Evaluation	5 d	Wed 2/19/14	Sun 2/23/14									
112	TC Approval of evaluation report	2 d	Mon 2/24/14	Tue 2/25/14									
113	Notification of award	7 d	Wed 2/26/14	Tue 3/4/14									
114	Contract Negotiations	7 d	Wed 3/5/14	Tue 3/11/14									
115	Contract signing	0 d	Tue 3/11/14	Tue 3/11/14									
116	IMPLEMENTATION	144 d	Wed 3/12/14	Sat 8/2/14									
117	Issuance of 70% LC	7 d	Wed 3/12/14	Tue 3/18/14									
118	30% Advance Payment	30 d	Wed 3/12/14	Thu 4/10/14									
119	Delivery to site	120 d	Wed 3/12/14	Wed 7/9/14									
120	70% Final Payment	0 d	Sat 8/2/14	Sat 8/2/14									8/2

CERTIFIED BY: DR. SILAS M SIMIYU  
MANAGING DIRECTOR & CEO

SIGNATURE:





REPUBLIC OF KENYA



**5000+MW NATIONAL ENERGY PROJECTS  
GDC 200MW BARINGO SILALI**

**GEOHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2009	2010	2011	2012	2013	2014	2015	2016	2017
					M J S N J M M J S N J	M M J S N J M M J S N J	M M J S N J M M J S N J	M M J S N J M M J S N J	M M J S N J M M J S N J	M M J S N J M M J S N J	M M J S N J M M J S N J	M M J S N J M M J S N J	M M J S N J M M J S N J
158	PAYMENT MILESTONES	157 d	Sun 3/2/14	Tue 8/5/14									
159	Issuance of 70% LC	14 d	Sun 3/2/14	Sat 3/15/14									
160	Advance payment (20%)	30 d	Sun 3/9/14	Mon 4/7/14									
161	30% Payment against 50% Progress	30 d	Tue 4/8/14	Wed 5/7/14									
162	20% Payment against 90% progress	30 d	Thu 5/8/14	Fri 6/6/14									
163	10% Payment Upon Final Acceptance	60 d	Sat 6/7/14	Tue 8/5/14									
164	STORES (KSH 50M)	276 d	Fri 12/6/13	Sun 9/7/14									
165	BIDDING PROCESS	89 d	Fri 12/6/13	Tue 3/4/14									
166	Preparation of tender documents	14 d	Fri 12/6/13	Thu 12/19/13									
167	Issue of tender documents	5 d	Fri 12/20/13	Tue 12/24/13									
168	Bidding period	30 d	Wed 12/25/13	Thu 1/23/14									
169	Tender Evaluation	5 d	Fri 1/24/14	Tue 1/28/14									
170	TC Approval	2 d	Wed 1/29/14	Thu 1/30/14									
171	Notification of Award	7 d	Fri 1/31/14	Thu 2/6/14									
172	Draft contract preparation & Negotiation	21 d	Fri 2/7/14	Thu 2/27/14									
173	Contract signing	0 d	Tue 3/4/14	Tue 3/4/14									
174	IMPLEMENTATION	187 d	Wed 3/5/14	Sun 9/7/14									
175	Notice to Commence	7 d	Wed 3/5/14	Tue 3/11/14									
176	Construction	120 d	Wed 3/12/14	Wed 7/9/14									
177	PAYMENT MILESTONES	180 d	Wed 3/12/14	Sun 9/7/14									
178	Advance payment (20%)	30 d	Wed 3/12/14	Thu 4/10/14									
179	30% Payment against 50% Progress	30 d	Fri 4/11/14	Sat 5/10/14									
180	20% Payment against 70% progress	30 d	Sun 5/11/14	Mon 6/9/14									
181	20% Payment against 90% progress	30 d	Tue 6/10/14	Wed 7/9/14									
182	10% Payment for operational	60 d	Thu 7/10/14	Sun 9/7/14									
183	DRILLING OF 1 WELL - BARINGO (KSH 200M)	220 d	Thu 1/30/14	Sat 9/6/14									
184	Mobilization (KSH 20M)	90 d	Thu 1/30/14	Tue 4/29/14									
185	Drilling Materials (KSH 100M)	120 d	Thu 1/30/14	Thu 5/29/14									
186	Operations (KSH 80M)	100 d	Fri 5/30/14	Sat 9/6/14									
187	RIGS CONTRACTS	448 d	Fri 12/6/13	Thu 2/26/15									
188	DRILLING SERVICES - KFW-3 Rigs	373 d	Thu 12/19/13	Fri 12/26/14									
189	EOI proposal submission	30 d	Thu 12/19/13	Fri 1/17/14									
190	KFW no objection - EOI	7 d	Sat 1/18/14	Fri 1/24/14									
191	EOI Tendering	45 d	Tue 7/1/14	Thu 8/14/14									
192	Evaluation of EOI and shortlisting	7 d	Fri 8/15/14	Thu 8/21/14									
193	KFW no objection - shortlist	7 d	Fri 8/22/14	Thu 8/28/14									
194	Tender preparation	5 d	Fri 8/29/14	Tue 9/2/14									

CERTIFIED BY: DR. SILAS M SIMIYU  
MANAGING DIRECTOR & CEO

SIGNATURE:



REPUBLIC OF KENYA



**5000+MW NATIONAL ENERGY PROJECTS  
GDC 200MW BARINGO SILALI**

**GEOHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2009	2010	2011	2012	2013	2014	2015	2016	2017												
					M	J	S	N	J	M	M	J	S	N	J	M	M	J	S	N	J	M	M	J	
195	KFW no objection - Tender	7 d	Wed 9/3/14	Tue 9/9/14																					
196	Tendering	30 d	Wed 9/10/14	Thu 10/9/14																					
197	Evaluation	7 d	Fri 10/10/14	Thu 10/16/14																					
198	KFW no objection - evaluation	5 d	Fri 10/17/14	Tue 10/21/14																					
199	Award and contract negotiation	7 d	Wed 10/22/14	Tue 10/28/14																					
200	KFW no objection - draft contract	7 d	Wed 10/29/14	Tue 11/4/14																					
201	contract signing	7 d	Wed 11/5/14	Tue 11/11/14																					
202	Advance payment (20%)	30 d	Wed 11/12/14	Thu 12/11/14																					
203	Rig mobilization and rig-up	45 d	Wed 11/12/14	Fri 12/26/14																					
204	3 DRILLING RIGS	448 d	Fri 12/6/13	Thu 2/26/15																					
205	Funding Approval	60 d	Fri 12/6/13	Mon 2/3/14																					
206	Tendering	30 d	Tue 2/4/14	Wed 3/5/14																					
207	Evaluation	7 d	Thu 3/6/14	Wed 3/12/14																					
208	Contract Negotiation & Award	14 d	Thu 3/13/14	Wed 3/26/14																					
209	Contract signing	7 d	Thu 3/27/14	Wed 4/2/14																					
210	Design & manufacture	270 d	Thu 4/3/14	Sun 12/28/14																					
211	Delivery to Site	60 d	Mon 12/29/14	Thu 2/26/15																					
212	PROCUREMENT OF MATERIALS	155 d	Mon 12/23/13	Mon 5/26/14																					
213	Tender Document Preparation	14 d	Mon 12/23/13	Sun 1/5/14																					
214	Tendering	30 d	Mon 1/6/14	Tue 2/4/14																					
215	Evaluation	7 d	Wed 2/5/14	Tue 2/11/14																					
216	Award	14 d	Wed 2/12/14	Tue 2/25/14																					
217	Delivery	90 d	Wed 2/26/14	Mon 5/14/17																					
218	CONSULTANCY SERVICES	1353 d	Sat 8/31/13	Sun 5/14/17																					
219	MANAGEMENT & SUPERVISION	1113 d	Sat 8/31/13	Fri 9/16/16																					
220	EOI proposal submission	15 d	Sat 8/31/13	Sun 9/15/13																					
221	KFW no objection - EOI	200 d	Sun 9/15/13	Thu 4/3/14																					
222	EOI Tendering	30 d	Thu 4/3/14	Sat 5/3/14																					
223	Evaluation of EOI and shortlisting	7 d	Sat 5/3/14	Sat 5/10/14																					
224	KFW no objection - shortlist	5 d	Sat 5/10/14	Thu 5/15/14																					
225	Tender preparation	14 d	Thu 5/15/14	Thu 5/29/14																					
226	KFW no objection - Tender	5 d	Thu 5/29/14	Tue 6/3/14																					
227	Tendering	45 d	Tue 6/3/14	Fri 7/18/14																					
228	Evaluation	7 d	Fri 7/18/14	Fri 7/25/14																					
229	KFW no objection - evaluation	5 d	Fri 7/25/14	Wed 7/30/14																					
230	Award and contract negotiation	21 d	Wed 7/30/14	Wed 8/20/14																					
231	KFW no objection - draft contract	5 d	Wed 8/20/14	Mon 8/25/14																					

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 200MW BARINGO SILALI**

**GEOTHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2009	2010	2011	2012	2013	2014	2015	2016	2017
232	contract signing	14 d	Mon 8/25/14	Mon 9/8/14									
233	Mobilization	30 d	Mon 9/8/14	Wed 10/8/14									
234	Contract performance	710 d	Wed 10/8/14	Fri 9/16/16									
235	TRANSACTION ADVISOR	1083 d	Wed 5/28/14	Sun 5/14/17									
236	EOI proposal submission	15 d	Wed 5/28/14	Thu 6/12/14									
237	KFW no objection - EOI	200 d	Thu 6/12/14	Mon 12/29/14									
238	EOI proposal Tendering	30 d	Mon 12/29/14	Wed 1/28/15									
239	Evaluation of EOI and shortlisting	7 d	Wed 1/28/15	Wed 2/4/15									
240	KFW no objection - shortlist	5 d	Wed 2/4/15	Mon 2/9/15									
241	Tender preparation	14 d	Mon 2/9/15	Mon 2/23/15									
242	KFW no objection - Tender	5 d	Mon 2/23/15	Sat 2/28/15									
243	Tendering	45 d	Sat 2/28/15	Tue 4/14/15									
244	Evaluation	7 d	Tue 4/14/15	Tue 4/21/15									
245	KFW no objection - evaluation	5 d	Tue 4/21/15	Sun 4/26/15									
246	Award and contract negotiation	21 d	Sun 4/26/15	Sun 5/17/15									
247	KFW no objection - draft contract	5 d	Sun 5/17/15	Fri 5/22/15									
248	contract signing	14 d	Fri 5/22/15	Fri 6/5/15									
249	Contract Performance	710 d	Fri 6/5/15	Sun 5/14/17									
250	<b>PROJECT SITE PREPARATION</b>	<b>458 d</b>	<b>Thu 9/20/12</b>	<b>Sat 12/21/13</b>									
251	LAND	458 d	Thu 9/20/12	Sat 12/21/13									
252	Application for Land Rights	45 d	Thu 9/20/12	Sat 11/3/12									
253	Approval by Council	60 d	Sun 11/4/12	Mon 1/2/13									
254	Engagement of County	60 d	Wed 10/23/13	Sat 12/21/13									
255	<b>DRILLING</b> (Baringo/Turkana)	<b>843 d</b>	<b>Tue 7/29/14</b>	<b>Thu 11/17/16</b>									
256	Baringo-Silali (7 Rigs-68 Wells)	843 d	Tue 7/29/14	Thu 11/17/16									
257	GDC Rig	840 d	Tue 7/29/14	Mon 11/14/16									
258	GDC01 - 03 (3 Wells)	210 d	Tue 7/29/14	Mon 2/23/15									
259	GDC04 - 06(3 Wells)	210 d	Tue 2/24/15	Mon 9/21/15									
260	GDC07 - 09 (3 Wells)	210 d	Tue 9/22/15	Mon 4/18/16									
261	GDC10 - 12 (3 Wells)	210 d	Tue 4/19/16	Mon 11/14/16									
262	KFW Rigs (3 Rigs)	630 d	Sat 12/27/14	Fri 9/16/16									
263	Kfw01-Kfw09	210 d	Sat 12/27/14	Fri 7/24/15									
264	Kfw10-Kfw18	210 d	Sat 7/25/15	Fri 2/19/16									
265	Kfw19-Kfw27	210 d	Sat 2/20/16	Fri 9/16/16									
266	Rigs (3 Rigs)	630 d	Fri 2/27/15	Thu 11/17/16									
267	Well 01-Well 09	210 d	Fri 2/27/15	Thu 9/24/15									
268	Well 10-Well 18	210 d	Fri 9/25/15	Thu 4/21/16									

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 200MW BARINGO SILALI**

**GEO THERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2009	2010	2011	2012	2013	2014	2015	2016	2017					
					M	J	S	N	J	M	M	J	S	N	J	M	M	J
269	Well 19-Well 27	210 d	Fri 4/22/16	Thu 11/17/16														
270	<b>FEASIBILITY STUDIES</b>	<b>369 d</b>	<b>Sat 1/17/15</b>	<b>Wed 1/20/16</b>														
271	PROCUREMENT	129 d	Sat 1/17/15	Tue 5/26/15														
272	Preparation of tender documents for the EPC	14 d	Sat 1/17/15	Sat 1/31/15														
273	Advertisement and Issue of tender document	5 d	Sat 1/31/15	Thu 2/5/15														
274	Bidding period	45 d	Thu 2/5/15	Sun 3/22/15														
275	Tender Evaluation	5 d	Sun 3/22/15	Fri 3/27/15														
276	TC Approval	2 d	Fri 3/27/15	Sun 3/29/15														
277	Notification of Award	7 d	Sun 3/29/15	Sun 4/5/15														
278	Draft contract preparation	21 d	Sun 4/5/15	Sun 4/26/15														
279	Negotiation	30 d	Sun 4/26/15	Tue 5/26/15														
280	Contract signing	0 d	Tue 5/26/15	Tue 5/26/15														
281	IMPLEMENTATION	240 d	Tue 5/26/15	Wed 1/20/16														
282	<b>STEAM GATHERING SYSTEM</b>	<b>496 d</b>	<b>Thu 2/4/16</b>	<b>Tue 6/13/17</b>														
283	PROCUREMENT OF EPC CONTRACTOR	496 d	Thu 2/4/16	Tue 6/13/17														
284	Bidding process	129 d	Thu 2/4/16	Sun 6/12/16														
285	Preparation of tender documents for the EPC	14 d	Thu 2/4/16	Thu 2/18/16														
286	Advertisement and Issue of tender document	5 d	Thu 2/18/16	Tue 2/23/16														
287	Bidding period	45 d	Tue 2/23/16	Fri 4/8/16														
288	Tender Evaluation	5 d	Fri 4/8/16	Wed 4/13/16														
289	TC Approval	2 d	Wed 4/13/16	Fri 4/15/16														
290	Notification of Award	7 d	Fri 4/15/16	Fri 4/22/16														
291	Draft contract preparation	21 d	Fri 4/22/16	Fri 5/13/16														
292	Negotiation	30 d	Fri 5/13/16	Sun 6/12/16														
293	Contract signing	0 d	Sun 6/12/16	Sun 6/12/16														
294	Implementation Period	367 d	Sun 6/12/16	Tue 6/13/17														
295	Notice to Commence	7 d	Sun 6/12/16	Sun 6/19/16														
296	Advance payment	30 d	Sun 6/19/16	Tue 7/19/16														
297	Detailed design of steam gathering system	30 d	Tue 7/19/16	Thu 8/18/16														
298	Pipeline Construction	270 d	Thu 8/18/16	Mon 5/15/17														
299	Testing and Commissioning	30 d	Mon 5/15/17	Tue 6/13/17														
300	<b>JOINT STEAM DEVELOPMENT</b>	<b>1241 d</b>	<b>Fri 10/11/13</b>	<b>Sat 3/4/17</b>														
301	PROCUREMENT OF DEVELOPERS	270 d	Fri 10/11/13	Mon 7/7/14														
302	RFP Preparation	7 d	Fri 10/11/13	Thu 10/17/13														
303	Issue RFP to shortlisted firms	0 d	Thu 10/17/13	Thu 10/17/13														
304	Proposal preparation	158 d	Fri 10/18/13	Mon 3/24/14														
305	Bidder's Technical Conference	3 d	Tue 3/25/14	Thu 3/27/14														

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 200MW BARINGO SILALI**

**GEO THERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2009	2010	2011	2012	2013	2014	2015	2016	2017
306	Submission of proposals	0 d	Thu 3/27/14	Thu 3/27/14									
307	Bid Evaluation	14 d	Fri 3/28/14	Thu 4/10/14									
308	Negotiation	60 d	Fri 4/11/14	Mon 6/9/14									
309	Tender Committee Approval	7 d	Tue 6/10/14	Mon 6/16/14									
310	Notification of award	14 d	Tue 6/17/14	Mon 6/30/14									
311	Tender Award	7 d	Tue 7/1/14	Mon 7/7/14									
312	STEAM DEVELOPMENT	971 d	Tue 7/8/14	Sat 3/4/17									
313	Notice to commence	7 d	Tue 7/8/14	Mon 7/14/14									
314	Implementation	964 d	Tue 7/15/14	Sat 3/4/17									
315	<b>ESIA FOR 200MW STEAM GATHERING</b>	<b>303 d</b>	<b>Wed 1/1/14</b>	<b>Thu 10/30/14</b>									
316	Preparation of RFP Document	15 d	Wed 1/15/14	Wed 1/15/14									
317	Advertisement	0 d	Wed 1/15/14	Wed 1/15/14									
318	Preparation of Proposals	45 d	Thu 1/16/14	Sat 3/1/14									
319	Evaluation of proposals	14 d	Sun 3/2/14	Sat 3/15/14									
320	TC Approval of evaluation report	0 d	Sat 3/15/14	Sat 3/15/14									
321	Notification of award	30 d	Sun 3/16/14	Mon 4/14/14									
322	Contract Negotiations	12 d	Tue 4/15/14	Sat 4/26/14									
323	Contract signing	0 d	Sat 4/26/14	Sat 4/26/14									
324	Commencement of Services	0 d	Sat 4/26/14	Sat 4/26/14									
325	Implementation Period	187 d	Sun 4/27/14	Thu 10/30/14									
326	Preparation of project ESIA report	30 d	Sun 4/27/14	Mon 5/26/14									
327	Submission to NEMA for review	7 d	Tue 5/27/14	Mon 6/2/14									
328	Review of report by NEMA	45 d	Tue 6/3/14	Thu 7/17/14									
329	EIA Study	60 d	Fri 7/18/14	Mon 9/15/14									
330	Final reports, submission & NEMA approval	45 d	Tue 9/16/14	Thu 10/30/14									
331	Issue of EIA licence	0 d	Thu 10/30/14	Thu 10/30/14									
332	<b>2000MW POWER PLANTS DEVELOPMENT</b>	<b>981 d</b>	<b>Tue 10/7/14</b>	<b>Tue 6/13/17</b>									
333	PROCUREMENT OF IPP	981 d	Tue 10/7/14	Tue 6/13/17									
334	Advert/ Issue RFP to Shortlisted firms	0 d	Sun 7/5/15	Sun 7/5/15									
335	Tendering Period	45 d	Sun 7/5/15	Wed 8/19/15									
336	Site Visit	0 d	Wed 8/19/15	Wed 8/19/15									
337	Submission of proposals	0 d	Wed 8/19/15	Wed 8/19/15									
338	Evaluation	7 d	Wed 8/19/15	Wed 8/26/15									
339	Tender Committee Approval	0 d	Wed 8/26/15	Wed 8/26/15									
340	Notification of award	7 d	Wed 8/26/15	Wed 9/2/15									
341	Tender Award	0 d	Wed 9/2/15	Wed 9/2/15									
342	Contracting	0 d	Wed 9/2/15	Thu 7/16/15									

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 200MW BARINGO SILALI**

**GEO THERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2009	2010	2011	2012	2013	2014	2015	2016	2017
343	Meeting of Conditions Precedent to proceed												
344	Negotiation of PSSA	21 d	Wed 9/2/15	Tue 9/22/15									
345	Negotiation of PPA	30 d	Wed 9/2/15	Fri 10/2/15									
346	Application and Approval of Generation	30 d	Thu 9/17/15	Fri 10/16/15									
347	Application and Approval of PPA	7 d	Fri 10/2/15	Thu 10/8/15									
348	PPP Secretariat Approval of Contract	14 d	Fri 10/2/15	Fri 10/16/15									
349	Agreement Signing (PSSA, PPA & Gen	7 d	Fri 10/16/15	Fri 10/23/15									
350	Financial Closure	90 d	Fri 10/23/15	Thu 1/21/16									
351	Power Plant Construction	510 d	Thu 1/21/16	Tue 6/13/17									
352	Notice to commence	0 d	Thu 1/21/16	Thu 1/21/16									
353	Power Plant Design & Construction	480 d	Thu 1/21/16	Sun 5/14/17									
354	Commissioning of power plant	30 d	Mon 5/15/17	Tue 6/13/17									
355	<b>400KV SILALI - RONGAI T/L PROJECT</b>	<b>1004 d</b>	<b>Tue 10/1/13</b>	<b>Thu 6/30/16</b>									
356	Source for and secure financing	137 d	Tue 10/1/13	Fri 2/14/14									
363	ESIA & RAP	116 d	Mon 11/4/13	Thu 2/27/14									
368	RAP	96 d	Tue 10/1/13	Sat 1/4/14									
374	Procure Consultant	70 d	Tue 10/1/13	Mon 12/9/13									
379	Compensation of land,structures,crops	626 d	Mon 3/3/14	Wed 11/18/15									
382	Compensation of land	252 d	Mon 5/5/14	Sun 1/11/15									
387	Procure EPC Contractor	88 d	Fri 2/21/14	Mon 5/19/14									
392	EPC Contract	595 d	Tue 7/1/14	Mon 2/15/16									

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**GEOTHERMAL DEVELOPMENT COMPANY**

**5000+MW NATIONAL ENERGY PROJECTS  
GDC 60MW MENENGAI GEOTHERMAL PROJECT**

ID	WBS Task Name	Duration	Start	Finish
1	<b>A 60MW MENENGAI PHASE I PROJECT</b>	<b>1552.13d</b>	<b>Thu 8/1/13</b>	<b>Tue 10/31/17</b>
2	<b>1.1 UPDATE OF FEASIBILITY STUDY</b>	<b>306 d</b>	<b>Wed 7/2/14</b>	<b>Sun 5/3/15</b>
3	1.1.1 Advertisement	14 d	Wed 7/2/14	Tue 7/15/14
4	1.1.1 Preparation of Proposals	45 d	Wed 7/16/14	Fri 8/29/14
5	1.1.3 Evaluation	7 d	Sat 8/30/14	Fri 9/5/14
6	1.1 Award & Contract Negotiation	30 d	Sun 9/6/14	Sun 10/5/14
7	1.1 Contract signing	0 d	Sun 10/5/14	Sun 10/5/14
8	1.1 Commencement of Services	0 d	Sun 10/5/14	Sun 10/5/14
9	1.1 Advance Payment	0 d	Tue 11/4/14	Tue 11/4/14
10	1.1 Implementation	180 d	Wed 11/5/14	Sun 5/3/15
11	1.1 Reservoir assessment report	180 d	Wed 11/5/14	Sun 5/3/15
12	1.1 Field utilization capacity Report	180 d	Wed 11/5/14	Sun 5/3/15
13	1.1 Menengai Transmission line report	180 d	Wed 11/5/14	Sun 5/3/15
14	1.1 Environmental scoping report	180 d	Wed 11/5/14	Sun 5/3/15
15	1.1 Financial & Economic Report	180 d	Wed 11/5/14	Sun 5/3/15
16	1.1 Bidding documents for the transmission line	180 d	Wed 11/5/14	Sun 5/3/15
17	1.1 Draft Feasibility Study Report	180 d	Wed 11/5/14	Sun 5/3/15
18	1.1 Review workshop	180 d	Wed 11/5/14	Sun 5/3/15
19	1.1 Feasibility study Final report	180 d	Wed 11/5/14	Sun 5/3/15
20	<b>1.2 STEAM GATHERING SYSTEM</b>	<b>410 d</b>	<b>Mon 5/4/15</b>	<b>Thu 6/16/16</b>
21	<b>1.2 Procurement of EPC Contractor</b>	<b>410 d</b>	<b>Mon 5/4/15</b>	<b>Thu 6/16/16</b>
22	<b>1.2 Bidding process</b>	<b>80 d</b>	<b>Mon 5/4/15</b>	<b>Wed 7/22/15</b>
23	1.2.1 Conceptual design of the steam gathering	7 d	Mon 5/4/15	Sun 5/10/15
24	1.2.1 Preparation of tender documents for the EPC	7 d	Mon 5/4/15	Sun 5/10/15
25	1.2.1 Advertisement	5 d	Mon 5/11/15	Fri 5/15/15
26	1.2.1 Bidding period	45 d	Mon 5/11/15	Wed 6/24/15
27	1.2.1 Tender Evaluation	7 d	Thu 6/25/15	Wed 7/1/15
28	1.2.1 TC Approval	0 d	Wed 7/1/15	Wed 7/1/15
29	1.2.1 Notification of award	7 d	Thu 7/2/15	Wed 7/8/15
30	1.2.1 Tender Award	0 d	Wed 7/8/15	Wed 7/8/15
31	1.2.1 Draft contract preparation	7 d	Thu 7/9/15	Wed 7/15/15
32	1.2.1 Negotiation	7 d	Thu 7/16/15	Wed 7/22/15
33	1.2.1 Contract signing	0 d	Wed 7/22/15	Wed 7/22/15
34	1.2.1 Implementation Period	330 d	Wed 7/22/15	Thu 6/16/16
35	1.2.1 Notice to proceed	0 d	Wed 7/22/15	Wed 7/22/15
36	1.2.1 Advance payment	30 d	Thu 7/23/15	Fri 8/21/15
37	1.2.1 Detailed design of steam gathering system	60 d	Thu 7/23/15	Sun 9/20/15
38	1.2.1 Manufacture & Installation	270 d	Mon 9/21/15	Thu 6/16/16
39	1.2.1 Implementation & Commissioning Period	0 d	Thu 6/16/16	Thu 6/16/16
40	1.2.1 60MW	0 d	Thu 6/16/16	Thu 6/16/16
41	<b>1.3 POWER PLANT DEVELOPMENT</b>	<b>1552.13 d</b>	<b>Thu 8/1/13</b>	<b>Tue 10/31/17</b>
42	<b>1.3 IPP for 60MW</b>	<b>588 d</b>	<b>Mon 6/30/14</b>	<b>Sun 27/16</b>
43	<b>1.3 PROCUREMENT OF IPP</b>	<b>1552.13 d</b>	<b>Thu 8/1/13</b>	<b>Tue 10/31/17</b>
44	1.3.1 PREQUALIFICATION	44 d	Mon 6/30/14	Tue 8/12/14
45	1.3.1 Bidding	30 d	Mon 6/30/14	Tue 7/29/14

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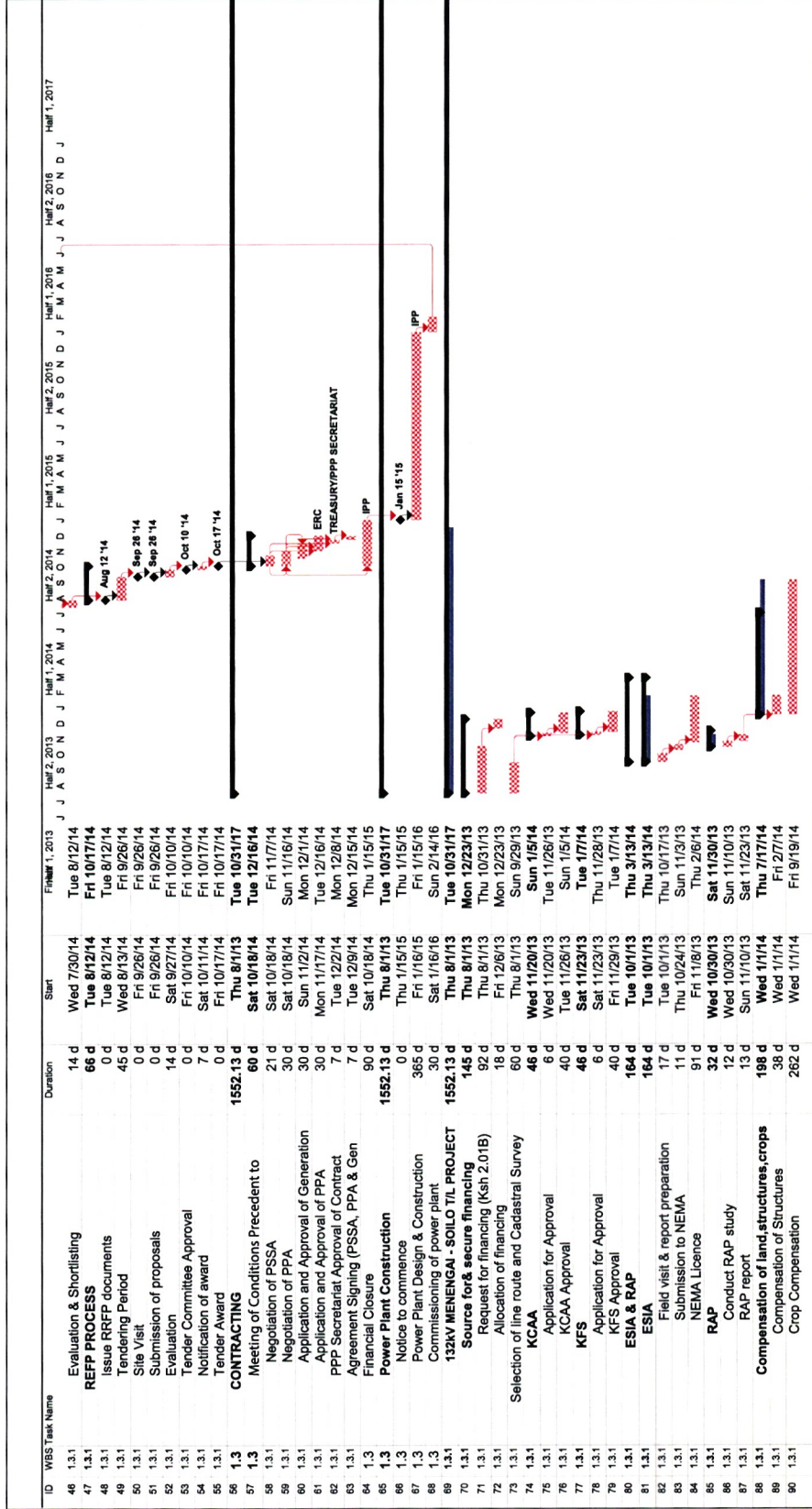
REPUBLIC OF KENYA



Geothermal Development Company

**5000+MW NATIONAL ENERGY PROJECTS  
GDC 60MW MENENGAI GEOTHERMAL PROJECT**

**GEOTHERMAL DEVELOPMENT  
COMPANY**



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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 100MW MENENGAI GEOTHERMAL PROJECT**

**GEOTHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	2013	2014	2015	2016
1	MENENGAI 100MW IPP POWER PLANT	850.67 days	Sun 5/19/13				
2	<b>PROJECT FINANCING</b>	120 days	Mon 11/18/13				
3	Request letter to Treasury	0 days	Mon 11/18/13				
4	Funding Confirmation	30 days	Mon 11/18/13				
5	<b>DISBURSEMENT</b>	90 days	Wed 12/18/13				
6	Quarter 3	30 days	Wed 12/18/13				
7	Quarter 4	90 days	Wed 12/18/13				
8	<b>LAND ACCESS RIGHTS</b>	48 days	Tue 11/12/13				
9	Application to KFS	0 days	Tue 11/12/13				
10	Acquisition of Certificate of Lease	48 days	Tue 11/12/13				
11	<b>PARTIAL RISK GUARANTEES (PRGS)</b>	568 days	Mon 10/28/13				
12	Application letter to AfDB	28 days	Mon 10/28/13				
13	Project appraisal Mission	7 days	Mon 6/16/14				
14	Approval of Project PRGs	90 days	Mon 6/23/14				
15	Contracting	180 days	Sun 9/21/14				
16	LC For Commercial Risk	60 days	Fri 3/20/15				
17	<b>IPP INVESTOR ENGAGEMENT</b>	850.67 days	Sun 5/19/13				
18	<b>APPLICATION FOR FEED IN TARIFF</b>	17 days	Sun 5/19/13				
19	Submit Application	5 days	Sun 5/19/13				
20	Committee seating	7 days	Fri 5/24/13				
21	Approval	5 days	Fri 5/31/13				
22	<b>RFP PREPARATION</b>	38 days	Sun 6/23/13				
23	Appointment of team	5 days	Sun 6/23/13				
24	Concept development	1 day	Fri 6/28/13				
25	Site plan development	2 days	Sat 6/29/13				
26	Preliminary specs	5 days	Mon 7/1/13				
27	Steam Supply Agreement (Draft)	5 days	Mon 7/1/13				
28	Draft Power purchase Agreement	5 days	Mon 7/1/13				
29	Review of draft document	5 days	Sat 7/6/13				
30	GDC/KPLC Payment Agreement	30 days	Mon 7/1/13				
31	<b>PROCUREMENT OF IPPS</b>	73 days	Fri 7/26/13				
32	Advertise and Issue of RFP	7 days	Fri 7/26/13				
33	Proposal preparation	52 days	Fri 7/26/13				
34	Bidder's Technical Conference	0 days	Fri 8/23/13				
35	Submission of proposals	0 days	Mon 9/16/13				
36	Bid Evaluation	5 days	Mon 9/16/13				
37	Tender Committee Approval	2 days	Sat 9/21/13				
38	Notification of Award	14 days	Mon 9/23/13				
39	<b>CONTRACTING OF IPPS</b>	325 days	Mon 10/7/13				
40	Negotiation	266 days	Mon 10/7/13				
41	<b>Meeting of Conditions Precedent to proceed and Financial Closure</b>	51 days	Mon 6/30/14				

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*Silas Simiyu*

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 100MW MENENGAI GEOTHERMAL PROJECT**

**GEOTHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start 2013	2014	2015	2016
42	Negotiation of PPA	21 days	Mon 6/30/14			
43	Negotiation of PSSA	249 days	Mon 10/14/13			
44	Application and Approval of PPA	30 days	Mon 7/21/14			
45	Application and Approval of Generation	30 days	Mon 7/21/14			
46	Notice to commence	8 days	Wed 8/20/14			
47	<b>POWER PLANT CONSTRUCTION</b>	<b>385 days</b>	<b>Thu 8/28/14</b>			
48	Power Plant Design & Construction	355 days	Thu 8/28/14			
49	Commissioning of power plant	30 days	Tue 8/18/15			
50	<b>STEAM GATHERING SYSTEM</b>	<b>544 days</b>	<b>Mon 7/1/13</b>			
51	Procurement of EPC Contractor	<b>544 days</b>	<b>Mon 7/1/13</b>			
52	Bidding process	<b>199 days</b>	<b>Mon 7/1/13</b>			
53	Preparation of tender documents for the	21 days	Mon 7/1/13			
54	Advertisement and Issue of tender	2 days	Wed 8/28/13			
55	Bidding period	45 days	Tue 9/3/13			
56	Tender Evaluation	5 days	Fri 10/18/13			
57	TC Approval	2 days	Wed 10/23/13			
58	Notification of Award	14 days	Fri 10/25/13			
59	Draft contract preparation	21 days	Fri 11/8/13			
60	Negotiation	21 days	Thu 12/19/13			
61	Contract signing	0 days	Thu 1/9/14			
62	Notice to Commence	7 days	Thu 1/9/14			
63	<b>Implementation Period</b>	<b>345 days</b>	<b>Thu 1/16/14</b>			
64	Advance payment	30 days	Thu 1/16/14			
65	Detailed design of steam gathering	30 days	Sat 2/15/14			
66	Pipeline Construction	250 days	Mon 3/17/14			
67	Testing and Commissioning	35 days	Sat 11/22/14			
68	<b>PAYMENT MILESTONES</b>	<b>345 days</b>	<b>Thu 1/16/14</b>			
69	Advance Payment (20%)	30 days	Thu 1/16/14			
70	30% payment to contractor upon	60 days	Sat 2/15/14			
71	20% payment to contractor upon	70 days	Wed 4/16/14			
72	20% payment to contractor upon	50 days	Wed 6/25/14			
73	10% payment to contractor upon	5 days	Mon 12/22/14			
74	<b>ESIA FOR STEAM GATHERING SYSTEM &amp; POWER PLANT</b>	<b>96 days</b>	<b>Fri 8/2/13</b>			
75	Preparation of TC paper for Direct Procurement	4 days	Fri 8/2/13			
76	TC Approval of method	2 days	Tue 8/6/13			
77	Preparation of ESIA TOR & RFP	10 days	Thu 8/8/13			
78	Issue of ESIA RFP	5 days	Sun 8/18/13			
79	Evaluation of proposals	2 days	Fri 8/23/13			
80	TC Approval	2 days	Sun 8/25/13			
81	Notification of Award	2 days	Tue 8/27/13			
82	Contract signing	2 days	Thu 8/29/13			

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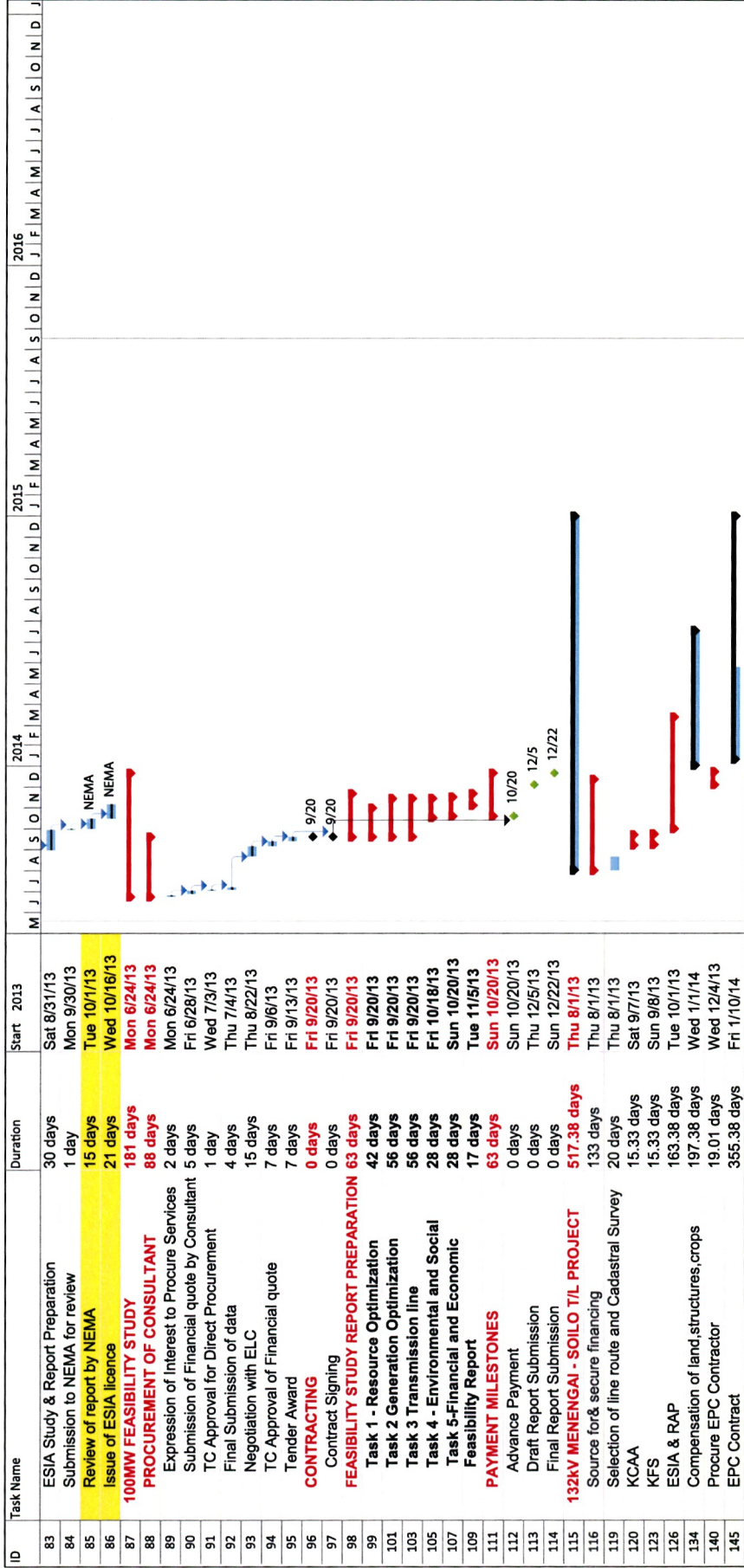


REPUBLIC OF KENYA



**5000+MW NATIONAL ENERGY PROJECTS  
GDC 100MW MENENGAI GEOTHERMAL PROJECT**

**GEOTHERMAL DEVELOPMENT  
COMPANY**



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REPUBLIC OF KENYA



**5000+MW NATIONAL ENERGY PROJECTS  
GDC 150MW SUSWA PROJECT**

**GEOTHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015	2016	2017
					H1	H1	H1	H1	H1	H1
1	150MW SUSWA GEOTHERMAL PROJECT	1806 d	Fri 6/1/12	Thu 5/11/17						
2	<b>PROJECT PREPARATION</b>	<b>663 d</b>	<b>Fri 6/1/12</b>	<b>Tue 3/25/14</b>						
3	SURFACE EXPLORATION	210 d	Fri 6/1/12	Thu 12/27/12						
4	Surface studies	180 d	Fri 6/1/12	Tue 11/27/12						
5	Well Siting	30 d	Wed 11/28/12	Thu 12/27/12						
6	COUNTY/COMMUNITY APPROVAL PROCESS	480 d	Sat 12/1/12	Tue 3/25/14						
7	Community Engagement	90 d	Sat 12/1/12	Thu 2/28/13						
8	Acceptance by Community	180 d	Fri 3/1/13	Tue 8/27/13						
9	County Government Approval	210 d	Wed 8/28/13	Tue 3/25/14						
10	ESIA FOR DRILLING	633 d	Fri 6/1/12	Sun 2/23/14						
11	Preparation of RFP Document	15 d	Fri 6/1/12	Fri 6/15/12						
12	Advertisement	0 d	Fri 6/15/12	Fri 6/15/12						
13	Preparation of Proposals	45 d	Sat 6/16/12	Mon 7/30/12						
14	Evaluation of proposals	14 d	Tue 7/31/12	Mon 8/13/12						
15	TC Approval of evaluation report	0 d	Mon 8/13/12	Mon 8/13/12						
16	Notification of award	30 d	Tue 8/14/12	Wed 9/12/12						
17	Contract Negotiations	12 d	Thu 9/13/12	Mon 9/24/12						
18	Contract signing	0 d	Mon 9/24/12	Mon 9/24/12						
19	IMPLEMENTATION PERIOD	517 d	Tue 9/25/12	Sun 2/23/14						
20	Preparation of project ESIA report	30 d	Tue 9/25/12	Wed 10/24/12						
21	Submission to NEMA for review	7 d	Thu 10/25/12	Wed 10/31/12						
22	Review of report by NEMA	45 d	Thu 11/1/12	Sat 12/15/12						
23	EIA Study	90 d	Sun 12/16/12	Fri 3/15/13						
24	Final reports, submission & NEMA approval	45 d	Fri 1/10/14	Sun 2/23/14						
25	Issue of EIA licence	0 d	Sun 2/23/14	Sun 2/23/14						
26	PPP APPROVAL PROCESS	336 d	Thu 12/27/12	Thu 11/28/13						
27	PPP PROJECT APPROVAL	336 d	Thu 12/27/12	Thu 11/28/13						
28	PROJECT PREFEASIBILITY	0 d	Thu 12/27/12	Thu 12/27/12						
29	Detailed Surface Studies	0 d	Thu 12/27/12	Thu 12/27/12						
30	PROJECT CONCEPT NOTE APPROVAL	89 d	Sun 9/1/13	Thu 12/27/12						
31	Concept Note Preparation	30 d	Sun 9/1/13	Mon 9/30/13						
	Review by PPP Unit	15 d	Tue 10/1/13	Tue 10/15/13						
	PPP Committee Approval	44 d	Wed 10/16/13	Thu 11/28/13						
34	<b>FUNDING</b>	<b>1208 d</b>	<b>Wed 11/7/12</b>	<b>Sat 2/27/16</b>						
35	INDIA EXIM BANK (200MUSD)	1208 d	Wed 11/7/12	Sat 2/27/16						
36	Request for credit to Treasury	0 d	Wed 11/7/12	Wed 11/7/12						
37	Proposal preparation	85 d	Wed 11/7/12	Wed 1/30/13						
38	Submission of proposal to MOE	0 d	Thu 1/31/13	Thu 1/31/13						

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 150MW SUSWA PROJECT**

**GEOHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015	2016	2017
					H1	H1	H1	H1	H1	H1
39	Submission of Proposal to Bank	0 d	Fri 2/15/13	Fri 2/15/13						
40	Bank Approval	300 d	Thu 9/15/13	Tue 7/1/14						
41	Preparation of Loan Financial Agreement	50 d	Wed 7/2/14	Wed 8/20/14						
42	Loan Signing	30 d	Mon 2/3/14	Tue 3/4/14						
43	Loan effectiveness	15 d	Wed 3/5/14	Wed 3/19/14						
44	Disbursement period	710 d	Thu 3/20/14	Sat 2/27/16						
45	<b>PROJECT SITE PREPARATION</b>	<b>1340 d</b>	<b>Sat 12/1/12</b>	<b>Mon 8/1/16</b>						
46	LAND	570 d	Sat 12/1/12	Mon 6/23/14						
47	COMMUNITY ENGAGEMENT	90 d	Sat 12/1/12	Thu 2/28/13						
48	LAND RIGHTS & ACQUISITION	480 d	Fri 3/1/13	Mon 6/23/14						
49	ACCESS ROADS & WELL PADS	950 d	Thu 12/26/13	Mon 8/1/16						
50	Main Access Road Construction	150 d	Thu 12/26/13	Sat 5/24/14						
51	Construction of Well Pads	800 d	Sun 5/25/14	Mon 8/1/16						
52	WATER SUPPLY SYSTEM	413 d	Thu 12/26/13	Wed 2/11/15						
53	Abstraction Permit Application	30 d	Thu 12/26/13	Fri 1/24/14						
54	Pump Station Tendering	45 d	Wed 7/2/14	Fri 8/15/14						
55	Pump station construction	180 d	Sat 8/16/14	Wed 2/11/15						
56	Power Supply & Commissioning	180 d	Sat 8/16/14	Wed 2/11/15						
57	Water storage/Reservoir facility	180 d	Sat 8/16/14	Wed 2/11/15						
58	Main pipeline installation	120 d	Wed 10/15/14	Wed 2/11/15						
59	Distribution pipeline installation	21 d	Thu 1/22/15	Wed 2/11/15						
60	<b>PROJECT PROCUREMENT</b>	<b>1164 d</b>	<b>Wed 3/5/14</b>	<b>Thu 5/11/17</b>						
61	DRILLING SERVICES RIGS ACQUISITION	190 d	Wed 3/5/14	Wed 9/10/14						
62	Advertisement	5 d	Wed 3/5/14	Sun 3/9/14						
63	Tendering	45 d	Mon 3/10/14	Wed 4/23/14						
64	Proposals Evaluation	15 d	Thu 4/24/14	Thu 5/8/14						
65	TC Approval	7 d	Fri 5/9/14	Thu 5/15/14						
66	Award and contract negotiation	21 d	Fri 5/16/14	Thu 6/5/14						
67	Contract signing	7 d	Fri 6/6/14	Thu 6/12/14						
68	Rig mobilization and rig-up	90 d	Fri 6/13/14	Wed 9/10/14						
69	CIVIL EQUIPMENT	237 d	Wed 3/5/14	Mon 10/27/14						
70	Tender preparation	7 d	Wed 3/5/14	Tue 3/11/14						
71	No objection - Tender	14 d	Wed 3/12/14	Tue 3/25/14						
72	Tendering	45 d	Wed 3/26/14	Fri 5/9/14						
73	Evaluation	7 d	Sat 5/10/14	Fri 5/16/14						
74	Award and contract negotiation	30 d	Sat 5/17/14	Sun 6/15/14						
75	Contract signing	14 d	Mon 6/16/14	Sun 6/29/14						
76	Delivery	120 d	Mon 6/30/14	Mon 10/27/14						

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 150MW SUSWA PROJECT**

**GEOHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015	2016	2017
77	DRILLING MATERIALS	215 d	Wed 3/5/14	Sun 10/5/14						
78	Tender preparation	7 d	Wed 3/5/14	Tue 3/11/14						
79	Tendering	30 d	Wed 3/12/14	Thu 4/10/14						
80	Evaluation	14 d	Fri 4/11/14	Thu 4/24/14						
81	Award and contract negotiation	30 d	Fri 4/25/14	Sat 5/24/14						
82	Contract signing	14 d	Sun 5/25/14	Sat 6/7/14						
83	Delivery	120 d	Sun 6/8/14	Sun 10/5/14						
84	WATER SUPPLY MATERIALS	208 d	Wed 3/5/14	Sun 9/28/14						
85	Tender preparation	7 d	Wed 3/5/14	Tue 3/11/14						
86	Tendering	30 d	Wed 3/12/14	Thu 4/10/14						
87	Evaluation	7 d	Fri 4/11/14	Thu 4/17/14						
88	Award and Contract Negotiation	30 d	Fri 4/18/14	Sat 5/17/14						
89	Contract signing	14 d	Sun 5/18/14	Sat 5/31/14						
90	Delivery	120 d	Sun 6/1/14	Sun 9/28/14						
91	MANAGEMENT & SUPERVISION CONSULTANCY	1040 d	Wed 3/5/14	Sat 1/7/17						
92	EOI proposal submission	15 d	Wed 3/5/14	Wed 3/19/14						
93	EOI Tendering	30 d	Thu 3/20/14	Fri 4/18/14						
94	Evaluation of EOI and shortlisting	15 d	Sat 4/19/14	Sat 5/3/14						
95	Tender preparation	30 d	Sun 5/4/14	Mon 6/2/14						
96	Tendering	45 d	Tue 6/3/14	Thu 7/17/14						
97	Evaluation	30 d	Fri 7/18/14	Sat 8/16/14						
98	Award and Contract Negotiation	30 d	Sun 8/17/14	Mon 9/15/14						
99	Contract signing	5 d	Tue 9/16/14	Sat 9/20/14						
100	Mobilization	30 d	Sun 9/21/14	Mon 10/20/14						
101	Contract performance	810 d	Tue 10/21/14	Sat 1/7/17						
102	TRANSACTION ADVISOR	740 d	Sun 5/3/15	Thu 5/11/17						
103	EOI proposal submission	15 d	Sun 5/3/15	Mon 5/18/15						
104	EOI Tendering	30 d	Mon 5/18/15	Wed 6/17/15						
105	Evaluation of EOI and shortlisting	15 d	Wed 6/17/15	Thu 7/2/15						
106	Tender preparation	30 d	Thu 7/2/15	Sat 8/1/15						
107	Tendering	45 d	Sat 8/1/15	Tue 9/15/15						
108	Evaluation	30 d	Tue 9/15/15	Thu 10/15/15						
109	Award and contract negotiation	30 d	Thu 10/15/15	Sat 11/14/15						
110	contract signing	5 d	Sat 11/14/15	Thu 11/19/15						
111	Transaction advisory services	540 d	Thu 11/19/15	Thu 5/11/17						
112	<b>JOINT STEAM DEVELOPMENT</b>	<b>1226 d</b>	<b>Mon 12/23/13</b>	<b>Mon 5/1/17</b>						
113	PROCUREMENT OF DEVELOPERS	1226 d	Mon 12/23/13	Mon 5/1/17						
114	RFP Preparation	7 d	Mon 12/23/13	Sun 12/29/13						

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 150MW SUSWA PROJECT**

**GEOHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015	2016	2017
					H1	H1	H1	H1	H1	H1
115	Advertise and issue of RFP	5 d	Mon 12/30/13	Fri 1/3/14						
116	Tendering	45 d	Sat 1/4/14	Mon 2/17/14						
117	Bidder's Technical Conference	0 d	Fri 1/24/14	Fri 1/24/14						
118	Submission of proposals	0 d	Mon 2/17/14	Mon 2/17/14						
119	Bid Evaluation	14 d	Tue 2/18/14	Mon 3/3/14						
120	TC Approval	2 d	Tue 3/4/14	Wed 3/5/14						
121	Notification of award	7 d	Thu 3/6/14	Wed 3/12/14						
122	Negotiation	30 d	Thu 3/13/14	Fri 4/11/14						
123	Contract Signing	7 d	Sat 4/12/14	Fri 4/18/14						
124	Joint Steam Development Agreement Performance	987 d	Thu 8/19/14	Mon 5/1/17						
125	<b>DRILLING (43 Wells, 4 Rigs)</b>	<b>810 d</b>	<b>Thu 2/12/15</b>	<b>Mon 5/1/17</b>						
126	EXPLORATION DRILLING	70 d	Thu 2/12/15	Wed 4/22/15						
127	APPRAISAL DRILLING	140 d	Thu 4/23/15	Wed 9/9/15						
128	PRODUCTION DRILLING	600 d	Thu 9/10/15	Mon 5/1/17						
129	<b>STEAM GATHERING SYSTEM</b>	<b>658 d</b>	<b>Thu 4/23/15</b>	<b>Wed 2/8/17</b>						
130	PROCUREMENT OF EPC CONTRACTOR	658 d	Thu 4/23/15	Wed 2/8/17						
131	BIDDING PROCESS	131 d	Thu 4/23/15	Mon 8/31/15						
132	Preparation of tender documents for the EPC	21 d	Thu 4/23/15	Wed 5/13/15						
133	Advertisement and issue of tender document	2 d	Thu 5/14/15	Fri 5/15/15						
134	Bidding period	45 d	Sat 5/16/15	Mon 6/29/15						
135	Tender Evaluation	5 d	Tue 6/30/15	Sat 7/4/15						
136	TC Approval	2 d	Sun 7/5/15	Mon 7/6/15						
137	Notification of Award	14 d	Tue 7/7/15	Mon 7/20/15						
138	Draft contract preparation	21 d	Tue 7/21/15	Mon 8/10/15						
139	Negotiation	21 d	Tue 8/11/15	Mon 8/31/15						
140	Contract signing	0 d	Mon 8/31/15	Mon 8/31/15						
141	IMPLEMENTATION PERIOD	527 d	Tue 9/1/15	Wed 2/8/17						
142	Notice to Commence	7 d	Tue 9/1/15	Mon 9/7/15						
143	Advance payment	30 d	Tue 9/8/15	Wed 10/7/15						
144	Detailed design of steam gathering system	30 d	Thu 10/8/15	Fri 11/6/15						
145	Pipeline Construction	250 d	Sat 11/7/15	Wed 7/13/16						
146	TESTING & COMMISSIONING	210 d	Thu 7/14/16	Wed 2/8/17						
147	50MW Line	30 d	Thu 7/14/16	Fri 8/12/16						
148	100MW Line	180 d	Sat 8/13/16	Wed 2/8/17						
149	<b>EIA FOR 150MW STEAM GATHERING SYSTEM &amp; POWER PLANT</b>	<b>273 d</b>	<b>Wed 10/15/14</b>	<b>Tue 7/14/15</b>						
150	Preparation of RFP Document	15 d	Wed 10/15/14	Wed 10/29/14						
151	Issue of RFP to Shortlisted Firms	0 d	Wed 10/29/14	Wed 10/29/14						
152	Tendering	45 d	Thu 10/30/14	Sat 12/13/14						

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 150MW SUSWA PROJECT**

**GEOHERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2012 H1	2012 H2	2013 H1	2013 H2	2014 H1	2014 H2	2015 H1	2015 H2	2016 H1	2016 H2	2017 H1
153	Evaluation of proposals	14 d	Sun 12/14/14	Sat 12/27/14											
154	TC Approval of evaluation report	0 d	Sat 12/27/14	Sat 12/27/14											
155	Notification of award	30 d	Sun 12/28/14	Mon 1/26/15											
156	Contract Negotiations	12 d	Tue 1/27/15	Sat 2/7/15											
157	Contract signing	0 d	Sat 2/7/15	Sat 2/7/15											
158	IMPLEMENTATION PERIOD	157 d	Sun 2/8/15	Tue 7/14/15											
159	Submission to NEMA for review	7 d	Sun 2/8/15	Sat 2/14/15											
160	Review of report by NEMA	45 d	Sun 2/15/15	Tue 3/31/15											
161	EIA Study	60 d	Wed 4/1/15	Sat 5/30/15											
162	Final reports, submission & NEMA approval	45 d	Sun 5/31/15	Tue 7/14/15											
163	Issue of EIA licence	0 d	Tue 7/14/15	Tue 7/14/15											
164	<b>FEASIBILITY STUDY</b>	<b>501 d</b>	<b>Fri 10/24/14</b>	<b>Mon 3/7/16</b>											
165	Preparation of EOI	7 d	Fri 10/24/14	Fri 10/31/14											
166	No Objection for Eoi	14 d	Fri 10/31/14	Fri 11/14/14											
167	Eoi Advert & Tendering	30 d	Fri 11/14/14	Sun 12/14/14											
168	Evaluation & Shortlist	14 d	Sun 12/14/14	Sun 12/28/14											
169	No Objection for Shortlist	14 d	Sun 12/28/14	Sun 1/11/15											
170	Preparation of RFP Document	21 d	Sun 1/11/15	Sun 2/1/15											
171	No Objection for RFP	14 d	Sun 2/1/15	Sun 2/15/15											
172	Issue of RFP to Shortlisted Firms	0 d	Sun 2/15/15	Sun 2/15/15											
173	Preparation of Proposals	45 d	Sun 2/15/15	Wed 4/1/15											
174	Combined Evaluation	14 d	Wed 4/1/15	Wed 4/15/15											
175	No Objection to evaluation report	14 d	Wed 4/15/15	Wed 4/29/15											
176	Award & Contract Negotiation	30 d	Wed 4/29/15	Fri 5/29/15											
177	No Objection to Contract	14 d	Fri 5/29/15	Fri 6/12/15											
178	Contract signing	0 d	Fri 6/12/15	Fri 6/12/15											
179	Advance Payment	0 d	Fri 6/12/15	Fri 6/12/15											
180	Implementation	270 d	Fri 6/12/15	Mon 3/7/16											
181	<b>POWER PLANT DEVELOPMENT</b>	<b>492 d</b>	<b>Wed 12/2/15</b>	<b>Thu 4/6/17</b>											
182	150MW POWER PLANT	492 d	Wed 12/2/15	Thu 4/6/17											
183	PROCUREMENT OF IPP	492 d	Wed 12/2/15	Thu 4/6/17											
184	Advert/ Issue RFP to Shortlisted firms	0 d	Wed 12/19/15	Sat 12/19/15											
185	Tendering Period	45 d	Sat 12/19/15	Tue 2/2/16											
186	Site Visit	0 d	Tue 2/2/16	Tue 2/2/16											
187	Submission of proposals	0 d	Tue 2/2/16	Tue 2/2/16											
188	Evaluation	7 d	Tue 2/2/16	Tue 2/9/16											
189	Tender Committee Approval	0 d	Tue 2/9/16	Tue 2/9/16											
190	Notification of award	7 d	Tue 2/9/16	Tue 2/16/16											
191	Tender Award	0 d	Tue 2/16/16	Tue 2/16/16											

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 150MW SUSWA PROJECT**

**GEO THERMAL DEVELOPMENT  
COMPANY**

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015	2016	2017
					H1	H1	H1	H1	H1	H1
192	Contracting	492 d	Wed 12/2/15	Thu 4/6/17						
193	Meeting of Conditions Precedent to proceed and Financial Closure	37 d	Sun 2/7/16	Mon 3/14/16						
194	Negotiation of PPA	21 d	Tue 2/16/16	Tue 3/8/16						
195	Application and Approval of Generation	30 d	Sun 2/7/16	Tue 3/8/16						
196	Application and Approval of PPA	30 d	Sun 2/7/16	Tue 3/8/16						
197	Application and Approval of PPA	7 d	Tue 3/8/16	Mon 3/14/16						
198	<b>PPP Secretariat Approval of Contract</b>	<b>14 d</b>	<b>Tue 3/8/16</b>	<b>Mon 3/21/16</b>						
199	Agreement Signing (PSSA, PPA & Gen Licence)	7 d	Wed 12/2/15	Wed 12/9/15						
200	Financial Closure	90 d	Wed 12/9/15	Tue 3/8/16						
201	<b>Power Plant Construction</b>	395 d	Tue 3/8/16	Thu 4/6/17						
202	Notice to commence	0 d	Tue 3/8/16	Tue 3/8/16						
203	Power Plant Design & Construction	365 d	Tue 3/8/16	Tue 3/7/17						
204	Commissioning of power plant	30 d	Wed 3/8/17	Thu 4/6/17						

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**5000+MW NATIONAL ENERGY PROJECTS  
GDC 300MW MENENGAI PROJECT**

**GEOTHERMAL DEVELOPMENT  
COMPANY**

ID	WBS Task Name	Duration	Start	Finish
1	A 300MW MENENGAI PHASE PROJECT	1051 d	Thu 1/1/15	Thu 11/16/17
2	1.1 FEASIBILITY STUDY	505 d	Mon 6/1/15	Mon 10/17/16
3	1.1 Preparation & Submission of EoI to WB	30 d	Tue 6/30/15	Tue 6/30/15
4	1.1 No Objection for EoI	0 d	Wed 7/1/15	Wed 7/1/15
5	1.1 EoI Advert	15 d	Thu 7/16/15	Wed 7/29/15
6	1.1 Evaluation & Shortlist	14 d	Thu 7/30/15	Wed 9/9/15
7	1.1 No Objection for Shortlist	42 d	Thu 9/10/15	Wed 9/23/15
8	1.1 Preparation of RFP Document	14 d	Thu 9/24/15	Wed 10/7/15
9	1.1 No Objection for RFP	14 d	Wed 10/7/15	Wed 10/7/15
10	1.1 Issue of RFP to Shortlisted Firms	0 d	Thu 10/8/15	Sat 11/21/15
11	1.1 Preparation of Proposals	45 d	Thu 10/8/15	Sat 11/21/15
12	1.1 Combined Evaluation	14 d	Sun 11/22/15	Sat 12/5/15
13	1.1 No Objection to evaluation report	0 d	Sat 12/5/15	Sat 12/5/15
14	1.1 Award & Contract Negotiation	30 d	Sun 12/6/15	Mon 1/4/16
15	1.1 No Objection to Contract	12 d	Tue 1/5/16	Sat 1/16/16
16	1.1 Contract signing	0 d	Sat 1/16/16	Sat 1/16/16
17	1.1 Commencement of Services	0 d	Sat 1/16/16	Sat 1/16/16
18	1.1 Advance Payment	0 d	Mon 2/15/16	Mon 2/15/16
19	1.1 Implementation	245 d	Tue 2/16/16	Mon 10/17/16
20	1.1 Reservoir assessment report (Wk 16)	93 d	Tue 2/16/16	Wed 5/18/16
21	1.1 Field utilization capacity Report (Wk 22)	161 d	Tue 2/16/16	Mon 7/25/16
22	1.1 Menengai Transmission line report (Wk 22)	196 d	Tue 2/16/16	Mon 8/29/16
23	1.1 Environmental scoping report (Wk 23)	154 d	Tue 2/16/16	Mon 7/18/16
24	1.1 Financial & Economic Report(Wk 27)	161 d	Tue 2/16/16	Mon 7/25/16
25	1.1 Bidding documents for the transmission line (Wk 28)	189 d	Tue 2/16/16	Mon 8/22/16
26	1.1 Draft Feasibility Study Report (Wk 28)	196 d	Tue 2/16/16	Mon 8/29/16
27	1.1 Review workshop (Wk 33)	224 d	Tue 2/16/16	Mon 9/26/16
28	1.1 Feasibility study Final report (Wk 35)	245 d	Tue 2/16/16	Mon 10/17/16
29	1.2 STEAM GATHERING SYSTEM	422 d	Mon 7/18/16	Tue 9/12/17
30	1.2 Procurement of EPC Contractor	422 d	Mon 7/18/16	Tue 9/12/17
31	1.2 Bidding process	92 d	Mon 7/18/16	Mon 10/17/16
32	1.2 Conceptual design of the steam gathering	7 d	Mon 7/18/16	Mon 7/25/16
33	1.2 Preparation of tender documents for the EPC	7 d	Mon 7/25/16	Mon 8/1/16
34	1.2 contract Advertisement	5 d	Mon 8/1/16	Sat 8/6/16
35	1.2 Bidding period	45 d	Sat 8/6/16	Tue 9/20/16
36	1.2 Tender Evaluation	7 d	Tue 9/20/16	Tue 9/27/16
37	1.2 TC Approval	0 d	Tue 9/27/16	Tue 9/27/16
38	1.2 Notification of award	7 d	Tue 9/27/16	Tue 10/4/16
39	1.2 Tender Award	0 d	Tue 10/4/16	Tue 10/4/16
40	1.2 Draft contract preparation	7 d	Tue 10/4/16	Tue 10/11/16
41	1.2 Negotiation	7 d	Tue 10/11/16	Mon 10/17/16
42	1.2 Contract signing	0 d	Mon 10/17/16	Mon 10/17/16
43	1.2 Implementation Period	330 d	Mon 10/17/16	Tue 9/12/17
44	1.2 Notice to proceed	0 d	Mon 10/17/16	Mon 10/17/16
45	1.2 Advance payment	30 d	Tue 10/18/16	Wed 11/16/16

CERTIFIED BY: DR. SILAS M. SIMIYU  
MANAGING DIRECTOR & CEO

SIGNATURE:



REPUBLIC OF KENYA



**5000+MW NATIONAL ENERGY PROJECTS  
GDC 300MW MENENGAI PROJECT**

**GEO THERMAL DEVELOPMENT  
COMPANY**

ID	WBS Task Name	Duration	Start	Finish	Half 1, 2014 A M J J A S O N D J J A S O N D J J A S O N D	Half 2, 2014 A M J J A S O N D J J A S O N D J J A S O N D	Half 1, 2015 J F M A M J J A S O N D J J A S O N D J J A S O N D	Half 2, 2015 J F M A M J J A S O N D J J A S O N D J J A S O N D	Half 1, 2016 J F M A M J J A S O N D J J A S O N D J J A S O N D	Half 2, 2016 J F M A M J J A S O N D J J A S O N D J J A S O N D	Half 1, 2017 J F M A M J J A S O N D J J A S O N D J J A S O N D	Half 2, 2017 J F M A M J J A S O N D J J A S O N D J J A S O N D
46	1.2 Detailed design of steam gathering system	60 d	Tue 10/18/16	Fri 12/16/16								
47	1.2 Manufacture & Installation	270 d	Sat 12/17/16	Tue 9/12/17								
48	1.3 POWER PLANT DEVELOPMENT	1051 d	Thu 1/1/15	Thu 11/16/17								
49	1.3.1 Drilling of 74 wells	910 d	Thu 1/1/15	Wed 6/28/17								
50	1.3.2 Procurement of IPPs	1026 d	Mon 1/26/15	Thu 11/16/17								
51	1.3.2 PREQUALIFICATION	44 d	Mon 1/26/15	Tue 3/10/15								
52	1.3.2 Bidding	30 d	Mon 1/26/15	Tue 2/24/15								
53	1.3.2 Evaluation & Shortlisting	14 d	Mon 1/26/15	Sun 2/8/15								
54	1.3.2 RFP PROCESS	1026 d	Mon 1/26/15	Thu 11/16/17								
55	1.3.2 Issue RFP documents	0 d	Mon 1/26/15	Mon 1/26/15								
56	1.3.2 Tendering Period	30 d	Mon 1/26/15	Tue 2/24/15								
57	1.3.2 Site Visit	0 d	Mon 1/26/15	Mon 1/26/15								
58	1.3.2 Submission of proposals	0 d	Mon 1/26/15	Mon 1/26/15								
59	1.3.2 Evaluation	7 d	Mon 1/26/15	Sun 2/1/15								
60	1.3.2 Tender Committee Approval	0 d	Mon 1/26/15	Mon 1/26/15								
61	1.3.2 Notification of award	7 d	Mon 1/26/15	Sun 2/1/15								
62	1.3.2 Tender Award	0 d	Mon 1/26/15	Mon 1/26/15								
63	1.3.2 CONTRACTING	30 d	Mon 1/26/15	Tue 2/24/15								
64	1.3.2 Meeting of Conditions Precedent to Negotiation of PSSA	30 d	Mon 1/26/15	Tue 2/24/15								
65	1.3.2 Negotiation of PPA	21 d	Mon 1/26/15	Sun 2/15/15								
66	1.3.2 Application and Approval of Generation	30 d	Mon 1/26/15	Tue 2/24/15								
67	1.3.2 Application and Approval of PPA	30 d	Mon 1/26/15	Tue 2/24/15								
68	1.3.2 PPP Secretariat Approval of Contract	7 d	Mon 1/26/15	Sun 2/1/15								
69	1.3.2 Agreement Signing (PSSA, PPA & Gen	14 d	Mon 1/26/15	Sun 2/8/15								
70	1.3.2 Financial Closure	7 d	Mon 1/26/15	Sun 2/1/15								
71	1.3.2 Power Plant Construction	90 d	Mon 1/26/15	Sat 4/25/15								
72	1.3.2 Notice to commence	395 d	Mon 10/17/16	Thu 11/16/17								
73	1.3.2 Power Plant Design & Construction	0 d	Mon 10/17/16	Mon 10/17/16								
74	1.3.2 Commissioning of power plant	365 d	Tue 10/18/16	Tue 10/17/17								
75	1.3.2	30 d	Wed 10/18/17	Thu 11/16/17								

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MANAGING DIRECTOR & CEO

SIGNATURE:



# KENYA ELECTRICITY TRANSMISSION COMPANY LTD.

JUNE 2014

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2.	Overview
3.	Financial Performance and Key Operational KPIs
4.	Projects Update
	a. Completed Electricity Transmission Lines
	b. Construction of electricity Transmission Lines
	c. Transmission Projects Preparation
5.	Other Key Achievements
6.	Challenges and Proposed Mitigation
7.	Conclusion/Way Forward
8.	Appendix: Gantt Charts



## 1. Background

Kenya Electricity Transmission Company Ltd. (KETRACO) was incorporated in December 2008 under the Company's Act, Cap 486 as a State Corporation pursuant to the Sessional Paper No. 4 of 2004 on Energy. The Mandate of the Company is to plan, design, construct, operate and maintain the National Electricity Transmission Grid and regional interconnectors. KETRACO is 100% Government owned and being a state corporation, it is regulated under the State Corporations Act, Cap 446.

The Company envisages being a world-class electricity transmission company and the leading inter-connector in Africa. Its mission therefore is, to build and operate a national electricity transmission network that is reliable, efficient, effective, safe and environment-friendly through innovative and best practices; and to promote regional power trade for socio-economic development.

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## 2. Overview of the 6 Month Operating Environment

During the period under review, the Company operated in a favourable environment. It received continuous support from Government and development partners and it engaged with more project contractors, consultants and other stakeholders.





### 3. Financial Performance and Key Operational Kpis

During the period under review, the total assets of the company were KES 45,130 Million, mainly driven by an increase in project costs and the acquisition of additional assets. The 2013/2014 projects revised budget for both local and external funding was KES 3,696 Million and KES 16,676 Million respectively.

### 4. Projects Implementation

#### (a) Completed Electricity Transmission Lines

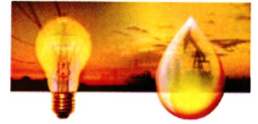
The following transmission lines were completed and commissioned:

- (i) 67km 132kV Kilimambogo-Thika-Githambo;
- (j) 40km 132kV Thika-Nyaga (Kiganjo);

#### (b) Construction of Electricity Transmission Lines

Construction of the following transmission lines continued:

- (i) **328km 220kV Rabai- Malindi- Garsen- Lamu Line:**
  - Conductor stringing completed and commissioning tests started.
  - Expected completion date: February 2014
- (ii) **482km 220/400kV Mombasa-Nairobi Line:**
  - Line construction and upgrading of Embakasi and Rabai substations in progress.
  - Expected completion date: June 2014
- (iii) **25 km 220kV Olkaria I – Suswa & 25 km 220kV Olkaria IV – Suswa:**
  - Line construction - tower foundations civil works and tower erection are in progress.
  - Expected completion date: April 2014
- (iv) **100km 400kV Nairobi Ring: Suswa-Isinya & 40 km 220kV Suswa – Ngong:**
  - Lines construction – tower erection and substations civil works are in progress.
  - Compensation for structures completed.
  - Expected completion date: April - November 2014



- (v) **354 km 132kV Kenya Electricity Expansion Programme (KEEP): Eldoret-Kitale, Kisii- Awendo and Kindaruma- Mwingi- Garissa Lines**
- Lines construction and tower foundations civil works are in progress.
  - Compensation for structures is on-going.
  - Expected completion date: June 2014
- (vi) **96Km 132kV Meru-Isiolo-Nanyuki:**
- EPC Contract awarded. Design work for line and substations has started.
  - Valuation of structures & crops and compensation for the same are on-going
- (vii) **127 km 400kV Lessos-Tororo (Kenya-Uganda) interconnector**
- EPC Contract awarded. Engineering designs and tower spotting commenced. Design for Lessos substation is at 4%
  - Schedule of affected land owners has been gazetted by the National Land Commission. Valuation of land is complete and compensation for structures is on-going.
  - Expected completion date: June 2015
- (viii) **431Km 132kV Power Transmission Improvement Projects:**  
Nanyuki-Nyahururu; Lessos-Kabarnet; Olkaria-Narok; Mwingi-Kitui-Sultan Hamud-Wote; Bomet-Sotik; Ishiara-Kieni transmission lines and associated substations
- EPC Contracts awarded. Transmission line and substations engineering design preparation is in progress
  - Route survey completed and compensation for structures is in progress.
  - Expected completion date: September 2015
- (ix) **430 km 400kV Loiyangalani-Suswa transmission line**
- Land valuation completed and 96% valuation of structures undertaken
  - Schedule of affected land owners has been gazetted by the National Land Commission (NLC). Compensation for structures is in progress. Offer letters for land pending adoption of the land evaluation report by the NLC.
- (x) **153km 132kV Machakos-Konza-Kajiado-Namanga single circuit line**
- EPC Contracts awarded and design work for line and substations has started
- (xi) **90km 220kV Turkwel -Ortum -Kitale single circuit Line**
- EPC Contracts awarded and design work for line and substations has started

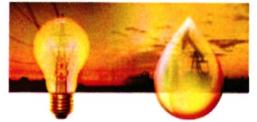


### (c) Transmission Projects Preparation

The following transmission lines projects are under preparation:

- a. 612km 500kV HVDC Ethiopia-Kenya Interconnector**
  - Valuation of both land and structures on the ROW completed. Documents prepared in readiness for gazettelement of the right of way through the National Land Commission
  - Procurement of EPC contractors is in progress.
- b. 300 km 400/220kVolkaria-Lessos-Kisumu line**
  - Acquisition of way leaves is in progress. Contractor procured to value land and structures. Consent signing at 75% of the line.
  - Prequalification of EPC Contractors is underway. Special procurement notice prepared. Prequalification documents submitted to JICA for concurrence.
- c. 100km 132kV Sondu-Homa Bay-Ndhiwa-Awendo transmission line**
  - Resettlement Action Plan (RAP) report submitted for acquiring NEMA licence.
- d. 5000+MW Projects**
  - (i) 23km 220kV Menengai-Lanet/Soilo**
    - Requested financial resources from MOE&P
    - EIA report submitted to NEMA. RAP study under progress.
    - Request for approval of shortlisted Consultant prepared for tender committee's approval



**(ii) 25km 400kV Menengai-Rongai**

- Requested financial resources from MOE&P
- ESIA and RAP under preparation by KETRACO project team.
- TOR for procurement of supervision consultant shared with financier for 'NO OBJECTION'.

**(iii) 150km 400kV Silali-Rongai Line**

- Requested financial resources from MOE&P
- Preparation of Request for Proposal (RFP) for ESIA & RAP consultants and preparation of draft Bid Documents are in progress.
- Preliminary route selection was started

**(iv) 50km 400kV DongoKundu-Mariakani**

- Requested financial resources from MOE&P
- Preparation of Request for Proposal (RFP) for ESIA & RAP consultants and preparation of draft Bid Documents are in progress.
- Preliminary route selection was started

**(v) 520km 400Kv Lamu- Kitui - Nairobi East Line**

- Requested financial resources from MOE&P
- Preparation of RFP for ESIA & RAP consultants and preparation of draft Bid Documents are in progress.
- Preliminary route selection was started

**(vi) 110km 400kV Isinya - Nairobi East Line**

- Requested financial resources from MOE&P
- Preparation of RFP for ESIA & RAP consultants and preparation of draft Bid Documents are in progress.
- Preliminary route selection was started

**(vii) Mariakani Substation**

- Procurement of Contractor is on-going. Tender awarded to procure plant design, supply and installation of Mariakani 400/220kV substation.

**(viii) Isinya Substation**

- RFP for procuring contractor prepared.



#### **(d) OTHER KEY ACHIEVEMENTS**

##### **(i) FEASIBILITY STUDIES UNDERTAKEN**

Feasibility studies are on-going for 22 new projects.

##### **(ii) PROJECT EPC TENDERS AWARDED**

The Company awarded 9 projects-related tenders: procurement of substations land, consultancy services

##### **(iii) TRANSMISSION LICENCE**

The Company was issued with a 50-year power transmission licence by ERC

##### **(iv) CAPACITY BUILDING AND PERFORMANCE EVALUATION**

The Company recruited more professional staff and trained different staff in different courses. The Company's 2012/2013 performance was successfully evaluated by the Government was rated **'VERY GOOD'**.

### **5. Challenges and Proposed Mitigation**

The Company encountered the following challenges:

- (i) Wayleaves acquisition issues;
- (ii) Vandalism of transmission infrastructure;
- (iii) Inadequate funds to finance 5000MW+ transmission projects;
- (iv) Shortage of Transmission/Substation Engineers in the market;
- (v) Slow processing of duty exemptions for contractors;

The following mitigation measures were applied:

- (i) Using the National Land Commission to issue public notice and gazette the affected parcels of land;
- (ii) Collaboration with Kenya Forest Service, Kenya Wildlife Service and National Environmental Management Authority;
- (iii) Continuous public sensitization, engagement of community leaders, collaboration with local administration and improved compensation payment procedures;
- (iv) Use of modern survey technology for route selection;
- (v) Use of anti-theft bolts in tower erection;
- (vi) Request Government for additional budget allocation;
- (vii) Disseminating projects information to prospective investors and development partners;
- (viii) Collaboration with National Treasury in processing of duty exemptions for contractors;
- (ix) Continuous training of staff;



## 6. Conclusion/way Forward

Plan for January – June 2014

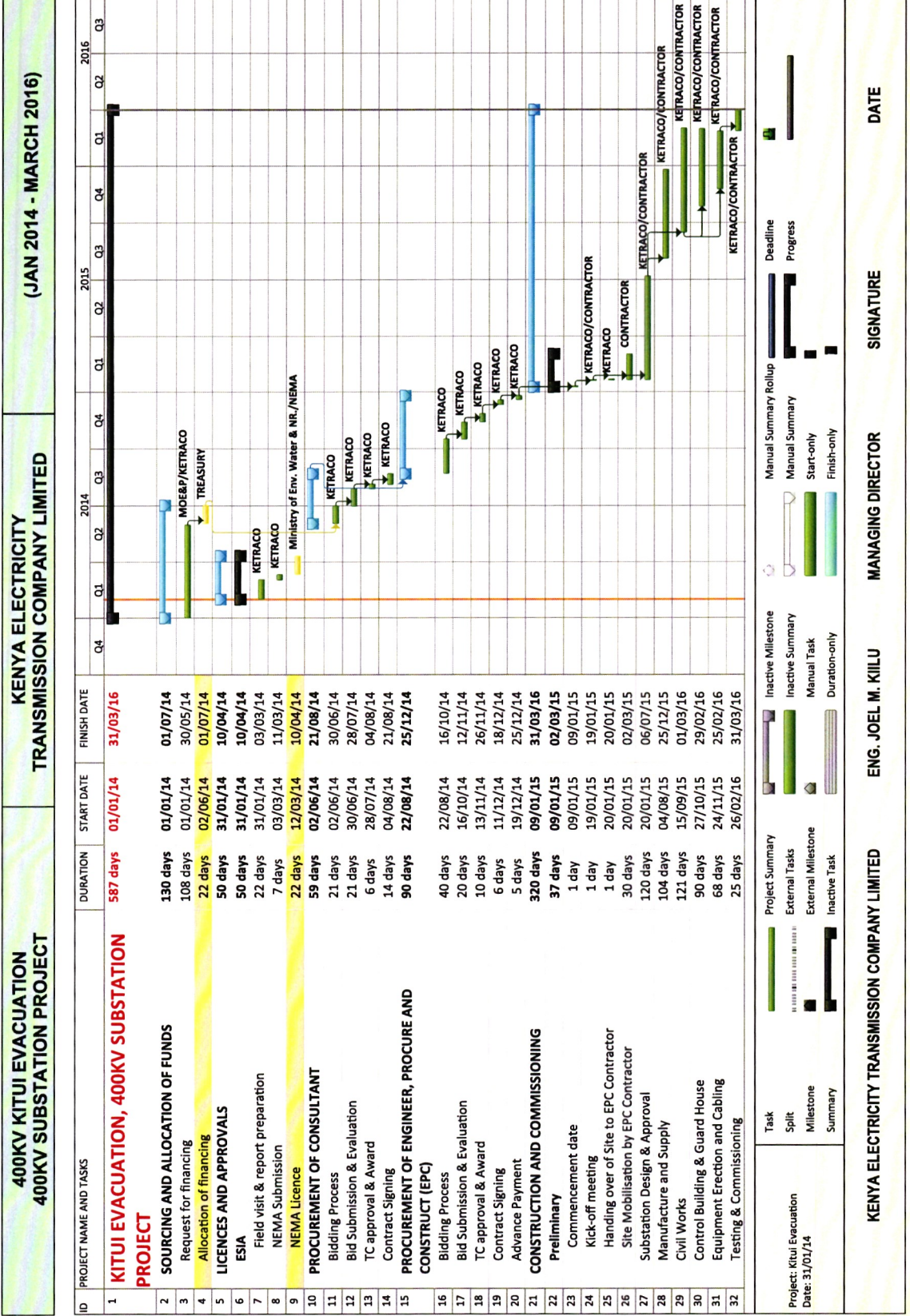
- (i) Complete, energise and commission the following lines: Rabai-Malindi-Garsen-Lamu; Mombasa-Nairobi; Olkaria-Suswa; Eldoret-Kitale; Kisii-Awendo; Kindaruma-Mwingi-Garissa
- (ii) Complete construction of Suswa sub-station
- (iii) Start construction of the following lines: Lessos-Tororo; Meru-Isiolo-Nanyuki; Nanyuki-Nyahururu; Lessos-Kabarnet; Olkaria-Narok; Mwingi-Kitui-Sultan Hamud-Wote; Bomet-Sotik; Ishiara-Kieni; Machakos-Konza-Kajiado-Namanga; Turkwel -Ortum-Kitale; Loiyangalani-Suswa
- (iv) Award EPC contracts for the following projects: Ethiopia-Kenya; Olkaria-Lessos-Kisumu; Menengai-Soilo; Mariakani sub-station; Isinya sub-station
- (v) Complete the on-going feasibility studies
- (vi) Continuous capacity building

# APPENDIX

KENYA ELECTRICITY TRANSMISSION COMPANY LTD.  
WORKPLAN



REPUBLIC OF KENYA



Task  
Split  
Milestone  
Summary

Project Summary  
External Tasks  
External Milestone  
Inactive Task

Inactive Milestone  
Inactive Summary  
Manual Task  
Duration-only

Manual Summary Rollup  
Manual Summary  
Start-only  
Finish-only

Deadline  
Progress

KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED

ENG. JOEL M. KILLU

MANAGING DIRECTOR

SIGNATURE

DATE



REPUBLIC OF KENYA



**5000+ MW TRANSMISSION LINE PROJECTS (OLKARIA - 280MW)**

**KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**

(AUG. 2013 - SEPT. 2014)

ID	PROJECT NAME AND TASKS	DURATION	START DATE	FINISH DATE 2013	2014
1	<b>OLKARIA 280MW POWER EVACUATION PROJECT</b>	<b>304 days</b>	<b>01/08/13</b>	<b>30/09/14</b>	
2	Olkaria - Suswa Transmission Line	193 days	01/08/13	28/04/14	KETRACO
3	Suswa Substation	254 days	01/08/13	22/07/14	KETRACO
4	Suswa - Isinya Transmission Line	304 days	01/08/13	30/09/14	KETRACO

Project: 5000MW+ Projects  
Date: 31/01/14

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Progress
Milestone	External Milestone	Manual Task	Start-only	
Summary	Inactive Task	Duration-only	Finish-only	

KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED

ENG. JOEL M. KIILU

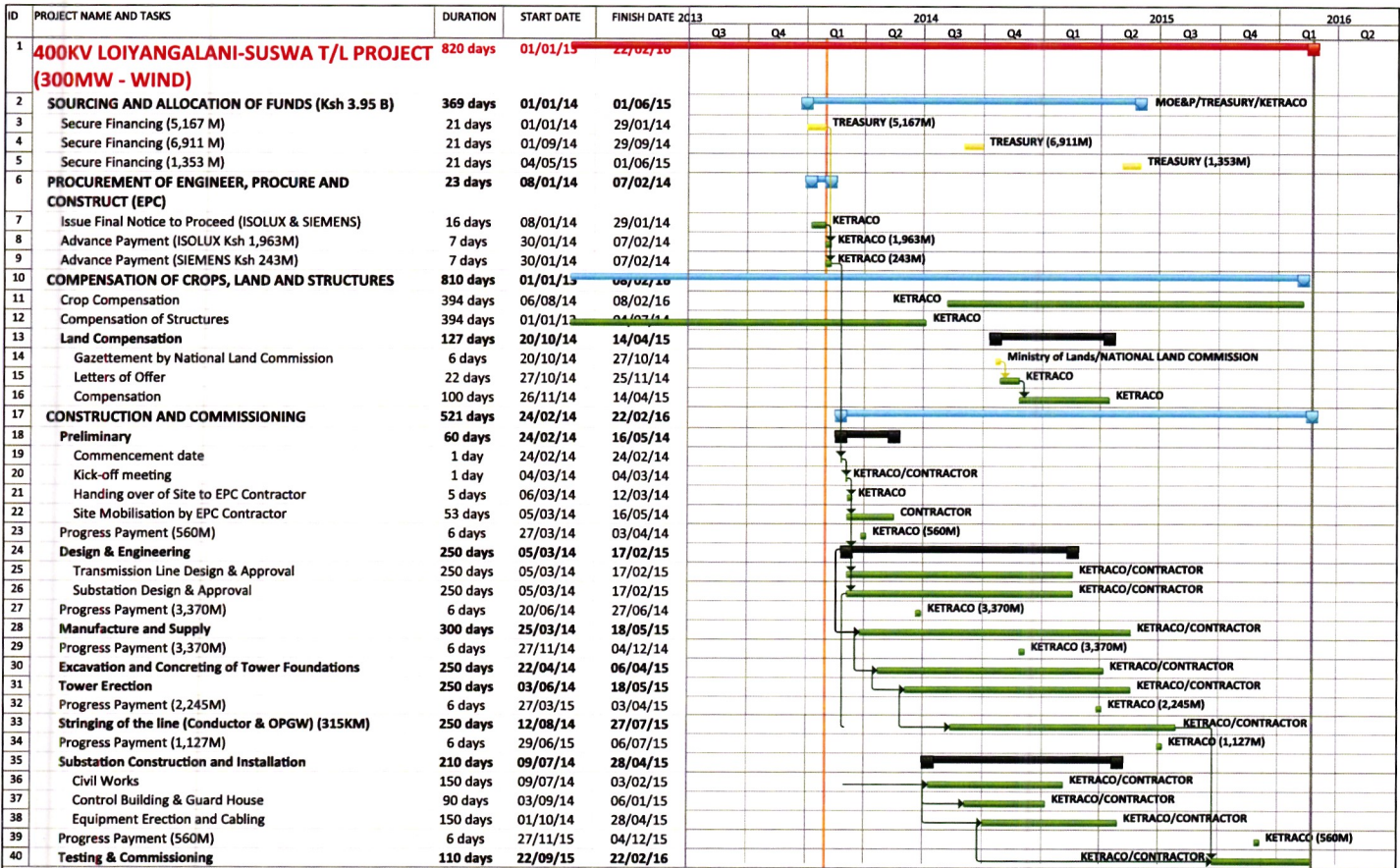
MANAGING DIRECTOR

SIGNATURE

DATE



**400KV LOIYANGALANI-SUSWA TRANSMISSION LINE PROJECT (300MW - WIND)**      **KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**      **(JAN. 2013 - FEB. 2016)**



Project: LOIYANGALANI-SUSWA  
Date: 31/01/14

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline	Progress
Split	External Tasks	Inactive Summary	Manual Summary	Start-only	Finish-only
Milestone	External Milestone	Manual Task	Duration-only	Start-only	Finish-only
Summary	Inactive Task	Duration-only	Finish-only	Start-only	Finish-only

**KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**      **ENG. JOEL M. KIILU**      **MANAGING DIRECTOR**      **SIGNATURE**      **DATE**



REPUBLIC OF KENYA



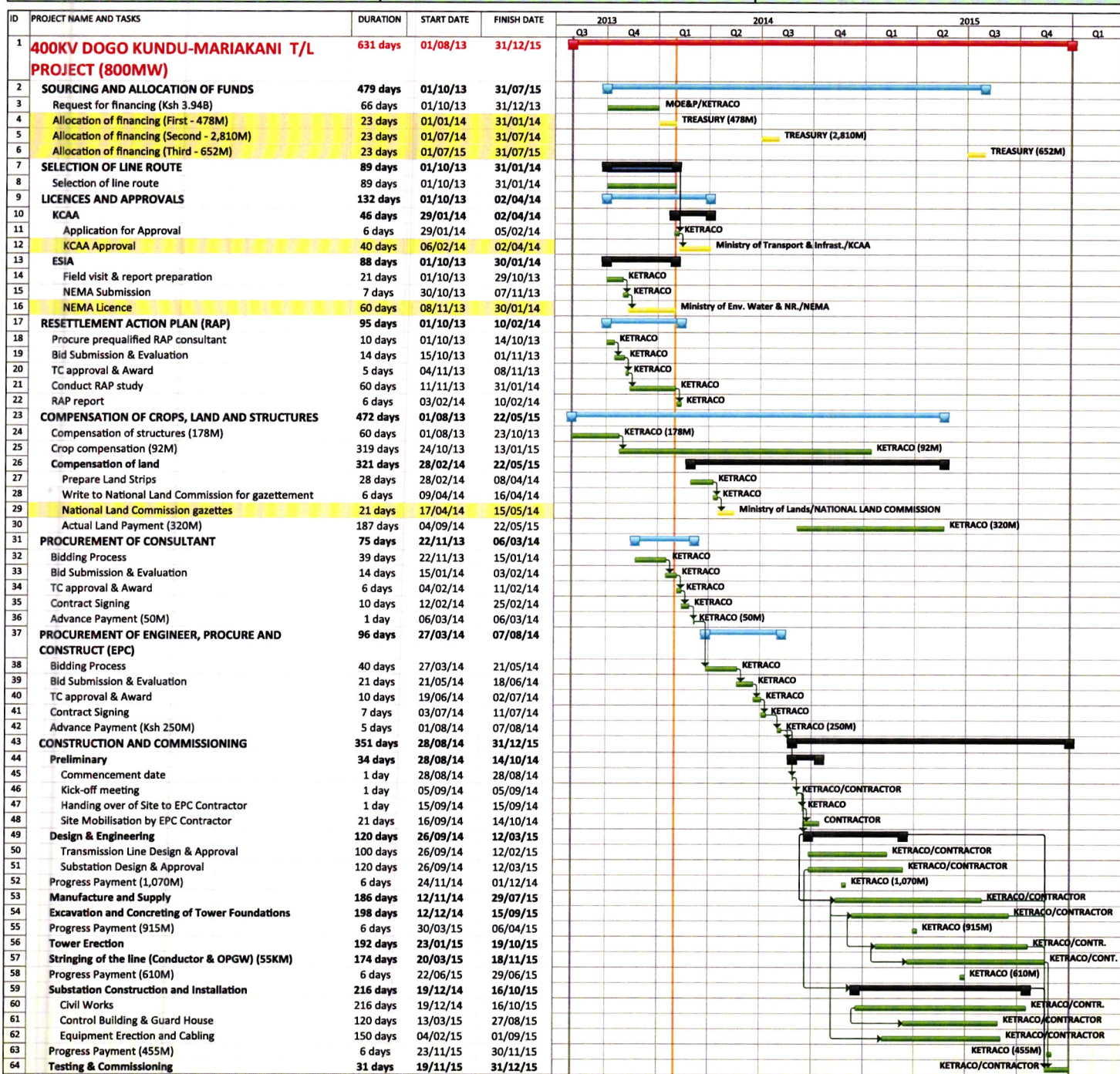
**400KV ISINYA-NAIROBI EAST TRANSMISSION LINE PROJECT**      **KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**      **(DEC. 2013 - DEC. 2016)**

ID	PROJECT NAME AND TASKS	DURATION	START DATE	FINISH DATE	2013		2014				2015				2016					
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
1	<b>400KV ISINYA-NAIROBI EAST T/L PROJECT</b>	<b>805 days</b>	<b>02/12/13</b>	<b>30/12/16</b>	[Gantt bar spanning from Q4 2013 to Q1 2016]															
2	<b>SOURCING AND ALLOCATION OF FUNDS</b>	<b>704 days</b>	<b>02/12/13</b>	<b>11/08/16</b>	[Gantt bar from Q4 2013 to Q4 2015]															
3	Request for financing (Ksh 4.69B)	100 days	02/12/13	18/04/14	[Gantt bar from Q4 2013 to Q1 2014]															
4	Allocation of financing (First - 122M)	29 days	01/01/14	10/02/14	[Gantt bar from Q1 2014 to Q1 2014]															
5	Allocation of financing (Second - 1,470M)	29 days	01/07/14	08/08/14	[Gantt bar from Q2 2014 to Q2 2014]															
6	Allocation of financing (Third - 2,198M)	29 days	01/07/15	10/08/15	[Gantt bar from Q2 2015 to Q2 2015]															
7	Allocation of financing (Fourth - 900M)	29 days	04/07/16	11/08/16	[Gantt bar from Q3 2016 to Q3 2016]															
8	<b>SELECTION OF LINE ROUTE</b>	<b>90 days</b>	<b>02/12/13</b>	<b>04/04/14</b>	[Gantt bar from Q4 2013 to Q1 2014]															
9	Selection of line route	90 days	02/12/13	04/04/14	[Gantt bar from Q4 2013 to Q1 2014]															
10	<b>LICENCES AND APPROVALS</b>	<b>109 days</b>	<b>02/12/13</b>	<b>01/05/14</b>	[Gantt bar from Q4 2013 to Q1 2014]															
11	KCAA	46 days	02/12/13	03/02/14	[Gantt bar from Q4 2013 to Q1 2014]															
12	Application for Approval	6 days	02/12/13	09/12/13	[Gantt bar from Q4 2013 to Q4 2013]															
13	KCAA Approval	40 days	10/12/13	03/02/14	[Gantt bar from Q4 2013 to Q1 2014]															
14	ESIA	87 days	01/01/14	01/05/14	[Gantt bar from Q1 2014 to Q1 2014]															
15	Field visit & report preparation	21 days	01/01/14	29/01/14	[Gantt bar from Q1 2014 to Q1 2014]															
16	NEMA Submission	6 days	30/01/14	06/02/14	[Gantt bar from Q1 2014 to Q1 2014]															
17	NEMA Licence	60 days	07/02/14	01/05/14	[Gantt bar from Q1 2014 to Q1 2014]															
18	<b>RESETTLEMENT ACTION PLAN (RAP)</b>	<b>94 days</b>	<b>01/01/14</b>	<b>12/05/14</b>	[Gantt bar from Q1 2014 to Q1 2014]															
19	Procure prequalified RAP consultant	10 days	01/01/14	14/01/14	[Gantt bar from Q1 2014 to Q1 2014]															
20	Bid Submission & Evaluation	15 days	15/01/14	04/02/14	[Gantt bar from Q1 2014 to Q1 2014]															
21	TC approval & Award	5 days	04/02/14	10/02/14	[Gantt bar from Q1 2014 to Q1 2014]															
22	Conduct RAP study	60 days	10/02/14	02/05/14	[Gantt bar from Q1 2014 to Q1 2014]															
23	RAP report	6 days	05/05/14	12/05/14	[Gantt bar from Q1 2014 to Q1 2014]															
24	<b>COMPENSATION OF CROPS, LAND AND STRUCTURES</b>	<b>706 days</b>	<b>18/04/14</b>	<b>30/12/16</b>	[Gantt bar from Q1 2014 to Q4 2016]															
25	Compensation of structures (500M)	60 days	28/05/14	19/08/14	[Gantt bar from Q2 2014 to Q2 2014]															
26	Crop compensation (72M)	678 days	28/05/14	30/12/16	[Gantt bar from Q2 2014 to Q4 2016]															
27	Compensation of land	447 days	18/04/14	04/01/16	[Gantt bar from Q1 2014 to Q4 2016]															
28	Prepare Land Strips	28 days	18/04/14	27/05/14	[Gantt bar from Q1 2014 to Q1 2014]															
29	Write to National Land Commission for gazette	6 days	28/05/14	04/06/14	[Gantt bar from Q1 2014 to Q1 2014]															
30	National Land Commission gazettes	21 days	05/06/14	03/07/14	[Gantt bar from Q1 2014 to Q1 2014]															
31	Actual Land Payment (418M)	131 days	06/07/15	04/01/16	[Gantt bar from Q3 2015 to Q1 2016]															
32	<b>PROCUREMENT OF CONSULTANT</b>	<b>60 days</b>	<b>02/01/14</b>	<b>26/03/14</b>	[Gantt bar from Q1 2014 to Q1 2014]															
33	Bidding Process	17 days	02/01/14	24/01/14	[Gantt bar from Q1 2014 to Q1 2014]															
34	Bid Submission & Evaluation	14 days	27/01/14	13/02/14	[Gantt bar from Q1 2014 to Q1 2014]															
35	TC approval & Award	5 days	14/02/14	20/02/14	[Gantt bar from Q1 2014 to Q1 2014]															
36	Contract Signing	14 days	21/02/14	12/03/14	[Gantt bar from Q1 2014 to Q1 2014]															
37	Advance Payment (50M)	1 day	26/03/14	26/03/14	[Gantt bar from Q1 2014 to Q1 2014]															
38	<b>PROCUREMENT OF ENGINEER, PROCURE AND CONSTRUCT (EPC)</b>	<b>119 days</b>	<b>24/07/14</b>	<b>06/01/15</b>	[Gantt bar from Q3 2014 to Q1 2015]															
39	Bidding Process	40 days	24/07/14	17/09/14	[Gantt bar from Q3 2014 to Q3 2014]															
40	Bid Submission & Evaluation	21 days	18/09/14	16/10/14	[Gantt bar from Q3 2014 to Q3 2014]															
41	TC approval & Award	28 days	17/10/14	25/11/14	[Gantt bar from Q3 2014 to Q3 2014]															
42	Contract Signing	14 days	26/11/14	15/12/14	[Gantt bar from Q3 2014 to Q3 2014]															
43	Advance Payment (320M)	6 days	30/12/14	06/01/15	[Gantt bar from Q3 2014 to Q3 2014]															
44	<b>CONSTRUCTION AND COMMISSIONING</b>	<b>504 days</b>	<b>27/01/15</b>	<b>30/12/16</b>	[Gantt bar from Q1 2015 to Q4 2016]															
45	Preliminary	34 days	27/01/15	13/03/15	[Gantt bar from Q1 2015 to Q1 2015]															
46	Commencement date	1 day	27/01/15	27/01/15	[Gantt bar from Q1 2015 to Q1 2015]															
47	Kick-off meeting	1 day	04/02/15	04/02/15	[Gantt bar from Q1 2015 to Q1 2015]															
48	Handing over of Site to EPC Contractor	1 day	12/02/15	12/02/15	[Gantt bar from Q1 2015 to Q1 2015]															
49	Site Mobilisation by EPC Contractor	21 days	13/02/15	13/03/15	[Gantt bar from Q1 2015 to Q1 2015]															
50	<b>Design &amp; Engineering</b>	<b>192 days</b>	<b>16/02/15</b>	<b>10/11/15</b>	[Gantt bar from Q1 2015 to Q3 2015]															
51	Transmission Line Design & Approval	144 days	16/02/15	03/09/15	[Gantt bar from Q1 2015 to Q3 2015]															
52	Substation Design & Approval	192 days	16/02/15	10/11/15	[Gantt bar from Q1 2015 to Q3 2015]															
53	Progress Payment (170M)	6 days	25/05/15	01/06/15	[Gantt bar from Q2 2015 to Q2 2015]															
54	<b>Manufacture and Supply</b>	<b>294 days</b>	<b>27/04/15</b>	<b>09/06/16</b>	[Gantt bar from Q2 2015 to Q4 2016]															
55	Progress Payment (1,000M)	6 days	22/06/15	29/06/15	[Gantt bar from Q2 2015 to Q2 2015]															
56	<b>Excavation and Concreting of Tower Foundations</b>	<b>324 days</b>	<b>22/06/15</b>	<b>15/09/16</b>	[Gantt bar from Q2 2015 to Q4 2016]															
57	Progress Payment (830M)	6 days	23/11/15	30/11/15	[Gantt bar from Q4 2015 to Q4 2015]															
58	<b>Tower Erection</b>	<b>306 days</b>	<b>17/08/15</b>	<b>17/10/16</b>	[Gantt bar from Q3 2015 to Q4 2016]															
59	Progress Payment (665M)	6 days	30/03/16	06/04/16	[Gantt bar from Q3 2016 to Q3 2016]															
60	<b>Stringing of the line (Conductor &amp; OPGW)</b>	<b>288 days</b>	<b>14/10/15</b>	<b>18/11/16</b>	[Gantt bar from Q4 2015 to Q4 2016]															
61	Progress Payment (500M)	6 days	27/06/16	04/07/16	[Gantt bar from Q2 2016 to Q2 2016]															
62	<b>Substation Construction and Installation</b>	<b>330 days</b>	<b>11/05/15</b>	<b>12/08/16</b>	[Gantt bar from Q2 2015 to Q4 2016]															
63	Civil Works	330 days	11/05/15	12/08/16	[Gantt bar from Q2 2015 to Q4 2016]															
64	Control Building & Guard House	120 days	03/08/15	15/01/16	[Gantt bar from Q3 2015 to Q3 2016]															
65	Equipment Erection and Cabling	150 days	20/07/15	12/02/16	[Gantt bar from Q3 2015 to Q3 2016]															
66	Progress Payment (165M)	6 days	23/11/16	30/11/16	[Gantt bar from Q4 2016 to Q4 2016]															
67	<b>Testing &amp; Commissioning</b>	<b>30 days</b>	<b>21/11/16</b>	<b>30/12/16</b>	[Gantt bar from Q4 2016 to Q4 2016]															

Project: ISINYA-NAIROBI EAST Date: 31/01/14	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline		Progress
	Split		External Tasks		Inactive Summary		Manual Summary		Progress		Progress
	Milestone		External Milestone		Manual Task		Start-only		Progress		Progress
	Summary		Inactive Task		Duration-only		Finish-only		Progress		Progress

**KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**     
 **ENG. JOEL M. KIILU**     
**MANAGING DIRECTOR**     
**SIGNATURE**     
**DATE**

<b>400KV DOGO KUNDU-MARIAKANI TRANSMISSION LINE PROJECT (800MW)</b>	<b>KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED</b>	<b>(AUG. 2013 - DEC. 2015)</b>
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Project: DOGO KUNDU-MARIAKANI Date: 31/01/14	Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Progress	
Milestone	External Milestone	Manual Task	Duration-only	Start-only	
Summary	Inactive Task			Finish-only	

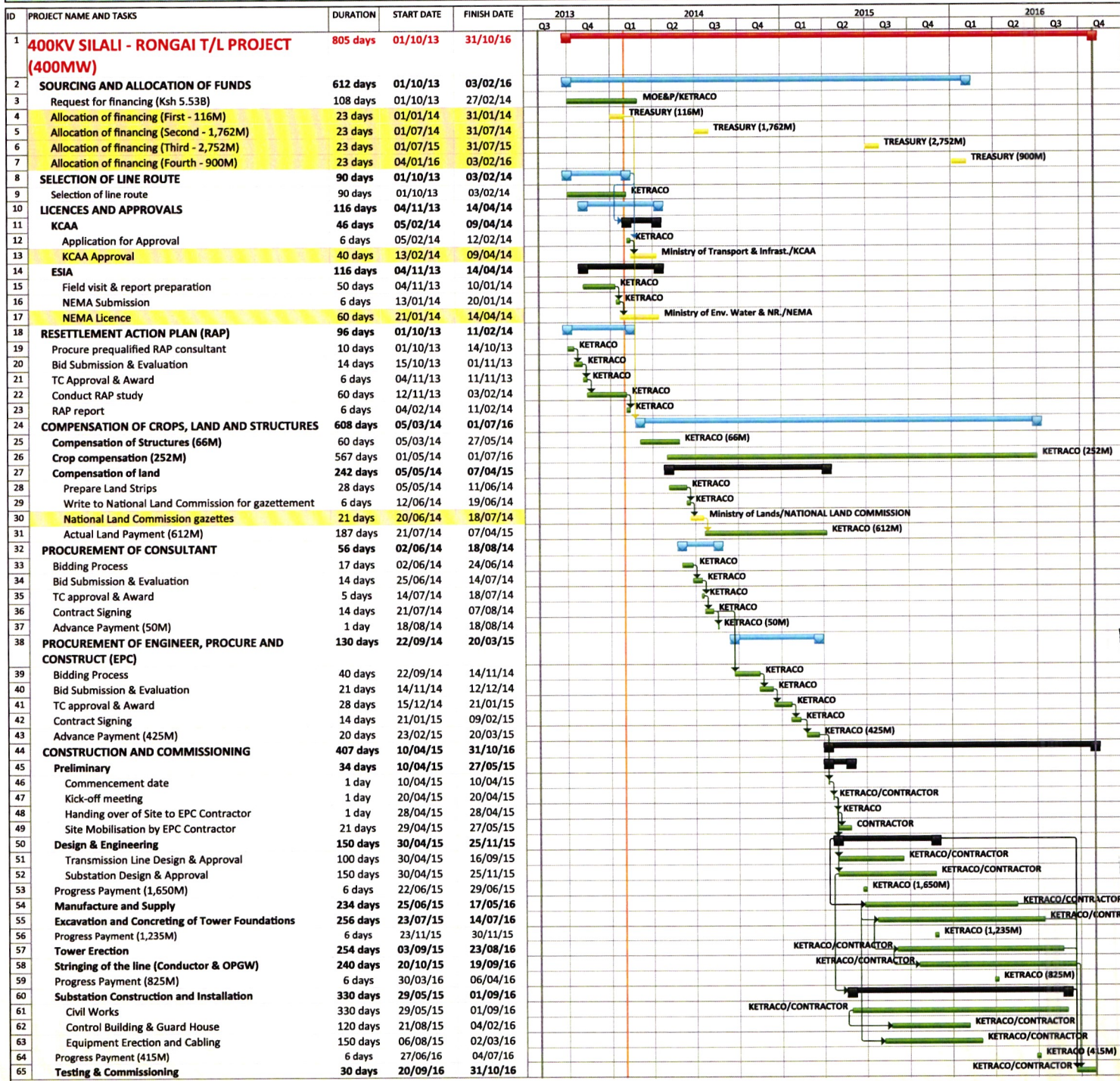
<b>KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED</b>	<b>ENG. JOEL M. KIILU</b>	<b>MANAGING DIRECTOR</b>
SIGNATURE	DATE	



REPUBLIC OF KENYA



<b>400KV SILALI-RONGAI TRANSMISSION LINE PROJECT (400MW)</b>	<b>KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED</b>	<b>(OCT. 2013 - OCT. 2016)</b>
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Project: SILALI-RONGAI Date: 31/01/14	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline
	Split		External Tasks		Inactive Summary		Manual Summary		Progress
	Milestone		External Milestone		Manual Task		Start-only		
	Summary		Inactive Task		Duration-only		Finish-only		

KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED	ENG. JOEL M. KILU MANAGING DIRECTOR	SIGNATURE
	DATE	



REPUBLIC OF KENYA



**400KV MENENGAI-RONGAI TRANSMISSION LINE PROJECT (200MW)**      **KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**      **(OCT. 2013 - OCT. 2016)**

ID	PROJECT NAME AND TASKS	DURATION	START DATE	FINISH DATE	2013		2014				2015				2016					
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
1	<b>400KV MENENGAI - RONGAI T/L PROJECT (200MW)</b>	<b>805 days</b>	<b>01/10/13</b>	<b>31/10/16</b>																
2	<b>SOURCING AND ALLOCATION OF FUNDS</b>	<b>604 days</b>	<b>01/10/13</b>	<b>22/01/16</b>																
3	Request for financing (Ksh 3.16B)	100 days	01/10/13	17/02/14																
4	Allocation of financing (First - 70M)	31 days	01/01/14	12/02/14																
5	Allocation of financing (Second - 1,058M)	15 days	01/07/14	21/07/14																
6	Allocation of financing (Third - 1,332M)	15 days	01/07/15	21/07/15																
7	Allocation of financing (Fourth - 700M)	15 days	04/01/16	22/01/16																
8	<b>SELECTION OF LINE ROUTE</b>	<b>90 days</b>	<b>01/10/13</b>	<b>03/02/14</b>																
9	Selection of line route	90 days	01/10/13	03/02/14																
10	<b>LICENCES AND APPROVALS</b>	<b>79 days</b>	<b>02/12/13</b>	<b>20/03/14</b>																
11	<b>KCAA</b>	<b>46 days</b>	<b>06/01/14</b>	<b>10/03/14</b>																
12	Application for Approval	6 days	06/01/14	13/01/14																
13	KCAA approval	40 days	14/01/14	10/03/14																
14	<b>KFS</b>	<b>46 days</b>	<b>08/01/14</b>	<b>12/03/14</b>																
15	Application for Approval	6 days	08/01/14	15/01/14																
16	KFS Approval	40 days	16/01/14	12/03/14																
17	<b>ESIA</b>	<b>79 days</b>	<b>02/12/13</b>	<b>20/03/14</b>																
18	Field visit & report preparation	14 days	02/12/13	19/12/13																
19	NEMA Submission	5 days	20/12/13	26/12/13																
20	NEMA Licence	60 days	27/12/13	20/03/14																
21	<b>RESETTLEMENT ACTION PLAN (RAP)</b>	<b>130 days</b>	<b>02/12/13</b>	<b>30/05/14</b>																
22	Conduct RAP Study	124 days	02/12/13	22/05/14																
23	RAP report	6 days	23/05/14	30/05/14																
24	<b>COMPENSATION OF CROPS, LAND AND STRUCTURES</b>	<b>604 days</b>	<b>14/04/14</b>	<b>04/08/16</b>																
25	Compensation of Structures (50M)	40 days	01/05/14	25/06/14																
26	Crop Compensation (102M)	556 days	01/05/14	16/06/16																
27	Compensation of land	604 days	14/04/14	04/08/16																
28	Prepare Land Strips	6 days	14/04/14	21/04/14																
29	Write to National Land Commission for gazette	6 days	23/04/14	30/04/14																
30	National Land Commission gazettes	14 days	01/05/14	20/05/14																
31	Actual Land Payment (258M)	498 days	09/09/14	04/08/16																
32	<b>PROCUREMENT OF CONSULTANT</b>	<b>56 days</b>	<b>02/06/14</b>	<b>18/08/14</b>																
33	Bidding Process	17 days	02/06/14	24/06/14																
34	Bid Submission & Evaluation	14 days	25/06/14	14/07/14																
35	TC approval & Award	5 days	15/07/14	21/07/14																
36	Contract Signing	14 days	22/07/14	08/08/14																
37	Advance Payment (20M)	1 day	18/08/14	18/08/14																
38	<b>PROCUREMENT OF ENGINEER, PROCURE AND CONSTRUCT (EPC)</b>	<b>130 days</b>	<b>22/09/14</b>	<b>20/03/15</b>																
39	Bidding Process	40 days	22/09/14	14/11/14																
40	Bid Submission & Evaluation	21 days	14/11/14	12/12/14																
41	TC approval & Award	28 days	15/12/14	21/01/15																
42	Contract Signing	14 days	21/01/15	09/02/15																
43	Advance Payment (Ksh 255M)	20 days	23/02/15	20/03/15																
44	<b>CONSTRUCTION AND COMMISSIONING</b>	<b>407 days</b>	<b>10/04/15</b>	<b>31/10/16</b>																
45	<b>Preliminary</b>	<b>34 days</b>	<b>10/04/15</b>	<b>27/05/15</b>																
46	Commencement date	1 day	10/04/15	10/04/15																
47	Kick-off meeting	1 day	20/04/15	20/04/15																
48	Handing over of Site to EPC Contractor	1 day	28/04/15	28/04/15																
49	Site Mobilisation by EPC Contractor	21 days	29/04/15	27/05/15																
50	<b>Design &amp; Engineering</b>	<b>150 days</b>	<b>30/04/15</b>	<b>25/11/15</b>																
51	Transmission Line Design & Approval	100 days	30/04/15	16/09/15																
52	Substation Design & Approval	150 days	30/04/15	25/11/15																
53	Progress Payment (920M)	6 days	22/06/15	29/06/15																
54	<b>Manufacture and Supply</b>	<b>234 days</b>	<b>25/06/15</b>	<b>17/05/16</b>																
55	Excavation and Concreting of Tower Foundations	256 days	23/07/15	14/07/16																
56	Progress Payment (685M)	6 days	23/11/15	30/11/15																
57	<b>Tower Erection</b>	<b>254 days</b>	<b>03/09/15</b>	<b>23/08/16</b>																
58	Stringing of the line (Conductor & OPGW)	240 days	20/10/15	19/09/16																
59	Progress Payment (460M)	6 days	30/03/16	06/04/16																
60	<b>Substation Construction and Installation</b>	<b>330 days</b>	<b>29/05/15</b>	<b>01/09/16</b>																
61	Civil Works	330 days	29/05/15	01/09/16																
62	Control Building & Guard House	120 days	21/08/15	04/02/16																
63	Equipment Erection and Cabling	150 days	01/09/15	28/03/16																
64	Progress Payment (230M)	6 days	27/06/16	04/07/16																
65	<b>Testing &amp; Commissioning</b>	<b>30 days</b>	<b>20/09/16</b>	<b>31/10/16</b>																

Project: MENENGAI-RONGAI Date: 31/01/14

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			

**KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**      **ENG. JOEL M. KIILU**      **MANAGING DIRECTOR**      **SIGNATURE**      **DATE**



REPUBLIC OF KENYA



**132KV MENENGAI-SOIL0 TRANSMISSION LINE PROJECT (100MW)**      **KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED**      **(AUG. 2013 - DEC. 2014)**

ID	PROJECT NAME AND TASKS	DURATION	START DATE	FINISH DATE	Gantt Chart (2013-2014)						
					Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	<b>132KV MENENGAI - SOILO T/L PROJECT (100MW)</b>	369 days	01/08/13	30/12/14	[Red bar spanning from Q3 2013 to Q1 2014]						
2	<b>SOURCING AND ALLOCATION OF FUNDS</b>	253 days	01/08/13	21/07/14	[Blue bar spanning from Q3 2013 to Q2 2014]						
3	Request for financing (KES 1,395M)	92 days	01/08/13	06/12/13	[Green bar: MOE&P/KETRACO]						
4	Allocation of financing (KETRACO - 475M)	18 days	01/01/14	24/01/14	[Green bar: KETRACO (475M)]						
5	Allocation of financing (First - 500M)	18 days	01/01/14	24/01/14	[Yellow bar: TREASURY (500M)]						
6	Allocation of financing (Second - 895M)	15 days	01/07/14	21/07/14	[Yellow bar: TREASURY (895M)]						
7	<b>SELECTION OF LINE ROUTE</b>	60 days	01/08/13	23/10/13	[Blue bar: KETRACO]						
8	Selection of Line Route	60 days	01/08/13	23/10/13	[Green bar: KETRACO]						
9	<b>LICENCES AND APPROVALS</b>	118 days	01/10/13	13/03/14	[Blue bar: KETRACO]						
10	KCAA	46 days	06/01/14	10/03/14	[Blue bar: KETRACO]						
11	Application for Approval	6 days	06/01/14	13/01/14	[Blue bar: KETRACO]						
12	KCAA Approval	40 days	14/01/14	10/03/14	[Yellow bar: Ministry of Transport & Infrast./ KCAA]						
13	KFS	46 days	08/01/14	12/03/14	[Blue bar: KETRACO]						
14	Application for Approval	6 days	08/01/14	15/01/14	[Blue bar: KETRACO]						
15	KFS Approval	40 days	16/01/14	12/03/14	[Yellow bar: Ministry of Env. Water & NR./KFS]						
16	ESIA	118 days	01/10/13	13/03/14	[Blue bar: KETRACO]						
17	Field visit & report preparation	17 days	01/10/13	23/10/13	[Green bar: KETRACO]						
18	Submission to NEMA	11 days	24/10/13	07/11/13	[Green bar: KETRACO]						
19	NEMA Licence	90 days	08/11/13	13/03/14	[Yellow bar: Ministry of Env. Water & NR./NEMA]						
20	<b>RESETTLEMENT ACTION PLAN (RAP)</b>	24 days	30/10/13	02/12/13	[Blue bar: KETRACO]						
21	Conduct RAP study	12 days	30/10/13	14/11/13	[Green bar: KETRACO]						
22	RAP report	13 days	14/11/13	02/12/13	[Green bar: KETRACO]						
23	<b>COMPENSATION OF CROPS, LAND AND STRUCTURES</b>	260 days	01/01/14	30/12/14	[Blue bar: KETRACO]						
24	Compensation of Structures (100M)	38 days	01/01/14	21/02/14	[Green bar: KETRACO (100M)]						
25	Crop Compensation (60M)	260 days	01/01/14	30/12/14	[Green bar: KETRACO (60M)]						
26	Compensation of land	119 days	03/02/14	17/07/14	[Blue bar: KETRACO]						
27	Prepare land strips	6 days	03/02/14	10/02/14	[Green bar: KETRACO]						
28	Actual Land Payment (160M)	114 days	10/02/14	17/07/14	[Green bar: KETRACO (160M)]						
29	<b>PROCUREMENT OF ENGINEER, PROCURE AND CONSTRUCT (EPC)</b>	86 days	15/11/13	14/03/14	[Blue bar: KETRACO]						
30	Bidding process	49 days	15/11/13	22/01/14	[Green bar: KETRACO]						
31	Bid Submission & Evaluation	10 days	23/01/14	05/02/14	[Green bar: KETRACO]						
32	TC approval & Award	14 days	06/02/14	25/02/14	[Green bar: KETRACO]						
33	Contract Signing	7 days	26/02/14	06/03/14	[Green bar: KETRACO]						
34	Advance payment (155M)	6 days	07/03/14	14/03/14	[Green bar: KETRACO (155M)]						
35	<b>CONSTRUCTION AND COMMISSIONING</b>	197 days	31/03/14	30/12/14	[Blue bar: KETRACO]						
36	Preliminary	22 days	31/03/14	29/04/14	[Blue bar: KETRACO/CONTRACTOR]						
37	Commencement date	1 day	31/03/14	31/03/14	[Green bar: KETRACO]						
38	Kick-off meeting	1 day	08/04/14	08/04/14	[Green bar: KETRACO]						
39	Handing over of Site to EPC Contractor	1 day	09/04/14	09/04/14	[Green bar: KETRACO]						
40	Site Mobilisation by EPC Contractor	14 days	10/04/14	29/04/14	[Green bar: CONTRACTOR]						
41	<b>Design &amp; Engineering</b>	52 days	09/04/14	19/06/14	[Green bar: KETRACO/CONTRACTOR]						
42	Transmission Line Design & Approval	49 days	09/04/14	16/06/14	[Green bar: KETRACO/CONTRACTOR]						
43	Substation Design & Approval	52 days	09/04/14	19/06/14	[Green bar: KETRACO/CONTRACTOR]						
44	Progress Payment (942M)	6 days	20/06/14	27/06/14	[Green bar: KETRACO (942M)]						
45	<b>Manufacture and Supply</b>	90 days	29/04/14	01/09/14	[Green bar: KETRACO/CONTRACTOR]						
46	Excavation and Concreting of Tower Foundations	60 days	27/05/14	18/08/14	[Green bar: KETRACO/CONTRACTOR]						
47	Tower Erection	55 days	16/06/14	29/08/14	[Green bar: KETRACO/CONTRACTOR]						
48	<b>Stringing of the line (Conductor &amp; OPGW)</b>	60 days	28/07/14	17/10/14	[Green bar: KETRACO/CONTRACTOR]						
49	Progress Payment (453M)	6 days	27/11/14	04/12/14	[Green bar: KETRACO (453M)]						
50	<b>Substation Construction and Installation</b>	145 days	08/05/14	26/11/14	[Green bar: KETRACO/CONTRACTOR]						
51	Civil Works	145 days	08/05/14	26/11/14	[Green bar: KETRACO/CONTRACTOR]						
52	Control Building & Guard House	75 days	28/05/14	09/09/14	[Green bar: KETRACO/CONTRACTOR]						
53	Equipment Erection and Cabling	120 days	28/05/14	11/11/14	[Green bar: KETRACO/CONTRACTOR]						
54	<b>Testing &amp; Commissioning</b>	24 days	27/11/14	30/12/14	[Green bar: KETRACO/CONTRACTOR]						

Project: MENENGAI-SOIL0  
Date: 31/01/14

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline
Split		External Tasks		Inactive Summary		Manual Summary		Progress
Milestone		External Milestone		Manual Task		Start-only		
Summary		Inactive Task		Duration-only		Finish-only		

KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED      ENG. JOEL M. KIILU      MANAGING DIRECTOR      SIGNATURE      DATE



REPUBLIC OF KENYA



**400KV LAMU-KITUI-NAIROBI EAST TRANSMISSION LINE PROJECT (2000MW)** | **KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED** | **(AUG. 2013 - MARCH 2016)**

ID	PROJECT NAME AND TASKS	DURATION	START DATE	FINISH DATE	2013		2014				2015				2016			
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1	<b>400KV LAMU-KITUI-NAIROBI EAST T/L PROJECT (2000MW)</b>	695 days	01/08/13	30/03/16	[Gantt chart bar spanning from Q3 2013 to Q2 2016]													
2	<b>SOURCING AND ALLOCATION OF FUNDS</b>	522 days	01/08/13	31/07/15	[Gantt chart bar from Q3 2013 to Q2 2015]													
3	Request for financing (Ksh 17.035B)	87 days	01/08/13	29/11/13	[Gantt chart bar from Q3 2013 to Q4 2013]													
4	Allocation of financing (First - 636M)	23 days	01/01/14	31/01/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
5	Allocation of financing (Second - 7,762M)	23 days	01/07/14	31/07/14	[Gantt chart bar from Q3 2014 to Q3 2014]													
6	Allocation of financing (Third - 6,587M)	23 days	05/01/15	04/02/15	[Gantt chart bar from Q1 2015 to Q1 2015]													
7	Allocation of financing (Fourth - 2,050M)	23 days	01/07/15	31/07/15	[Gantt chart bar from Q3 2015 to Q3 2015]													
8	<b>SELECTION OF LINE ROUTE</b>	88 days	01/10/13	30/01/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
9	Selection of line route	88 days	01/10/13	30/01/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
10	<b>LICENCES AND APPROVALS</b>	116 days	01/11/13	11/04/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
11	<b>KCAA</b>	46 days	05/02/14	09/04/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
12	Application for Approval	6 days	05/02/14	12/02/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
13	KCAA Approval	40 days	13/02/14	09/04/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
14	<b>KWS</b>	46 days	07/02/14	11/04/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
15	Application for Approval	6 days	07/02/14	14/02/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
16	KWS Approval	40 days	17/02/14	11/04/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
17	<b>ESIA</b>	95 days	01/11/13	13/03/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
18	Field visit & report preparation	28 days	01/11/13	10/12/13	[Gantt chart bar from Q4 2013 to Q4 2013]													
19	NEMA Submission	7 days	11/12/13	19/12/13	[Gantt chart bar from Q4 2013 to Q4 2013]													
20	NEMA Licence	60 days	20/12/13	13/03/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
21	<b>RESETTLEMENT ACTION PLAN (RAP)</b>	94 days	01/11/13	12/03/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
22	Procure prequalified RAP consultant	10 days	01/11/13	14/11/13	[Gantt chart bar from Q4 2013 to Q4 2013]													
23	Bid Submission & Evaluation	14 days	14/11/13	03/12/13	[Gantt chart bar from Q4 2013 to Q4 2013]													
24	TC approval & Award	6 days	04/12/13	11/12/13	[Gantt chart bar from Q4 2013 to Q4 2013]													
25	Conduct RAP study	59 days	12/12/13	04/03/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
26	RAP report	6 days	05/03/14	12/03/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
27	<b>COMPENSATION OF CROPS, STRUCTURES AND LAND</b>	502 days	01/04/14	02/03/16	[Gantt chart bar from Q1 2014 to Q2 2016]													
28	Compensation of Structures (136M)	60 days	02/04/14	24/06/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
29	Crop compensation (312M)	435 days	03/07/14	02/03/16	[Gantt chart bar from Q1 2014 to Q2 2016]													
30	Compensation of land	352 days	01/04/14	05/08/15	[Gantt chart bar from Q1 2014 to Q2 2015]													
31	Prepare Land Strips	36 days	01/04/14	20/05/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
32	Write to National Land Commission for gazette	6 days	21/05/14	28/05/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
33	National Land Commission gazettes	21 days	28/05/14	25/06/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
34	Actual Land Payment (1,512M)	240 days	04/09/14	05/08/15	[Gantt chart bar from Q3 2014 to Q2 2015]													
35	<b>PROCUREMENT OF CONSULTANT</b>	68 days	22/11/13	25/02/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
36	Bidding Process	39 days	22/11/13	15/01/14	[Gantt chart bar from Q4 2013 to Q1 2014]													
37	Bid Submission & Evaluation	14 days	15/01/14	03/02/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
38	TC approval & Award	6 days	04/02/14	11/02/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
39	Contract Signing	10 days	12/02/14	25/02/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
40	<b>PROCUREMENT OF ENGINEER, PROCURE AND CONSTRUCT (EPC)</b>	96 days	27/03/14	07/08/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
41	Bidding Process	40 days	27/03/14	21/05/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
42	Bid Submission & Evaluation	21 days	21/05/14	18/06/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
43	TC approval & Award	10 days	19/06/14	02/07/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
44	Contract Signing	7 days	03/07/14	11/07/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
45	Advance Payment (500M)	5 days	01/08/14	07/08/14	[Gantt chart bar from Q1 2014 to Q1 2014]													
46	<b>CONSTRUCTION AND COMMISSIONING</b>	415 days	28/08/14	30/03/16	[Gantt chart bar from Q2 2014 to Q3 2016]													
47	<b>Preliminary</b>	34 days	28/08/14	14/10/14	[Gantt chart bar from Q2 2014 to Q2 2014]													
48	Commencement date	1 day	28/08/14	28/08/14	[Gantt chart bar from Q2 2014 to Q2 2014]													
49	Kick-off meeting	1 day	05/09/14	05/09/14	[Gantt chart bar from Q2 2014 to Q2 2014]													
50	Handing over of Site to EPC Contractor	1 day	15/09/14	15/09/14	[Gantt chart bar from Q2 2014 to Q2 2014]													
51	Site Mobilisation by EPC Contractor	21 days	16/09/14	14/10/14	[Gantt chart bar from Q2 2014 to Q2 2014]													
52	<b>Design &amp; Engineering</b>	150 days	26/09/14	23/04/15	[Gantt chart bar from Q2 2014 to Q3 2015]													
53	Transmission Line Design & Approval	120 days	26/09/14	12/03/15	[Gantt chart bar from Q2 2014 to Q3 2015]													
54	Substation Design & Approval	150 days	26/09/14	23/04/15	[Gantt chart bar from Q2 2014 to Q3 2015]													
55	Progress Payment (6,650M)	6 days	24/11/14	01/12/14	[Gantt chart bar from Q3 2014 to Q3 2014]													
56	<b>Manufacture and Supply</b>	240 days	12/11/14	13/10/15	[Gantt chart bar from Q3 2014 to Q2 2015]													
57	Excavation and Concreting of Tower Foundations	252 days	12/12/14	30/11/15	[Gantt chart bar from Q3 2014 to Q2 2015]													
58	Progress Payment (4,950M)	6 days	30/03/15	06/04/15	[Gantt chart bar from Q1 2015 to Q1 2015]													
59	<b>Tower Erection</b>	246 days	23/01/15	01/01/16	[Gantt chart bar from Q1 2015 to Q1 2016]													
60	<b>Stringing of the line (Conductor &amp; OPGW)</b>	234 days	20/03/15	10/02/16	[Gantt chart bar from Q1 2015 to Q2 2016]													
61	Progress Payment (3,350M)	6 days	22/06/15	29/06/15	[Gantt chart bar from Q2 2015 to Q2 2015]													
62	<b>Substation Construction and Installation</b>	288 days	19/12/14	26/01/16	[Gantt chart bar from Q4 2014 to Q1 2016]													
63	Civil Works	288 days	19/12/14	26/01/16	[Gantt chart bar from Q4 2014 to Q1 2016]													
64	Control Building & Guard House	120 days	13/03/15	27/08/15	[Gantt chart bar from Q1 2015 to Q2 2015]													
65	Equipment Erection and Cabling	150 days	04/02/15	01/09/15	[Gantt chart bar from Q1 2015 to Q2 2015]													
66	Progress Payment (1,675M)	6 days	23/11/15	30/11/15	[Gantt chart bar from Q4 2015 to Q4 2015]													
67	<b>Testing &amp; Commissioning</b>	35 days	11/02/16	30/03/16	[Gantt chart bar from Q1 2016 to Q1 2016]													

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Progress
Milestone	External Milestone	Manual Task	Start-only	Progress
Summary	Inactive Task	Duration-only	Finish-only	Progress

KENYA ELECTRICITY TRANSMISSION COMPANY LIMITED | ENG. JOEL M. KIILU | MANAGING DIRECTOR | SIGNATURE | DATE



# KENYA ELECTRICITY GENERATION COMPANY

JUNE 2014

## CONTENTS

1.	Background
2.	Overview
3.	Financial Highlights and Key KPI
4.	Projects Update
5.	Challenges and Proposed Mitigation
6.	Conclusion/Way Forward
7.	Appendix : Gantt Charts



## 1. Background

Reliable and affordably priced electricity is essential for the growth of a country's economy and key to the sustenance of its future. The high cost of electricity has been identified as a concern by the Government and industry players. Initiatives to reduce electricity costs have been mooted to bolster economic growth while meeting energy and environmental goals.

Kenya Electricity Generating Company (KenGen) is the nation's leading power producer, generating 75% of the electricity consumed nationally. Demand for electricity has grown steadily over the last decade at a rate of 8-10% and is projected to increase exponentially over the next 17 years – from the current 1.7GW to 33GW.

KenGen's current status is a result of evolution over half a century; from a private company to a government-owned parastatal organization to today's partially-private state corporation with a 70:30 ownership ratio between the Government and private investors.

As Kenya strives to achieve the +10% annual growth required to attain developing country status through Vision 2030, conscious efforts must be implemented to power the desired shift.

KenGen shoulders the bulk of this growth despite the perpetual challenges of financing, IPPs emergence and sustainability of generation sources. With only 29% of the population accessing electricity, there is immense potential to grow and meet the rising demand. To succeed in its vision of a capacity base of 33GW by 2018, KenGen is pursuing excellence in areas of capital growth, regulatory, operations and organizational health.





## 2. Overview: 6 Month Operating Environment

The new government has committed to install an additional 5GW in 40 months. Being a state corporation and market leader, KenGen has been tasked with delivering 844MW. This target, coupled with the current KenGen installed capacity of 1239MW, will go a long way to meeting the current energy demands. The Company has been involved in the preparation of the sector's implementation plans; identifying road maps, critical paths and interrelationships between key players. Multi-agency efforts have been stepped up with high level representation in the development of the new energy policy regulations.

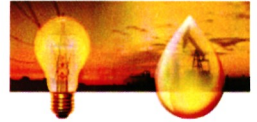
There have been several changes cutting across the Ministry of Energy and Petroleum corporations with a number of accounting officers appointed as well as various Board heads. There is a change in the Company's Board of Directors; three members were elected during the December AGM and a new Chairman appointed shortly after. In addition, the role of Managing Director / CEO has been filled. These changes herald a new management regime with huge expectations to deliver not only KenGen's objectives but also the nation's expected economic growth.

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## 3. Financial Performance and Key Operational Kpis

Pre-tax profit to date is Kshs. 1.84 billion, Kshs 64 million below target due to Embakasi GT commissioning delay after re-location, overhauls & repairs mainly in Olkaria 2 and well head units challenges. Debt / Equity at 163% is just short due to delay in disbursement of some loans from financiers. Development index and ROI are above target at 409% and 1.64% respectively due to increased activity in some projects, mainly Olkaria I&IV, as well as lower operational costs. Current asset base is Kshs 189 billion and expected to rise with the commissioning of the ongoing projects.

A total of 3,196 GWh of electricity were produced in the last 6 months, utilizing natural hydro, wind and geothermal resources as well as stop-gap imported thermal fuel, with 70% generated from green sources. Performance of the generating plants in the period is above target with only Embakasi Gas Turbine (GT) slightly below due to delayed commissioning following unplanned repairs. Lower than expected rainfall resulted in reduced hydrology with Masinga, the country's major hydro reservoir, receiving below normal inflows.



GoK Performance Contracting has been entrenched in KenGen, with a “Very Good” score of 2.874 attained for year 2012/13 evaluation. This embodies the achievement of targets as set out by Government in regard to financial, social and operational aspects.

The Company was awarded Best HR Practices (Public Sector) at the Human Resources Index Audit from IHRM as well as 4 other awards. An additional cap was bagged following the second runner-up position at the IFRS Fire Awards. Emphasis is given to innovation which is manifested through programs such as the Technical Seminar held in September. Various improvements have been exploited and notable gains made.

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#### 4. Key Projects

KenGen is undergoing a paradigm shift by implementing a corporate transformation strategy dubbed “Good to Great”. This was necessitated by regulatory environment reforms, ever-growing electricity demand and the 30% IPO public listing as they influenced increased performance pressure in regard to return on investment as well as delivery on our promise to provide affordable and reliable energy. The strategy is anchored on reducing operational and overhead costs, quick implementation of new growth capacity, improving operational and maintenance processes and improving the organizational health to enable employees to perform.

The Company, in line with Vision 2030 delivery, embarked on an ambitious geothermal development program starting with the flagship Olkaria I & IV 280MW at an estimated cost of US\$ 1 billion dollars; a first in the world of geothermal and a true case for continental collaboration in financing and engineering. It is one of the most competitive projects, with an overall tariff of around 5 US cents. The project is 89% complete with most installations complete and 210MW scheduled to be commissioned by July 2014.





Additional committed projects are ongoing and status is as follows:

Project	Capacity (MW)	Mode	Progress (%)	Status
Ngong I	6.8	Wind	<b>65</b>	4 of 8 foundations ready, major components shipped and substation works in progress.
Ngong II	13.6	Wind	<b>30</b>	Foundation excavation done and equipment shipment set to start.
Olkaria I (Unit 4&5)	140	Geo	<b>83</b>	Commissioning of unit 4 due in April 2014 and unit 5 in September 2014.
Olkaria IV (Unit 1&2)	140	Geo	<b>96</b>	Commissioning of unit 1 to start in March 2014 and unit 2 in June 2014.
Wellhead Project	70	Geo	<b>25</b>	Two units (6.4MW) installed, manufacture and shipment of additional units ongoing.
Isiolo	100	Wind	<b>12</b>	Land acquisitions initiated in Meru.
Olkaria I (Unit 6) / Olkaria VI	210	Geo	<b>7.5</b>	ESIA done, ToR for consultancy completed and financing plan initiated.



## 5. Challenges and Proposed Mitigation

Challenge	Mitigation
Accelerating geothermal development	KenGen is accelerating drilling and deployment of geothermal well-heads and power plants using 2 recently acquired rigs to fast-track implementation of geothermal generation. At least ten rigs will be required to exploit the current geothermal potential.
Capital financing	There is need to leverage on capital markets for injection of private capital to achieve an ambitious capital spend target of US\$ 5 billion. Capital structuring (debt equity) and National Treasury support will be necessary while exploring alternative revenue opportunities.
Cost reflective tariffs	Headway is required to finalize on 20-packed PPA items to ensure equitable value proposition for all partners as well as fast-tracking PPAs.
Land / site acquisition	Facilitate acquisition of land (sites) for key projects such as coal and geothermal expansion.
Stakeholder / community issues	Engagement and Government intervention especially in land compensation, amicable community relations and sharing of resources.
PPP framework development	Build on Public-Private-Partnership / Joint Venture framework to accelerate project financing.

## 6. Conclusion / Way Forward

Going forward, KenGen aims to enforce its geothermal footprint. To achieve the growth projections targeted by the Company requires resilient sourcing of capital funds hence focus is on locking in finances. An excellent working relationship is necessary between the industry players and Government for the achievement of all goals and powering the nation's economic growth.

# APPENDIX

KENYA ELECTRICITY GENERATION COMPANY  
WORKPLAN



REPUBLIC OF KENYA



5000+MW POWER PLAN: KENGEN CONTRIBUTION 280MW OLKARIA I and IV PROJECT		KENYA ELECTRICITY GENERATING COMPANY		(DEC. 2011 - SEP. 2014)	
ID	Task Name	Start	Finish	Timeline (2011-2014)	
1	<b>280MW Olkaria I &amp; Olkaria IV Programme</b>	Dec 6 '11	Jun 11 '14	[Timeline bar]	
2	Local Infrastructure	Mar 5 '13	Jun 26 '14	[Timeline bar]	
3	RAP Construction	Mar 5 '13	May 23 '14	[Timeline bar]	
4	Offices and Laboratories	Apr 15 '13	Jun 26 '14	[Timeline bar]	
5	Construction and Commissioning	Dec 6 '11	Sep 11 '14	[Timeline bar]	
6	<b>Steamfield Construction</b>	Dec 6 '11	Aug 1 '14	[Timeline bar]	
7	Olkaria IV - Unit 1	May 16 '12	Feb 11 '14	[Timeline bar]	
8	Olkaria IV - Unit 2	May 16 '12	Mar 3 '14	[Timeline bar]	
9	Olkaria I - Unit 4	May 16 '12	Apr 28 '14	[Timeline bar]	
10	Olkaria I - Unit 5	May 16 '12	Jun 16 '14	[Timeline bar]	
11	Balance of Works	Dec 6 '11	Aug 1 '14	[Timeline bar]	
12	Olkaria IV 140MW Plant Construction	Feb 26 '14	Jun 18 '14	[Timeline bar]	
13	Start Commissioning Olkaria IV Unit 1	Feb 26 '14	Mar 25 '14	[Timeline bar]	
14	Olkaria IV Unit 1 Reliability Run	Mar 26 '14	Apr 25 '14	[Timeline bar]	
15	Olkaria IV Unit 1 TakeOver	Apr 25 '14	Apr 25 '14	[Timeline bar]	
16	Start Commissioning Olkaria IV Unit 2	Mar 3 '14	May 7 '14	[Timeline bar]	
17	Olkaria IV Unit 2 Reliability Run	May 6 '14	Jun 5 '14	[Timeline bar]	
18	Olkaria IV Power Plant TakeOver	Jun 5 '14	Jun 18 '14	[Timeline bar]	
19	Olkaria I 140MW Plant Construction	Feb 26 '14	Sep 11 '14	[Timeline bar]	
20	Start Commissioning Olkaria I Unit 4	Feb 26 '14	Jun 4 '14	[Timeline bar]	
21	Olkaria I Unit 4 Reliability Run	Jun 5 '14	Jul 7 '14	[Timeline bar]	
22	Olkaria I Unit 4 TakeOver	Jul 7 '14	Jul 7 '14	[Timeline bar]	
23	Start Commissioning Olkaria I Unit 5	Jun 2 '14	Jul 25 '14	[Timeline bar]	
24	Olkaria I Unit 5 Reliability Run	Jul 29 '14	Aug 28 '14	[Timeline bar]	
25	Olkaria I Power Plant Takeover	Aug 29 '14	Sep 11 '14	[Timeline bar]	
26	<b>Transmission Line &amp; Substation</b>	Feb 23 '12	Aug 25 '14	[Timeline bar]	
27	<b>Suswa Substation &amp; Suswa-Isinya Line</b>	Oct 24 '12	Aug 25 '14	[Timeline bar]	
28	Line and Substation Construction	Feb 23 '12	Jun 19 '14	[Timeline bar]	
29	Olkaria II Substation	Feb 24 '12	Feb 14 '14	[Timeline bar]	
30	Olkaria I 132kV and 220kV Substations	Feb 23 '12	Apr 11 '14	[Timeline bar]	
31	Olkaria IV 220kV Substation	Mar 13 '12	Mar 6 '14	[Timeline bar]	
32	Tie in of Olk I -132kV Line	Sep 11 '13	May 2 '14	[Timeline bar]	
33	Olkaria I-Olkaria II 132kV Line removal	Mar 4 '14	Mar 6 '14	[Timeline bar]	
34	Relocation of 220 kV in Olkaria II Substation	Sep 11 '12	Feb 17 '14	[Timeline bar]	
35	220 kV line - Olkaria I-Olkaria II Substation	Jan 30 '14	Feb 25 '14	[Timeline bar]	
36	220 kV line Olkaria I Substation to Junction	Apr 13 '12	Feb 16 '14	[Timeline bar]	
37	220 kV line Olkaria IV substation to Junction	Aug 1 '13	Feb 16 '14	[Timeline bar]	
38	220kV line Junction to Suswa Substation	Feb 3 '14	Jun 19 '14	[Timeline bar]	
39	<b>Start Defects Period</b>	Sep 11 '14	Sep 11 '14	[Timeline bar]	

Revision 1

Name: Eng. Albert Mugo, MD & CEO

Date:

Task Progress

Milestone Summary

Roll Up Task

Roll Up Milestone

Roll Up Progress

Split

External Tasks

Project Summary

Group By Summary

Deadline



REPUBLIC OF KENYA



**5000+MW POWER PLAN KENGEN CONTRIBUTION 140MW OLKARIA V**

**KENYA ELECTRICITY GENERATING COMPANY**

(SEP. 2013 TO DEC. 2016)

ID	Task Name	Start	Finish	2014	2015	2016	2017
				Q1	Q2	Q3	Q4
1	<b>140 MW OLKARIA V GEOTHERMAL PROJECT</b>	Sep 2 '13	Dec 28 '16				
2	Land and Finance Agreement	Sep 2 '13	Dec 5 '14				
3	Finalise Land Purchase	Sep 2 '13	May 9 '14				
4	Finalise Finance Agreement	Sep 2 '13	Jun 20 '14				
5	Government Loan Approval	Jun 23 '14	Dec 5 '14				
6	ESIA Preparation & NEMA Approval	Sep 2 '13	Mar 28 '14				
7	Procure Consultancy Services	Oct 1 '13	Jun 11 '14				
8	RFP /ToR Preparation	Oct 1 '13	Dec 9 '13				
9	EOI Preparation, Evaluation & Approval	Feb 10 '14	Mar 21 '14				
10	Preparation and Submission of Proposals	Mar 24 '14	Apr 30 '14				
11	Proposals Evaluation and Approval	May 1 '14	Jun 4 '14				
12	Award/Contract Signature	Jun 5 '14	Jun 11 '14				
13	<b>Tendering</b>	Jun 12 '14	Feb 25 '15				
14	Prepare PQ Documents	Jun 12 '14	Jul 2 '14				
15	Financier Approval of PQ Documents	Jul 3 '14	Jul 16 '14				
16	PQ Submission, Evaluation & Approval	Jul 17 '14	Sep 17 '14				
17	Preparation of Tender Documents	Jun 12 '14	Sep 3 '14				
18	Financiers No Objection	Sep 4 '14	Sep 24 '14				
19	Preparation and Submission of Bids	Sep 25 '14	Jan 7 '15				
20	Evaluation and Approval	Jan 8 '15	Jan 28 '15				
21	Financiers No Objection	Jan 29 '15	Feb 11 '15				
22	Award and Contract Signature	Feb 12 '15	Feb 25 '15				
23	Power Purchase Agreements	Jan 8 '15	Mar 6 '15				
24	PPA Preparation	Jan 8 '15	Jan 9 '15				
25	PPA Negotiation	Jan 12 '15	Feb 6 '15				
26	PPA Approval	Feb 9 '15	Mar 6 '15				
27	<b>Drilling, Construction &amp; Commissioning</b>	Sep 2 '13	Dec 28 '16				
28	Drilling Balance of Wells	Sep 2 '13	Jul 3 '15				
29	Construction & Commissioning- Power Plant	Feb 26 '15	Dec 28 '16				
30	Construction & Commissioning-Steamfield	Feb 26 '15	Sep 7 '16				
31	Construction of Substation & Transmission Lines	Feb 26 '15	Mar 23 '15				
32	Plant Takeover and Start of Defects Period	Dec 28 '16	Dec 28 '16				

Revision 1:

Task Split

Milestone Summary

Project Summary External Tasks

External Milestone Inactive Task

Progress Deadline

Name: Eng. Albert Mugo, MD & CEO

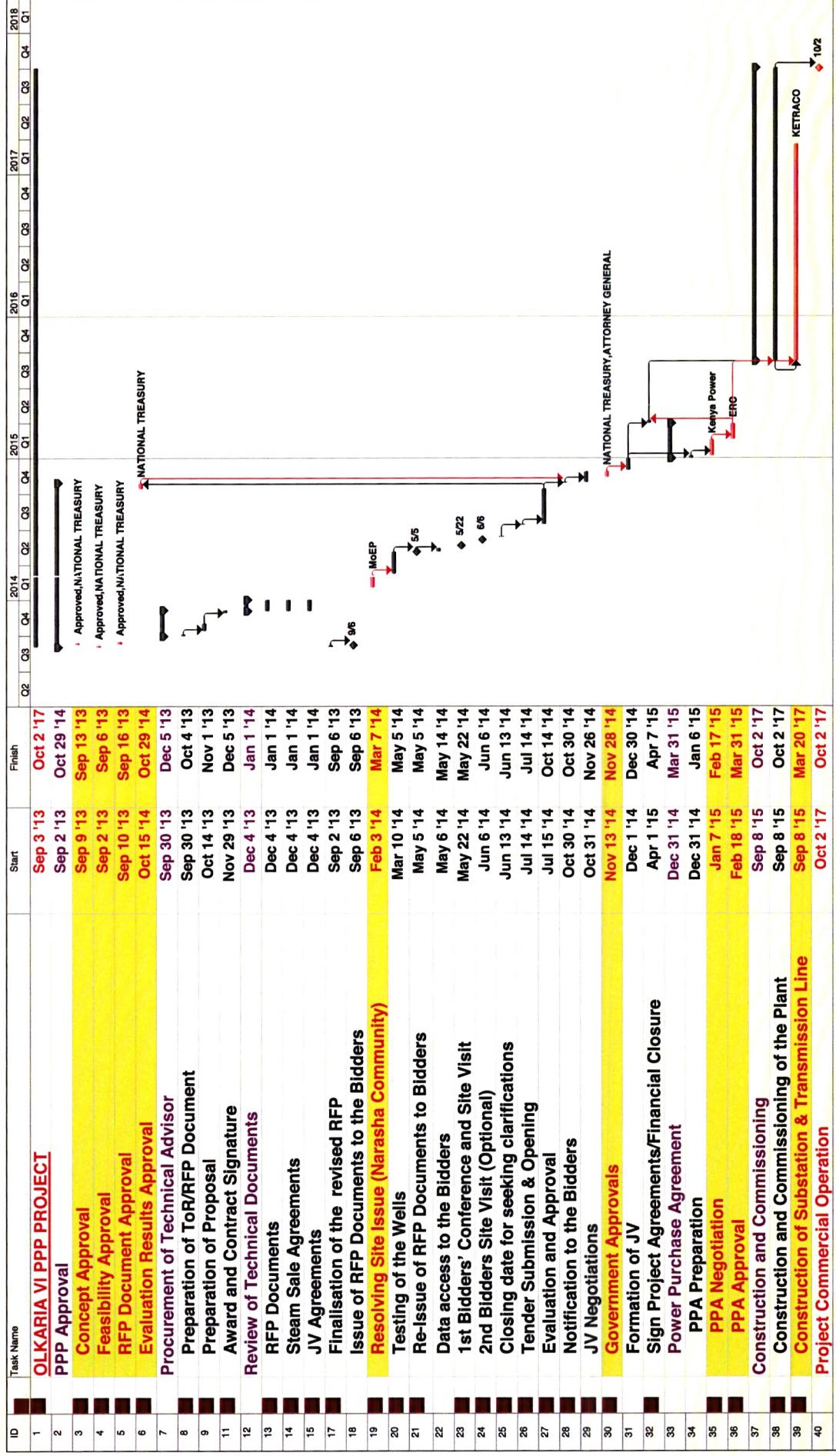
Date:



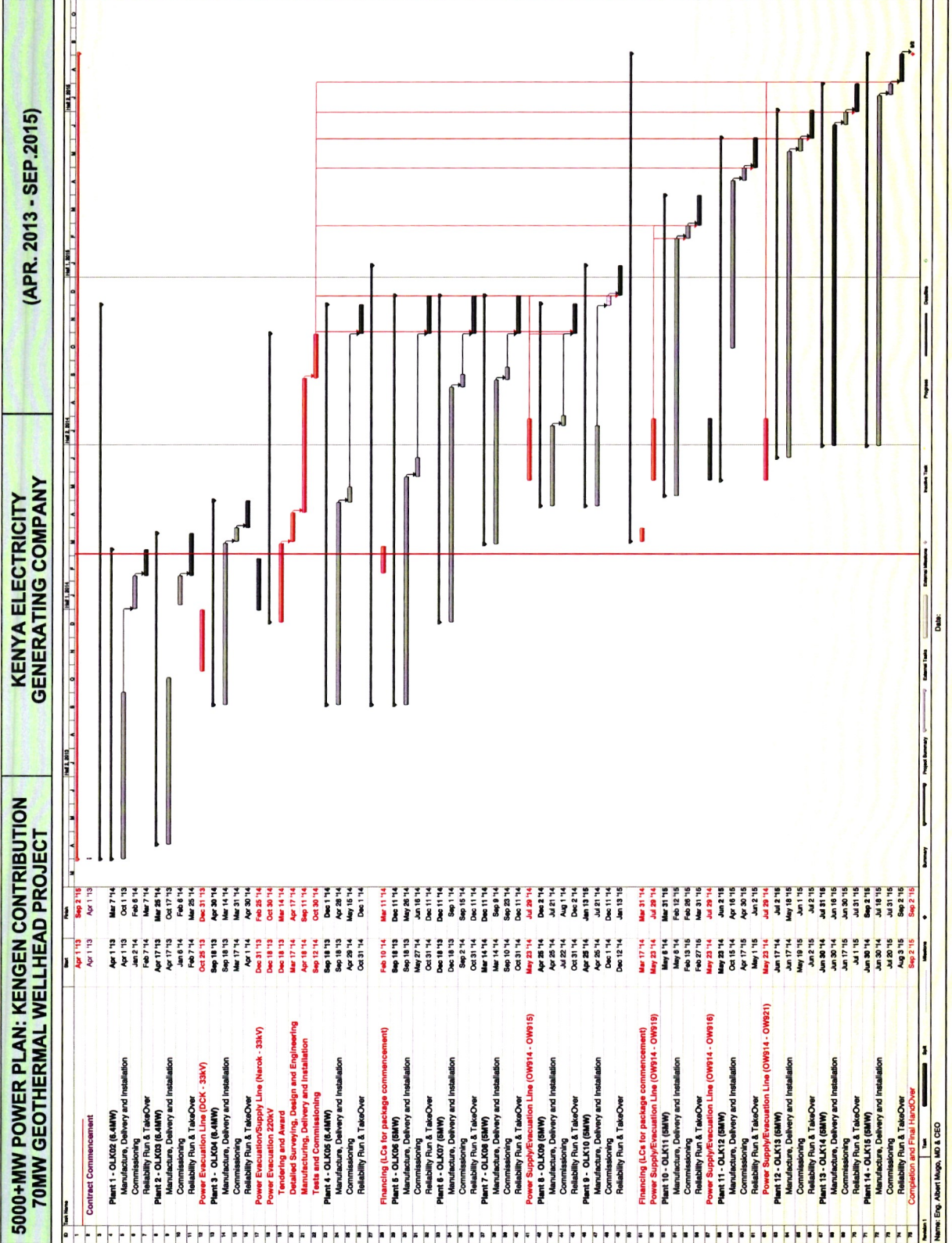
5000+MW POWER PLAN KENGEN  
CONTRIBUTION 140MW OLKARIA VI PPP

KENYA ELECTRICITY  
GENERATING COMPANY

(SEPT. 2013 TO OCT. 2017)



5000+MW POWER PLAN: KENGEN CONTRIBUTION 100MW ISIOLO (MERU) WIND PROJECT		KENYA ELECTRICITY GENERATING COMPANY		(AUG. 2013 - DEC. 2016)												
ID	Task Name	Start	Finish	2014	2015	2016	2017									
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	<b>100MW Isiolo (Meru) Wind Project</b>	Aug 5 '13	Dec 22 '16													
2	PPP Approval	Dec 9 '13	Jul 13 '15													
3	Concept Approval	Dec 9 '13	Mar 14 '14													
4	Feasibility Approval	Dec 9 '13	Mar 14 '14													
5	RFP Document Approval	Dec 9 '14	Jan 5 '15													
6	Evaluation Results Approval	Jun 30 '15	Jul 13 '15													
7	Land & Finance Agreements	Aug 5 '13	Oct 17 '14													
8	Finalise Land Agreement	Aug 5 '13	May 23 '14													
9	Finalise Financial Agreement	Oct 7 '13	Oct 17 '14													
10	ESIA Preparation, Submission & Approval	Oct 7 '13	Jul 25 '14													
11	Procure Consultants	Jan 13 '14	Jun 18 '14													
12	RFP /ToR Preparation	Jan 13 '14	Apr 4 '14													
13	Preparation of Proposal	Apr 7 '14	May 14 '14													
14	Evaluation and Approval	May 15 '14	Jun 11 '14													
15	Award /Contract Signature	Jun 12 '14	Jun 18 '14													
16	Tendering & Award	Jun 19 '14	Apr 30 '15													
17	Preparation of Tender Documents	Jun 19 '14	Oct 22 '14													
18	<b>Financier No Objection</b>	Oct 23 '14	Nov 12 '14													
19	Tendering/Preparation of Bid	Nov 13 '14	Feb 25 '15													
20	Bid Opening	Feb 26 '15	Feb 26 '15													
21	Evaluation and Approval	Feb 27 '15	Mar 26 '15													
22	<b>Financier No Objection</b>	Mar 27 '15	Apr 16 '15													
23	Award and Contract Signature	Apr 17 '15	Apr 30 '15													
24	Power Purchase Agreement	May 1 '15	Jun 29 '15													
25	PPA Preparation	May 1 '15	May 4 '15													
26	<b>Negotiate PPA</b>	May 5 '15	Jun 1 '15													
27	<b>Approval of the PPA</b>	Jun 2 '15	Jun 29 '15													
28	Construction/Commissioning- Wind Farm	May 1 '15	Dec 22 '16													
29	E&M Construction and Commissioning	May 1 '15	Dec 22 '16													
30	Civil Works Construction	May 1 '15	Oct 27 '16													
31	<b>Construction/Commissioning- Substation &amp; Line</b>	May 1 '15	Sep 1 '16													
32																



5000+MW POWER PLAN: KENGEN CONTRIBUTION 70MW OLKARIA I UNIT 6 PROJECT		KENYA ELECTRICITY GENERATING COMPANY		(AUG. 2013 - DEC. 2016)											
ID	Task Name	Start	Finish	2013		2014		2015		2016		2017			
				H1	H2	H1	H2	H1	H2	H1	H2	H1	H2		
1															
2	<b>Preparation</b>	Nov 25 '13	Apr 4 '14												
3	<b>Finalisation of Finance Agreements</b>	Nov 25 '13	Apr 4 '14												
4	<b>Procurement of Consultancy Services</b>	Nov 25 '13	Apr 4 '14												
5	RFP /ToR Preparation	Nov 25 '13	Jan 3 '14												
6	<b>KfW Approval of ToR</b>	Jan 31 '14	Feb 6 '14												
7	Preparation and Submission of Proposals	Feb 7 '14	Feb 28 '14												
8	Evaluation & Approval	Mar 3 '14	Mar 21 '14												
9	<b>KfW Evaluation Results Approval</b>	Mar 24 '14	Mar 28 '14												
10	Award /Contract Signature	Mar 31 '14	Apr 4 '14												
11	<b>Tendering</b>	Apr 7 '14	Jan 2 '15												
12	Prepare PQ Documents	Apr 7 '14	Apr 18 '14												
13	<b>Financiers Approval of PQ Documents</b>	Apr 21 '14	May 2 '14												
14	PQ Submission, Evaluation & Approval	May 5 '14	Jun 13 '14												
15	Preparation of Tender Documents	Apr 7 '14	Jun 27 '14												
16	<b>Financiers No Objection</b>	Jun 30 '14	Jul 18 '14												
17	Preparation & Submission of Bids	Jul 21 '14	Oct 31 '14												
18	Evaluation and Approval	Nov 3 '14	Nov 28 '14												
19	<b>Financiers No Objection</b>	Dec 1 '14	Dec 19 '14												
20	Award and Contract Signature	Dec 22 '14	Jan 2 '15												
21	<b>Power Purchase Agreements (PPA)</b>	Nov 3 '14	Dec 30 '14												
22	PPA Preparation	Nov 3 '14	Nov 4 '14												
23	<b>Negotiate PPA</b>	Nov 5 '14	Dec 2 '14												
24	<b>Approval of PPA</b>	Dec 3 '14	Dec 30 '14												
25	<b>Construction &amp; Commissioning</b>	Jan 5 '15	Dec 2 '16												
26	Construction/ Commission- Power Plant	Jan 5 '15	Dec 2 '16												
27	Construction/Commission- Steamfield	Jan 5 '15	Jul 15 '16												
28															12/2



REPUBLIC OF KENYA



**KenGen**  
Energy for the nation

5000+MW POWER PLAN: KENGEN CONTRIBUTION 13.6MW NGONG II WIND FARM PROJECT		KENYA ELECTRICITY GENERATING COMPANY		(JUN. 2013 - SEP. 2014)											
ID	Task Name	Start	Finish	Gantt Chart (M, A, M, J, J, A, S, O, N, D, J, F, M, A, M, J, J, A, S, O)											
1	<b>NGONG II WIND POWER PROJECT</b>	Jun 21 '13	Sep 12 '14	[Gantt bar from Jun 21 '13 to Sep 12 '14]											
2	<b>SUBSTATION WORKS</b>	Aug 12 '13	Jun 19 '14	[Gantt bar from Aug 12 '13 to Jun 19 '14]											
3	PROCUREMENT AND SUPPLY	Aug 12 '13	Oct 14 '13	[Gantt bar from Aug 12 '13 to Oct 14 '13]											
4	<b>CONSTRUCTION</b>	Aug 12 '13	Jun 19 '14	[Gantt bar from Aug 12 '13 to Jun 19 '14]											
5	Civil Works	Aug 12 '13	Mar 13 '14	[Gantt bar from Aug 12 '13 to Mar 13 '14]											
6	ElectroMechanical Works	Mar 14 '14	May 8 '14	[Gantt bar from Mar 14 '14 to May 8 '14]											
7	Commissioning	May 9 '14	Jun 19 '14	[Gantt bar from May 9 '14 to Jun 19 '14]											
8	<b>WIND FARM WORKS</b>	Jun 21 '13	Sep 12 '14	[Gantt bar from Jun 21 '13 to Sep 12 '14]											
9	<b>WIND FARM</b>	Jun 21 '13	Sep 12 '14	[Gantt bar from Jun 21 '13 to Sep 12 '14]											
10	<b>CIVIL WORKS</b>	Jun 21 '13	Jun 17 '14	[Gantt bar from Jun 21 '13 to Jun 17 '14]											
11	Roads	Nov 12 '13	Jun 3 '14	[Gantt bar from Nov 12 '13 to Jun 3 '14]											
12	Foundations	Jun 21 '13	Jan 14 '14	[Gantt bar from Jun 21 '13 to Jan 14 '14]											
13	Platforms	Nov 5 '13	Jun 17 '14	[Gantt bar from Nov 5 '13 to Jun 17 '14]											
14	<b>MV NETWORK</b>	Jan 28 '14	May 13 '14	[Gantt bar from Jan 28 '14 to May 13 '14]											
15	Trenches	Jan 28 '14	Mar 24 '14	[Gantt bar from Jan 28 '14 to Mar 24 '14]											
16	WTG Switchgears	Feb 28 '14	May 13 '14	[Gantt bar from Feb 28 '14 to May 13 '14]											
17	<b>WINDTURBINES</b>	Aug 14 '13	Sep 12 '14	[Gantt bar from Aug 14 '13 to Sep 12 '14]											
18	Procurement	Aug 14 '13	Sep 16 '13	[Gantt bar from Aug 14 '13 to Sep 16 '13]											
19	Manufacturing	Sep 17 '13	Nov 21 '13	[Gantt bar from Sep 17 '13 to Nov 21 '13]											
20	Shop assembly and testing	Nov 22 '13	Dec 9 '13	[Gantt bar from Nov 22 '13 to Dec 9 '13]											
21	Transport	Dec 10 '13	Mar 25 '14	[Gantt bar from Dec 10 '13 to Mar 25 '14]											
22	Storage	Jan 24 '14	Mar 25 '14	[Gantt bar from Jan 24 '14 to Mar 25 '14]											
23	Erection	Feb 14 '14	May 20 '14	[Gantt bar from Feb 14 '14 to May 20 '14]											
24	<b>11/66 kV Substation take Over</b>	May 20 '14	May 20 '14	[Gantt bar from May 20 '14 to May 20 '14]											
25	Commissioning	May 21 '14	Jul 22 '14	[Gantt bar from May 21 '14 to Jul 22 '14]											
26	Testing Complete Wind Farm	May 28 '14	Sep 12 '14	[Gantt bar from May 28 '14 to Sep 12 '14]											
27	<b>Take over of the Works</b>	Sep 12 '14	Sep 12 '14	[Gantt bar from Sep 12 '14 to Sep 12 '14]											

Revision 1 | Task Split | Progress Milestone | Summary Project Summary | External Tasks External MileTask | Split

Name: Eng. Albert Mugo, MD & CEO



**5000+MW POWER PLAN: KENGEN CONTRIBUTION  
6.8 MW NGONG I PHASE II WIND POWER PROJECT**

**KENYA ELECTRICITY  
GENERATING COMPANY**

**(FEB. 2012 - APR. 2014)**

ID	Task Name	Start	Finish	Half 1, 2013 D J F M A M J J A S O N D	Half 2, 2013 J J A S O N D	Half 1, 2014 J F M A M J J A S O N D	Half 2, 2014 J J A S O N D	Half 1, 2015 J F M A M J J	H		
1	<b>Ngong I Phase II Wind Farm</b>	<b>Feb 12 '13</b>	<b>Apr 22 '14</b>								
2											
3	Engineering Design	Feb 12 '13	Feb 22 '13								
4	Engineering Design Approval by KenGen	Feb 22 '13	Mar 4 '13								
5	WTG Transformer Manufacturing, Sea Freight & Delivery	Mar 18 '13	Jul 17 '13								
6	MV6 Cabinet Manufacturing, Sea Freight & Delivery	Mar 18 '13	Jul 26 '13								
7	SM6 Cabinet Manufacturing, Sea Freight & Delivery	Mar 18 '13	Jul 26 '13								
8	Cable Manufacturing, Sea Freight & Delivery To Site	Mar 18 '13	Jun 17 '13								
9	Transformer Installation On Top Of Tower Foundation	Jul 17 '13	Aug 7 '13								
10	MV6 Cabinet Installation At Tower Base	Feb 20 '14	Mar 22 '14								
11	SM6 Cabinet Installation At Substation	Feb 20 '14	Mar 22 '14								
12											
13	Wind Turbine Generator (WTG) Manufacturing	Feb 12 '13	Sep 1 '13								
14	WTG's Ready To Ship	Sep 1 '13	Sep 1 '13								
15	WTG Factory Training	Aug 25 '13	Sep 15 '13								
16	WTG Sea Freight To Mombasa	Sep 8 '13	Oct 8 '13								
17	Customs Clearance & Land Transport	Oct 8 '13	Nov 22 '13								
18	WTG's Available On Site	Nov 11 '13	Nov 11 '13								
19	WTG Mechanical Erection	Nov 17 '13	Feb 13 '14								
20	WTG Electrical Erection	Feb 20 '14	Mar 22 '14								
21	Assymetrical Digital Service Line Availability	Feb 13 '14	Feb 13 '14								
22	SCADA Installation	Feb 13 '14	Mar 6 '14								
23											
24	WTG Testing & Commissioning	Feb 27 '14	Apr 13 '14								
25	Testing Complete Wind Farm	Apr 13 '14	Apr 22 '14								
26	<b>Take-Over of the Works</b>	<b>Apr 22 '14</b>	<b>Apr 22 '14</b>								



**Kenya Power**

## KENYA POWER & LIGHTING CO. LTD.

JUNE 2014

### CONTENTS

1. Mandate of Kenya Power
2. Overview of the 6 month operating environment
3. Financial performance and Key Operational KPIs
4. Key Projects (key projects being undertaken by your entity and a status update on the same)
5. Challenges and proposed mitigation
6. Conclusion/Way Forward



## 1. Mandate of Kenya Power

The Kenya Power and Lighting Company Ltd is a power utility which commenced operations in 1922 as the East African Power and Lighting Co. Ltd. The company has the mandate to purchase bulk electricity supply, transmit, distribute and retail electricity to end use customers throughout Kenya. Its purpose, responsibilities and core functions as a commercial state corporation in Kenya are stated in its Vision and Mission Statements and are expressed in its relationships with other key players in the power sub-sector and in its contributions to the country's long term public policy and national development objectives.

### **Mission Statement**

Powering People for Better Lives

### **Vision Statement**

To provide world class power that delights our customers.





## 2. Overview of the 6 month operating environment

The major events in the operating environment that had highest levels of impact on company operations were:

- a. Approval was received from the Energy Regulatory Commission for implementation of the electricity tariff adjustment the company had applied for in February 2013. The implementation effective date was 1st December 2013 and it resulted in an initial 7.1% increase in basic revenue yield per kWh sold from Ksh 8.09 to Ksh 8.59.
- b. Lower generation fuel prices led to a 3% reduction in pass through fuel cost for the first six months to Kshs16,261 million as compared to Kshs 16,686 million at the same time in the previous year, in spite of 8% growth in energy sales.
- c. Rising GDP growth in 2013 has driven electricity sales growth to 8% as compared to 3.6% growth in the same period in the previous year. This growth is especially noted in the large power customer segment.
- d. Vandalism of power network assets improved with to an average of 82 cases per month reported in the period July to December 2013 as compared to an average of 110 cases per month over the same period in the previous year.
- e. A total of 102 MW of new power generation capacity was commissioned in the first six months as compared to 40MW over the same period in the previous year. This has allowed for retirement of 90 MW of emergency generation, which the most expensive source and contributed to a 5.6% reduction in generation fuel cost to Kshs4.01 per kWh from Ksh4.25per kW.

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## 3. Financial performance and Key Operational KPIs

### i. Profit Before Tax

This has improved to Kshs 4,190 million as at December 2013 as compared to 3,576 at the end of December 2012. This 17.2% growth is mostly attributable to an 8% increase in sales and 7% increase in revenue yield per kWh due to the tariff adjustment of December 2013.

### ii. Return on Investment

This has lowered to 2.9% as at December 2013 as compared to 3.3% at the end of December 2012. This decline is attributable to a heavy development program resulting in 30.3% increase in Total Assets as compared to 17.2% increase in Profit Before tax.



### iii. Debt Equity Ratio

This has improved to 2.3 at December 2013 as compared to 1.8 at December 2012 due to a 79% increase in debt as compared to a 9.5% increase in equity. This ratio can still be raised further to 3.0 (75% debt against 25% equity) as recommended by the World Bank as the self-financing ratio for the company's major projects. This high debt-equity ratio mitigates the need for tariff increases to raise project development funds.

### iv. Development Index

This index has improved to 55% as compared to 51% at the same time in the previous year. This was due to comparatively higher value of capital expenditure in the period up to December 2013 that offset the growth in recurrent expenditure this year to date.

### v. Number of New Customers Connected

In the six months to December 2013 a total of 147,212 new customers were connected as compared to 139,241 in the first six months of 2012/13. Despite the rise in connection costs that has occurred the company has still managed to maintain this indicator on a positive trend. Factors contributing to this included increased availability of loans to prospective customers, a Sh 2.7 billion government subsidy applied in the 1st quarter 2013/14 and an increase in number of new applications received.

### vi. Expand and Upgrade Electricity Distribution Network

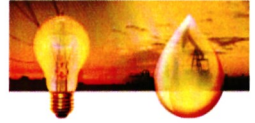
The length of power lines (HV, MV and LV) constructed by the company had reached 4,101kms in the first six months of 2013/14 as compared to 3,676 in the same period in the previous year. This growth is associated with high customer connectivity growth and timing of project completion. Due to long delay in reviewing new connection charges the company is now subsidizing new connection line LV extensions.

### vii. Sales

Sales for the six months has improved to 3,528 GWh as compared to 3,270 GWh in the same period last year and is attributed mainly to economic growth and rise in new customers connected in recent months.

### viii. Generation capacity procured

This indicator in the first six months of 2013/14 included the 81.5 MW Thika Power Station and 20 MW Kinadaruma expansion, which was greater than the 40MW new capacity procured in the previous year.



### **ix. System Efficiency**

System Efficiency, which is electricity sold to final consumers as a percentage of energy purchased from generating companies at 80.37%, was slightly lower than 81.17% in the same period last year. Mismatched timing of new power stations and transmission line developments is contributing to rising transmission losses. Construction of the new higher capacity transmission line between Nairobi and Mombasa is ongoing, which will reduce transmission losses when complete. Connection of a large number of new customers at low voltage especially in rural areas where line distances in between substations are long is also creating tendency for technical losses to rise. Loss reduction projects and system design strategies continue to be implemented aimed at reducing technical losses. Commercial losses (especially from power theft) continue to be addressed by widespread inspection of power supply installations.

### **x. LV Breakdowns per 1000 customers per month**

Average Number of Low Voltage Breakdowns per 1,000 customers per month that 9.77 is worse than the achievement 7.50 at the same time in the previous year, which is mainly a reflection of better data capture on incidences. This indicator has been affected by transformer vandalism, oil siphoning, shortage of 33kV cables and stay wire. Enhanced LV maintenance to address faults in the LV includes availing transformers & cables and reinforcement to repetitive cases.

### **xi. Average time to connect new customer upon payment**

Average Time to Connect New Customers After Payment (240V and 415V customers) worsened to 84.4 days as compared to 62.9 days at the same time in the previous year. Analysis of the data shows that new customers are applying for connection at a time when their premises are not yet ready for connection as it is taking 48 days on average after payment for customers to submit internal wiring completion certificates as compared to 36 days on average for the company to carry out connection after receipt of the wiring certificates.

### **xii. Average Tariffs**

Average Industrial Retail Tariff in US dollars has improved to US cents 13.43 as compared to US cents 14.14 at the same time in the previous year due to more favourable generation mix entailing retirement of expensive emergency generation and procurement of cheaper energy from new geothermal and thermal power stations.

Average Domestic Retail Tariff in US dollars has remained the same at US cents 18.78 as compared to the previous year. This indicator is affected by a stepped tariff entailing a higher energy charge for increased levels of consumption.



#### 4. Key Projects (key projects being undertaken by your entity and a status update on the same)

##### Projects Division Status of ongoing Projects – January 2014

RIGHT ISSUE PROJECTS										
KPLC RIGHTS ISSUE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective		
(a) City Square GIS Substation & Lines	KPLC	Hydro China Huadong	7.72	March 2012	15months.	Feb2014	<b>On going- Final tests IP</b>	Capacity enhancement, voltage support and reliability improvement around Nairobi's Upper Hill area and City Centre.		
(b) Nyeri Town 33/11KV Substation & Lines	KPLC	Etrade Limited	5.49	June 2012	15months	January 2014	<b>On going – Final tests IP</b>	Capacity enhancement, voltage support reliability and alternate supply to Nyeri Town		
(c) Ruaraka Complex 66/11KV SS	KPLC	Power Technics	7.46	September 2013	15Months	December 2014	<b>Ongoing</b>	Capacity enhancement, voltage support and reliability improvement in Nairobi's Ruaraka, Mathare North, Part of Eastleigh. Replaced Kasarani 66/11KV due to non availability of land at Mwhoko – Kasarani Area		



IFC PROJECTS									
IFC - (WORLD BANK GROUP)	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
(a) Maungu 132/33kv S/S & Lines	IFC	AEE - SA Spain	7.889	N/A	N/A	N/A	Evaluation completed	Capacity enhancement at Maungu and De-Link from KPC system and alternate line to Voi Town	
(b) Bahati 33/11 KV s/s & Lines	IFC	ABB Kenya	4.349	N/A	N/A	N/A	Awaiting effective date	Capacity enhancement, voltage support reliability and alternate supply to Bahati Area of Nakuru	
(c) Mamlaka GIS s/s & Lines	IFC	Hydro China Huadong	6.743	N/A	N/A	N/A		Capacity enhancement, voltage support and reliability improvement in Nairobi's State House, University of Nairobi and relieve Cathedral SS.	



**KPLC NAIROBI RING PROJECT (EPCF)**

Project	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date of Completion	Status	Objective
(a) Thika Road 220/66KV substation (Kenyaatta University)	KPLC/ AEE Spain	AEE SA - Spain	28.97	Pending effective date	30Months	Not Set	Pending site acquisition and effective date	Capacity enhancement, voltage support and reliability improvement around Nairobi City & Environs. Part of the Nairobi 220KV Ring Project

**KPLC/MOE Funded TURNKEY PROJECTS**

Project	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date of Completion	Status	Objective
(a) Magadi Road GSU 66/33	MoE	ABB South Africa	28.97	26/4/2012	14	May 2014	Civil works in progress	Serve magadi GSU camp and its environs. Reduce the 11kV lines to Magadi
(b) Kahani 66/11 SS	MoE	Etrade	4.00	30/10/2013	14	31st December 2014	Design approval in progress	Of load Makuyu and thika town substations
(c) Lamu 33/11	MoE	Retendered	N/A	N/A	N/A	N/A	Retendering to be done on 16th January	Remove the off grid station at lamu and supply lamu town
(d) Hindi - Mokowe 33KV Line	MoE	Powergen	2.00	April 2013	14	June 2014	Pole erection in progress	Serve Hind towns, mokowe town and supply lamu island substation
(e) Hindi - Kibaoni 33KV line	MoE	Powergen	1.10	30/10/2013	14	31st December 2014	Designs in progress.	Produce indepent feeders to Witu and Mpeketoni towns from hindi substation



**KPLC/KETRACO 132 KV TRANSMISSION SUBSTATIONS**

KENYA ELECTRICITY EXPANSION PROJECT - CREDIT NO. 4743 - KE		Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective
(a)	Kindaruma- Mwingi- Garissa 132kv S/S	IDA	KEC Int. Ltd	11.18	July,2012	18 Months	Jun,2014	On going (KPLC/ KETRACO)	Capacity enhancement, voltage support at Mwingi and Garrissa. Retire Diesel stations.
(b)	Eldoret -Kitale 132KV S/S	IDA	ABB (PTY) Ltd	5.12	July,2012	18 Months	Jun,2014	On going (KPLC/ KETRACO)	Capacity enhancement, voltage support and reliability improvement in Kitale& Environs
(c.)	Kisii-Awendo 132 KV S/S	IDA	ABB (PTY) Ltd	10.22	July,2012	18 Months	Jun.,2014	On going (KPLC/ KETRACO)	Capacity enhancement, voltage support and reliability improvement in Southern Nyanza & Environs

**KPLC/KETRACO 132 KV TRANSMISSION LINES**

KENYA ELECTRICITY EXPANSION PROJECT - CREDIT NO. 4743 - KE		Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective
(a)	Kindaruma- Mwingi- Garissa 132kv Lines	IDA	Tata Projects Ltd	14.31	July,2012	24 Months	June 2014	On going (KPLC/ KETRACO)	Tx Lines for Capacity enhancement, voltage support at Mwingi and Garrissa. Retire Diesel stations.
(b)	Eldoret -Kitale 132KV Lines	IDA	Tata Projects Ltd	4.40	July,2012	18 Months	February 2014	On going (KPLC/ KETRACO)	Tx Lines for Capacity enhancement, voltage support and reliability improvement in Kitale& Environs



KPLC/KETRACO 132 KV TRANSMISSION SUBSTATIONS										
	KENYA ELECTRICITY EXPANSION PROJECT - CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
(c.)	Kisii-Awendo 132 KV Lines	IDA	Tata Projects Ltd	2.55	July, 2012	18Months	February 2014	On going (KPLC/KETRACO)	Tx Lines for Capacity enhancement, voltage support and reliability improvement in Southern Nyanza & Environs	
	<b>KEEP - Construction of Distribution substations</b>									
	KENYA ELECTRICITY EXPANSION PROJECT - CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
6	<b>LOT-1-Nairobi Region</b>									
(a)	Rironi	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(b)	Magumu,	IDA	KEC Int. Ltd	20.89	September, 2012	24 Months	Sept. 2014	On going	Loss reduction, capacity enhancement and improve reliability.	
(c)	Lower Kabete	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(d)	Ndenderu,	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(e)	Githunguri	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	



KEEP - Construction of Distribution substations										
	KENYA ELECTRICITY EXPANSION PROJECT – CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
<b>6</b>	<b>LOT-1-Nairobi Region</b>									
(f)	Kirigiti	IDA						<b>On going</b>	Loss reduction, capacity enhancement and improve reliability.	
(g)	Villa Franca	IDA						<b>On going</b>	Loss reduction, capacity enhancement and improve reliability.	
(h)	Uplands	IDA						<b>On going</b>	Loss reduction, capacity enhancement and improve reliability.	
(i)	Lukenya	IDA						<b>On going</b>	Loss reduction, capacity enhancement and improve reliability.	
KEEP - Construction of Distribution substations										
	KENYA ELECTRICITY EXPANSION PROJECT – CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
<b>7</b>	<b>Lot 2- West Kenya</b>									
(a)	Ahero	IDA						<b>On going</b>	Loss reduction, capacity enhancement and improve reliability.	
(b)	Maseno	IDA	Siemens India Ltd	10.28	<b>September, 2012</b>	24months	Sept.2014	<b>On going</b>	Loss reduction, capacity enhancement and improve reliability.	



KEEP - Construction of Distribution substations										
	KENYA ELECTRICITY EXPANSION PROJECT - CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
7	Lot 2- West Kenya									
(c.)	Chepseon	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(d)	Elgon View	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(e)	Kipsarrman	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(f)	Kibos	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(g)	Kabarak University	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	
(h)	MajengoVihiga.	IDA						On going	Loss reduction, capacity enhancement and improve reliability.	



KEEP - Construction of Distribution substations									
	KENYA ELECTRICITY EXPANSION PROJECT - CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective
7	Lot-3 - Mt. Kenya Region								
(a)	Gatundu	IDA						On going	Loss reduction, capacity enhancement and improve reliability.
(b)	Kangema	IDA						On going	Loss reduction, capacity enhancement and improve reliability.
(c.)	Tala	IDA	KEC Int. Ltd	8.56	September, 2012	24months	Sept.2014	On going	Loss reduction, capacity enhancement and improve reliability.
(d)	Mwea	IDA						On going	Loss reduction, capacity enhancement and improve reliability.
(e)	Juja	IDA						On going	Loss reduction, capacity enhancement and improve reliability.



KEEP – Construction of Distribution substations										
	KENYA ELECTRICITY EXPANSION PROJECT – CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
<b>8</b>	<b>Lot 4-Coast Region</b>	IDA								
(a)	Jomvu	IDA	CHINT ELECTRIC Ltd	6.19	November, 2012	24months	November 2014	<b>On going</b>	Loss reduction, capacity enhancement and improve reliability in mainland west – Jomvu, Miritini, Chaani and adjacent areas	
(b)	Mshomoroni.	IDA						<b>On going</b>	Loss reduction, capacity enhancement and improve reliability – mainland north Mshomoroni, Utange, Kisauni.	
	Construction of Distribution Lines	IDA								
<b>4.</b>	<b>LOT-1-Nairobi &amp; Coast Regions</b>	IDA								
(a)	Rironi	IDA						<b>On going</b>	Feed in and Feed-out Lines to supply new KEEP SS's above for Loss reduction, capacity enhancement and improve reliability.	
(b)	Magumu,	IDA						<b>On going</b>		
(c.)	Lower Kabete	IDA						<b>On going</b>		
(d)	Ndenderu,	IDA						<b>On going</b>		



KEEP - Construction of Distribution substations										
	KENYA ELECTRICITY EXPANSION PROJECT – CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
<b>4.</b>	<b>LOT-1-Nairobi &amp; Coast Regions</b>	IDA								
(e)	Githunguri	IDA	SINOTEC LTD	8.44	November, 2012	15 months	July 2014	On going		
(f)	Kirigiti	IDA						On going		
(g)	Villa Franca	IDA						On going		
(h)	Uplands	IDA						On going		
(i)	Lukenya	IDA						On going		
(k)	Jomvu	IDA						On going		
(l)	Mshomoroni.	IDA						On going		
<b>5</b>	<b>Lot 2-West Kenya</b>	IDA								
(a)	Ahero	IDA								
(b)	Maseno	IDA								
(c.)	Chepseon	IDA							Feed in and Feed-out Lines to supply new KEEP SS's above for Loss reduction, capacity enhancement and improve reliability.	
(d)	Elgon View	IDA						On going		
(e)	Kipsarrman	IDA	SINOTEC LTD	4.65	November, 2012	15 months	July 2014			



KEEP - Construction of Distribution substations									
KENYA ELECTRICITY EXPANSION PROJECT - CREDIT NO. 4743 - KE	Financier	Contractor	Contract amount \$(M)	Contract effective date	Period of Contract	Date Due for Completion	Status	Objective	
(f) Kibos	IDA								
(g) Kabarak University	IDA								
(h) Majengo	IDA								
<b>6. Lot-3 -Mt.Kenya Region</b>	IDA								
(a) Gatundu	IDA						On going		
(b) Kangema	IDA						On going	Feed in and Feed-out Lines to supply new KEEP SS's above for Loss reduction, capacity enhancement and improve reliability.	
(c.) Tala	IDA						On going		
(d) Mwea	IDA						On going		
(e) Juja	IDA						On going		



## 5. Challenges and proposed mitigation

Risk / Challenge	Mitigation
1. Unaffordability of connection cost by new ordinary customers	<ul style="list-style-type: none"> <li>• Loan facilities for customers</li> <li>• Support from GOK to meet connectivity costs</li> <li>• Review costs to increase efficiencies</li> <li>• Pre-investment</li> </ul>
2. Weak scrap metal law	<ul style="list-style-type: none"> <li>• Government to be lobbied to strengthen scrap metal law to effectively deter vandalism</li> </ul>
3. Drought induced power rationing	<ul style="list-style-type: none"> <li>• Diversification of energy sources.</li> <li>• Interconnection of the national grid with neighbouring countries</li> <li>• Discovery and development of new energy sources in the country</li> </ul>
4. Uncoordinated development planning (esp. cabling) with other utilities	<ul style="list-style-type: none"> <li>• Improved consultation and coordination between infrastructural developers including water and telecommunications</li> </ul>
5. Levies demanded by various Government entities for power infrastructure leading to debt conflicts. May also lead to higher tariffs.	<ul style="list-style-type: none"> <li>• Intervention by Central Government to resolve disputes, set relevant policy and harmonise relevant laws</li> </ul>
6. Delays in implementation of generation projects leading to continued suppressed demand and dampened sales Government delay in providing guarantees required for implementing generation projects.	<ul style="list-style-type: none"> <li>• Continued temporary use of emergency generation.</li> <li>• Raise generation reserve margin requirement from 15% to 30% provide future cushion for project delays.</li> <li>• Demand Side Management and Energy Efficiency programs to substitute for new plant.</li> <li>• Government to establish a policy and legal framework for provision of government support and securities for project implementation</li> </ul>
7. Right of Way for power lines, (wayleaves acquisition, encroachment, trace clearance)	<ul style="list-style-type: none"> <li>• Public Education</li> <li>• Engaging Government, County and other public bodies</li> <li>• Intensified trace maintenance</li> <li>• Linking transmission line development to new generation plant development</li> </ul>
8. High levels of vandalism and theft of power assets	<ul style="list-style-type: none"> <li>• Intensify anti-vandalism security measures.</li> <li>• Ensure enforcement of new stiff penalties.</li> <li>• Engage communities in anti-vandalism efforts.</li> <li>• Engage authorities</li> <li>• Step up prosecution of vandalism cases</li> </ul>



## 6. Conclusion/Way Forward

The priority strategic initiatives of the company are as follows:

- Complete the last 5 of the 51 new World Bank funded Energy Sector Recovery Project substations.
- Continue with construction of 31 new KEEP funded substation projects scheduled to be completed in 2015
- Extend automation of the distribution Network
- Increase redundancy and dedicated lines to Large Power customers so as to eliminate power outages affecting them;
- Implementation of the Distribution Master Plan completed in 2013
- Enhance anti-vandalism technical and legal interventions
- Ensure over 1 million new electricity customers are connected in every 5 year period
- Sales growth averaging 5.7% annually in past 10 years. Average of 15% annual growth required to meet 5000+MW generation expansion plan.
- Fast Track Regional interconnection (Kenya Ethiopia, Kenya Tanzania and second Kenya Uganda links)
- Structured procurement of 5,093 MW by 2017 out of which 2,383 MW is already committed to be built.

Although a very ambitious and costly power network infrastructural investment programme is being implemented to serve the aims of the Vision 2030 Medium Term Plan, it is noted that this programme has attracted keen attention from lenders, led by the World Bank, who are financing the majority of these projects to fruition.

Reasons for optimism of continued sales growth in the plan period include growth of the economy, massive infrastructural investment in the country, a vibrant domestic private sector and growing foreign direct investment in to the country.

The Company remains keenly aware that it provides an essential service as an input in productive activity and residential life in the modernising economy and as such recognises customer satisfaction as a core objective.

# APPENDIX

KENYA POWER & LIGHTING CO. LTD.  
WORKPLAN



REPUBLIC OF KENYA



Kenya Power

THE 5000+ MW POWER GENERATION PROJECTS			KENYA POWER & LIGHTING COMPANY		934MW KENYA POWER CONTRIBUTION THROUGH IPPS SEPT 2013 - DEC 2016													
ID	Task Name	Duration	Start	Finish	Half 1, 2013 J F M A M J J A S O N D	Half 2, 2013 J A S O N D J F M A M J J A S O N D	Half 1, 2014 J F M A M J J A S O N D	Half 2, 2014 J A S O N D J F M A M J J A S O N D	Half 1, 2015 J F M A M J J A S O N D	Half 2, 2015 J A S O N D J F M A M J J A S O N D	Half 1, 2016 J F M A M J J A S O N D	Half 2, 2016 J A S O N D J F M A M J J A S O N D	Half 1, 2017 J F M A M J J A S O N D					
1	<b>Thika Power 87MW</b>	197 days	4/1/13	12/31/13	[Gantt chart showing construction from 4/1/13 to 12/31/13]													
2	Construction (Steam Unit)	109 days	8/1/13	12/31/13	[Gantt chart showing construction from 8/1/13 to 12/31/13]													
3	Interim Commercial Operation Tests	101 days	4/1/13	8/18/13	[Gantt chart showing tests from 4/1/13 to 8/18/13]													
4	Full Commercial Operation Tests	23 days	11/30/13	12/31/13	[Gantt chart showing tests from 11/30/13 to 12/31/13]													
5	Full Commercial Operation Date	0 days	12/31/13	12/31/13	[Gantt chart showing date at 12/31/13]													
6	<b>OrPower4 16MW</b>	278 days	4/1/13	4/23/14	[Gantt chart showing construction from 4/1/13 to 4/23/14]													
7	Construction	278 days	4/1/13	4/23/14	[Gantt chart showing construction from 4/1/13 to 4/23/14]													
8	Full Commercial Operation Tests	67 days	12/28/13	3/31/14	[Gantt chart showing tests from 12/28/13 to 3/31/14]													
9	Full Commercial Operation Date	0 days	4/23/14	4/23/14	[Gantt chart showing date at 4/23/14]													
10	<b>Triumph Power 83MW</b>	326 days	4/1/13	6/30/14	[Gantt chart showing construction from 4/1/13 to 6/30/14]													
11	Construction	281 days	4/1/13	4/28/14	[Gantt chart showing construction from 4/1/13 to 4/28/14]													
12	66kV Interconnection Facilities	86 days	1/1/14	4/30/14	[Gantt chart showing facilities from 1/1/14 to 4/30/14]													
13	Full Commercial Operation Tests	43 days	5/1/14	6/30/14	[Gantt chart showing tests from 5/1/14 to 6/30/14]													
14	Full Commercial Operation Date	0 days	6/30/14	6/30/14	[Gantt chart showing date at 6/30/14]													
15	<b>Gulf Power 80MW</b>	326 days	4/1/13	6/30/14	[Gantt chart showing construction from 4/1/13 to 6/30/14]													

THE KENYA POWER & LIGHTING COMPANY LTD

DR. BEN CHUMO

MD & CEO

Sign: \_\_\_\_\_

Date: \_\_\_\_\_



**THE 5000+ MW POWER GENERATION PROJECTS**      **KENYA POWER & LIGHTING COMPANY**      **934MW KENYA POWER CONTRIBUTION THROUGH IPPS SEPT 2013 - DEC 2016**

ID	Task Name	Duration	Start	Finish	Half 1, 2013	Half 2, 2013	Half 1, 2014	Half 2, 2014	Half 1, 2015	Half 2, 2015	Half 1, 2016	Half 2, 2016	Half 1, 2017														
					J	F	M	A	M	J	J	A	S	O	N	D	J	J	A	S	O	N	D	J	F	M	A
16	Construction	283 days	4/1/13	4/30/14	IPP																						
17	66kV Interconnection Facilities	86 days	1/1/14	4/30/14	KPLC																						
18	Full Commercial Operation Tests	43 days	5/1/14	6/30/14	IPP																						
19	Full Commercial Operation Date	0 days	6/30/14	6/30/14			6/30																				
20	<b>Kinangop Wind 60MW</b>	<b>695 days</b>	<b>1/1/13</b>	<b>8/31/15</b>																							
21	PPA Approval	53 days	1/1/13	3/14/13	ERC																						
22	Effectiveness of PPA	177 days	3/14/13	11/15/13	IPP/KPLC																						
23	Construction	467 days	11/16/13	8/31/15	IPP																						
24	Transmission line Construction	446 days	11/16/13	7/31/15	IPP																						
25	Commissioning	66 days	6/1/15	8/31/15	IPP																						
26	Full Commercial Operation Date	0 days	8/31/15	8/31/15					8/31																		
27	<b>Lake Turkana Wind Power 300MW</b>	<b>1045 days</b>	<b>1/1/13</b>	<b>12/31/16</b>																							
28	PPA Approval	90 days	1/1/13	5/6/13	ERC																						
29	Effectiveness of PPA	216 days	5/6/13	3/1/14	IPP/KPLC																						
30	Escrow Agreement	196 days	5/6/13	2/3/14	TREASURY/IPP/KPLC																						

THE KENYA POWER & LIGHTING COMPANY LTD

DR. BEN CHUMO      MD & CEO

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Date: \_\_\_\_\_



REPUBLIC OF KENYA



Kenya Power

THE 5000+ MW POWER GENERATION PROJECTS			KENYA POWER & LIGHTING COMPANY		934MW KENYA POWER CONTRIBUTION THROUGH IPPS SEPT 2013 - DEC 2016											
ID	Task Name	Duration	Start	Finish	Half 1, 2013 J F M A M J J A S O N D	Half 2, 2013 J F M A M J J A S O N D	Half 1, 2014 J F M A M J J A S O N D	Half 2, 2014 J F M A M J J A S O N D	Half 1, 2015 J F M A M J J A S O N D	Half 2, 2015 J F M A M J J A S O N D	Half 1, 2016 J F M A M J J A S O N D	Half 2, 2016 J F M A M J J A S O N D	Half 1, 2017 J F M A M J J A S O N D			
31	Escrow Account Opening	563 days	2/4/14	3/31/16												
32	Construction	719 days	3/1/14	11/30/16						IPP						
33	Interconnection Facilities	566 days	3/1/14	4/29/16					IPP							
34	Transmission line Construction	566 days	3/1/14	4/29/16					KETRACO							
35	Suswa Substation Construction	566 days	3/1/14	4/29/16					KETRACO							
36	Loyangalani Substation Construction	566 days	3/1/14	4/29/16					KETRACO							
37	Suswa Isinya line	566 days	3/1/14	4/29/16					KETRACO							
38	Commissioning	155 days	5/1/16	12/1/16								IPP				
39	Full Commercial Operation Date	0 days	12/31/16	12/31/16										12/31		
40	<b>AGIL 70MW (Geo.)</b>	<b>1039 days</b>	<b>1/9/13</b>	<b>12/31/16</b>												
41	PPA Approval	37 days	1/9/13	2/28/13	IPP											
42	Effectiveness of PPA	263 days	2/28/13	3/3/14		IPP										
43	Government Support Letter	243 days	2/28/13	2/3/14			TREASURY/MOEP									
44	Generation Licence	252 days	2/28/13	2/14/14			ERC									
45	Reservoir Confirmation	263 days	3/3/14	3/4/15							IPP/MOEP					

THE KENYA POWER & LIGHTING COMPANY LTD

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THE 5000+ MW POWER GENERATION PROJECTS			KENYA POWER & LIGHTING COMPANY												934MW KENYA POWER CONTRIBUTION THROUGH IPPS SEPT 2013 - DEC 2016												
ID	Task Name	Duration	Start	Finish	Half 1, 2013	Half 2, 2013	Half 1, 2014	Half 2, 2014	Half 1, 2015	Half 2, 2015	Half 1, 2016	Half 2, 2016	Half 1, 2017														
					J	F	M	A	M	J	J	F	M	A	M	J	J	F	M	A	M	J	J	F	M	A	M
46	Construction	455 days	3/5/15	11/30/16																							
47	220kV line to Suswa Substation	412 days	3/5/15	9/30/16																							
48	Suswa Substation Construction	566 days	3/1/14	4/29/16																							
49	Suswa -Isinya line	566 days	3/1/14	4/29/16																							
50	Commissioning	67 days	9/30/16	12/31/16																							
51	Full Commercial Operation Date	0 days	12/31/16	12/31/16																							
52	<b>Marine Power (Geo.) 70MW</b>	<b>872 days</b>	<b>9/1/13</b>	<b>12/31/16</b>																							
53	PPA Negotiations	152 days	9/1/13	3/31/14																							
54	PPA Approval	22 days	4/1/14	4/30/14																							
55	Effectiveness of PPA	66 days	5/1/14	7/31/14																							
56	Government Support Letter	65 days	4/1/14	6/30/14																							
57	Generation Licence	65 days	4/1/14	6/30/14																							
58	Reservior Confirmation	239 days	7/31/14	6/30/15																							
59	Construction	587 days	8/1/14	10/31/16																							
60	Interconnection Facilities	545 days	9/30/14	10/31/16																							

THE KENYA POWER & LIGHTING COMPANY LTD

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REPUBLIC OF KENYA



Kenya Power

**THE 5000+ MW POWER GENERATION PROJECTS**      **KENYA POWER & LIGHTING COMPANY**      **934MW KENYA POWER CONTRIBUTION THROUGH IPPS SEPT 2013 - DEC 2016**

ID	Task Name	Duration	Start	Finish	Half 1, 2013	Half 2, 2013	Half 1, 2014	Half 2, 2014	Half 1, 2015	Half 2, 2015	Half 1, 2016	Half 2, 2016	Half 1, 2017
					J F M A M J J A S O N D	J A S O N D J F M A M J J A S O N D	J A S O N D J F M A M J J A S O N D	J A S O N D J F M A M J J A S O N D	J F M A M J J A S O N D	J A S O N D J F M A M J J A S O N D	J A S O N D J F M A M J J A S O N D	J A S O N D J F M A M J J A S O N D	J F M A M J J A S O N D
61	Suswa Substation Construction	566 days	3/1/14	4/29/16					KETRACO				
62	Suswa-Isinya line	566 days	3/1/14	4/29/16					KETRACO				
63	Commissioning	45 days	11/1/16	12/31/16								IPP	
64	Full Commercial Operation Date	0 days	12/31/16	12/31/16									12/31
65	<b>Prunus Wind 50MW</b>	<b>821 days</b>	<b>1/7/13</b>	<b>2/29/16</b>									
66	Conclusion of PPA	175 days	7/1/13	2/28/14		IPP/KPLC							
67	PPA Approval	22 days	3/1/14	3/31/14			ERC						
68	Effectiveness of PPA	65 days	4/1/14	6/30/14			IPP/KPLC						
69	Government Support Letter	44 days	4/1/14	5/30/14			TREASURY/MOEP						
70	Generation Licence	36 days	4/1/14	5/20/14			ERC						
71	Construction	404 days	7/1/14	1/15/16					IPP				
72	66kV line to Ngong Substation	370 days	7/1/14	11/30/15					IPP				
73	Suswa-Ngong line & Substation	327 days	7/1/14	9/30/15					KETRACO				
74	Commissioning	66 days	11/30/15	2/29/16							IPP		
75	Full Commercial Operation Date	0 days	2/29/16	2/29/16								2/29	

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Date: \_\_\_\_\_

THE 5000+ MW POWER GENERATION PROJECTS			KENYA POWER & LIGHTING COMPANY												934MW KENYA POWER CONTRIBUTION THROUGH IPPS SEPT 2013 - DEC 2016													
ID	Task Name	Duration	Start	Finish	Half 1, 2013	Half 2, 2013	Half 1, 2014	Half 2, 2014	Half 1, 2015	Half 2, 2015	Half 1, 2016	Half 2, 2016	Half 1, 2017															
					J	F	M	A	M	J	J	A	S	O	N	D	J	J	A	S	O	N	D	J	J	F	M	A
76	<b>Kipeto Wind 100MW</b>	<b>652 days</b>	<b>9/1/13</b>	<b>2/29/16</b>																								
77	PPA Negotiations	111 days	9/1/13	1/31/14			IPP/KPLC																					
78	PPA Approval	43 days	1/1/14	2/28/14			ERC																					
79	Effectiveness of PPA	87 days	2/1/14	5/31/14			IPP/KPLC																					
80	Government Support Letter	74 days	2/3/14	5/15/14			NT/MOEP																					
81	Generation Licence	64 days	2/3/14	5/1/14			ERC																					
82	Construction	478 days	5/1/14	2/29/16							IPP																	
83	220kV line to Isinya Substation	392 days	5/1/14	10/30/15							IPP																	
84	Isinya Substation	370 days	5/1/14	9/30/15							KETRACO																	
85	Commissioning	66 days	11/30/15	2/29/16																								
86	Full Commercial Operation Date	0 days	2/29/16	2/29/16																								
87	<b>Kwale Int. Sugar Company 18MW</b>	<b>565 days</b>	<b>9/1/13</b>	<b>10/29/15</b>																								
88	PPA Negotiations	131 days	9/1/13	2/28/14			IPP																					
89	PPA Approval	22 days	3/1/14	3/31/14			ERC																					
90	Effectiveness of PPA	44 days	4/1/14	5/30/14																								
							IPP/KPLC																					

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MD & CEO

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Date: \_\_\_\_\_





# RURAL ELECTRIFICATION AUTHORITY

JUNE 2014

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2.	Projects Under Implementation Over The Period July 2013 - June 2014
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b.	Status of ongoing renewable energy development projects
3.	Planned Projects For 2013/14 (January-June 2014)
4.	Challenges Encountered in Projects Implementation & Proposed Mitigation
5.	Conclusion
6.	Annexes
7.	Appendix: Gantt charts



## 1. Introduction

- The Government established the rural electrification program in 1973 for purposes of subsidizing electricity supply in the rural areas. Thirty years after the inception of the program (by 2003) only about 4% of the rural population had electricity connection in their homes while access level was about 8%.
- As a result of the low connectivity, the Government through the Economic Recovery Strategy (ERS) of 2003 and Sessional Paper No 4 of 2004 of Energy undertook to accelerate the pace of rural electrification through creation of a special purpose rural electrification agency.
- REA was consequently established in 2006 under the Energy Act No. 12 of 2006 with the mandate of enhancing electricity supply in the rural areas. The functions of the Authority as outlined in the Act are as follows:
  - a. Management of the rural electrification programme fund,
  - b. Development and updating of the rural electrification programme masterplan,
  - c. Implementing and sourcing of funds for the rural electrification programme,
  - d. Promotion of use of renewable energy sources,
  - e. Management of the delineation, tendering and award of contracts for licenses and permits for rural electrification.





- Upon commencing operations in 2007, REA aligned its goals to Vision 2030 which aims at having all Kenyans enjoy a high quality of life by the year 2030. The target set in Vision 2030 was to electrify all major public facilities and one million households by the year 2013.
- REA's first strategic plan (2008/09-2012/13) adopted the target of connecting all major public facilities (trading centres, secondary schools and health centres) by the year 2012/13.
- It is estimated that by end of 2012/13 out of a total of about 26,000 major public facilities (trading centres, secondary schools and health centres) in the country about 86% have been electrified leaving a balance of 14% as shown in the table below:-

Table 1: Summary of Electrification Level

Type of Facility	Total Number	Electrified By 2003	Electrified Facilities by 2013		Un - Electrified Facilities	
			No.	%	No.	%
Trading Centres	13,135	1,096	10,429	79%	2,706	21%
Secondary Schools	8,195	285	7,878	96%	1,037	4%
Health Centres	4,543	348	3,905	86%	1,467	14%
<b>TOTAL</b>	<b>25,873</b>	<b>1,729</b>	<b>22,212</b>	<b>86%</b>	<b>3,661</b>	<b>14%</b>

## 2. Projects Under Implementation Over the Period July 2013- June 2014

This section gives the status of projects under implementation within the last six months divided into three categories as below,

- Status of projects carried forward from the financial year 2012/13
- Status of implementation of the public primary schools projects
- Status of on-going renewable energy development projects.

### a) Status of projects carried forward from the financial year 2012/13

- At the close of the 2012/13 financial year, 862 projects were in various stages of implementation. These projects were mostly targeting the public secondary schools and trading centers among other facilities.
- The table below summaries the status of these projects as at 31st December 2013.



- The table below summaries the status of these projects as at 31st December 2013.

No	Status	No of Projects
1.	Commissioned	259
2.	Complete & Awaiting Commissioning	311
3.	Under implementation- in progress	292
	<b>TOTAL</b>	<b>862</b>

- Included in the 862 projects were 12 isolated diesel power stations (gensets) which were at various stages of implementation.
- Out of the 12 stations, REA was able to complete and commission three (3) stations namely; Takaba, Rhamu, and Eldas over the last six months. A summary status of the rest of the stations as at 31st December 2013 is attached as Annex I

#### b) Status of implementation of the public primary schools projects

- It is estimated that out of a total of 21,000 public primary schools only about 10,938 (48%) have access to electricity while a balance of 11,062 (52%) are yet to be supplied with electricity.
- The focus of the Authority in the financial years 2013/14 and 2014/15 is to supply electricity/connect all the un-electrified primary schools to provide the necessary infrastructure for the class one laptop implementation programme.
- In 2013/14 REA's budget for implementation of new electricity supply projects is about Kshs.3.4 billion as per the printed budget estimate which has been distributed to all the rural constituencies based on the CRA formulae for revenue allocation.
- REA's target for the year is to supply electricity to a minimum of 2,000 primary schools through both grid extension (1,800) and solar Pvs (215) for off grid primary schools. This will increase the number of primary schools with electricity from the current 11,062 (52%) to about 13,078 i.e. (62%)
- The status of implementation of the primary schools as of 31st December 2013 is as shown below. Electricity supply/connection includes wiring of class one in readiness for the laptops.



Table 2: Summary of electrification status of primary schools

No	Status	No of Primary schools (Grid)	No of Primary schools (Solar Pv)
1.	Commissioned/Connected	268	
2.	Complete & Awaiting Commissioning	85	
3.	Under implementation- in progress	657	
4.	Under survey & design	1,000	215
	<b>TOTAL</b>	<b>2,010</b>	<b>215</b>

- It is expected that all the primary schools financed will be connected by end of March 2014. Tender for the supply and installation of solar Pvs in the 215 schools has been evaluated and will be awarded by the end of January 2014.
- In addition to the grid extension and solar Pv installations REA is constructing five new isolated diesel power stations at Kamoliriban, Kotulo Khorondile, Maikona and Lokiriama. Detailed are given in Annex II.
- Civil and mechanical works for all the five stations have been awarded are expected to commence in February 2014 with a completion target of end of June 2014.

**c) Status of on-going renewable energy development projects.**

- REA has awarded contracts for the installation of solar Pvs at four (4) isolated power stations that is 50 KW Solar PV hybrid for Rhamu, 50 KW Solar PV hybrid for Takaba, 80 KW Solar PV hybrid for Laisamis, and 30 KW Solar PV hybrid for Eldas. The installations are expected to be completed by end of June 2014 and eventually reduce the operational cost of the stations



## 2. Planned Projects For 2013/14 (Jan-jun 2014)

- In the forthcoming revised budget estimate, it's expected that REA will be allocated additional funding of about Ksh.6 billion to finance a further 3,000 primary schools within the next six months.
- Towards this end REA has identified about 3,000 un-electrified primary schools across the country
- The additional connections to primary schools will include 400 solar Pv installations within the off-grid areas.
- The government of Kenya (GoK) has also entered into agreements with the Chinese government to finance development of 50 mw grid connected solar plant project in Garissa County. The project has been adopted as part of part of the Government 5000+MW power plan to transform Kenya by 2016.
- A 100 MW Hybrid Solar/Wind plant at Muhoroni with concessional financing from the Government of the People's Republic of China as part of the Government 5000+MW power plan to transform Kenya by 2016.
- A number of other renewable energy projects are planned for implementation as shown in the attached Annex III.



### 3. Challenges Encountered In Projects Implementation & Proposed Mitigation

- a) Funding- Although the Government has continued to provide funds for the Rural Electrification Programme over the years, the funds are hardly enough to implement the construction of all identified priority projects in each financial year.
- b) Delay in delivery of materials due to long lead time, hence delay in project implementation and commissioning. e.g. shortage of 33KV transformers has caused delays in commissioning of projects.

Solution: Bulk & timely procurement of materials and promoting more locally manufactured materials.

- c) Wayleaves acquisition: Huge compensation required and delays in acquisitions of consent

Solution: Involvement of communities, local leaders to sensitize communities on the importance of granting free wayleaves.

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### 4. Conclusion

With continued Government support, REA is committed to ensure that the Vision 2030 target of having all the households in the country connected with clean and reliable source of energy is achieved by the year 2020 as per Jubilee Government manifesto.

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## Annex I : Off Grid Diesel Power Stations – Ongoing Projects

	SITE/PROJECT	STATUS	CHALLENGES
1	<b>Takaba</b>	Commissioned to be handed over to KPLC for Operation and management in February 2014	Procurement of Turnkey projects takes time.
2.	<b>Rhamu</b>	Commissioned to be handed over to KPLC for Operation and management in February 2014	Procurement of Turnkey projects takes time.
3	<b>Eldas</b>	Commissioned to be handed over to KPLC for Operation and management in February 2014	Procurement of Turnkey projects takes time.
4	<b>Lokichogio</b>	In Operation but awaiting final commissioning and handover by June 2014	Procurement of Turnkey projects takes time.
5	<b>Laisamis</b>	Completed to be commissioned after customer connection.	Procurement of Turnkey projects takes time.
6	<b>Lokitaung</b>	Completed awaiting commissioning	Procurement of Turnkey projects takes time.
7	<b>North Horr</b>	Completed to be commissioned after customer connection	Procurement of Turnkey projects takes time.
8	<b>Banisa</b>	Civil & mechanical works are complete. Genset to be installed by June 2014	Procurement of Turnkey projects takes time.
9	<b>Lokori</b>	Completed awaiting commissioning by March 2014	Procurement of Turnkey projects takes time.
10.	<b>Hulugho</b>	Installation of genset in progress to completed and commissioned by June 2014	Procurement of Turnkey projects takes time.
11	<b>Kiunga</b>	Installation of genset in progress to completed and commissioned by June 2014	Procurement of Turnkey projects takes time.
12	<b>Dadaab</b>	Civil works and reticulation complete awaiting delivery of generators. To be completed by May 2014	Procurement of Turnkey projects takes time.



## Annex II. Off Grid Diesel Power Stations –2013/2014

	SITE/PROJECT	STATUS
1.	Kamoliriban	Civil works tender evaluation is completed. The project is expected to be completed by June 2014
2.	Kotulo	Civil works tender evaluation is completed. The project is expected to be completed by June 2014
3.	Khorondile	Civil works tender evaluation is completed. . The project is expected to be completed by June 2014
4.	Maikona	Civil & mechanical works awarded and contract signed.
5.	Lokiriama	Civil & mechanical works awarded and contract signed.

## Annex III. Renewable Energy Projects – Planned Projects For 2013/2014

	SITE/PROJECT	STATUS
1	100 MW Hybrid Solar/Wind at Muhoroni	Acquisition of land in process. This to be followed by feasibility Studies by China Jiangxi International.
2	50 MW solar plant at Garissa	MOU signed between Sinotec Co. Of China, Ministry of Energy & Petroleum and REA.
3	50 MW solar plant at Nanyuki	Signing of MOU in process between Sinotec Co. Of China, Ministry of Energy & Petroleum and REA.
4	Scale UP of Renewable Energy Program (SREP) mini-grids	Sites being identified by various stakeholders to on facilitate carrying out of Feasibility studies
5	ACP/EU Energy Facility Proposal	Proposal of a 1.4MW Small Hydro Project to be located at Nguruman site – Ngurman River, Kajiado/Narok County border. Proposal with EU
6	Chemosit Small hydro	Feasibility study completed by December 2013
7	Bangladesh settlement - Solar project	EOI for ESIA to be advertised by February 2014

# APPENDIX

## RURAL ELECTRIFICATION AUTHORITY WORKPLAN



REPUBLIC OF KENYA



**Rural**  
Electrification Authority

ELECTRIFICATION OF 11,000 PUBLIC PRIMARY SCHOOLS		RURAL ELECTRIFICATION AUTHORITY		MARCH 2014 - APRIL 2015																								
ID	Task Name	Duration	Start	Finish	2014	2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
1	<b>2013/14 FY - 5,000 PUBLIC PRIMARY SCHOOLS</b>	97 days	Feb 21 '14	Jul 7 '14	[Gantt chart bar]																							
2	<b>A) ELECTRIFICATION OF 2,500 PRIMARY SCHOOLS</b>	50 days	Mar 10 '14	May 16 '14	[Gantt chart bar]																							
3	Constuction in-progress through Grid Extension - 2,300 schools	38 days	Mar 10 '14	Apr 30 '14	[Gantt chart bar]																							
4	Solar PV Installation in progress - 200 schools	50 days	Mar 10 '14	May 16 '14	[Gantt chart bar]																							
5	Delivery of Pin Insulators	38 days	Mar 10 '14	Apr 30 '14	[Gantt chart bar]																							
6																												
7	<b>B) ELECTRIFICATION OF 400 PRIMARY SCHOOLS THROUGH SOLAR PVS</b>	97 days	Feb 21 '14	Jul 7 '14	[Gantt chart bar]																							
8	Tender Advertisement	18 days	Feb 21 '14	Mar 18 '14	[Gantt chart bar]																							
9	Appointment of opening/Evaluation Teams	5 days	Mar 10 '14	Mar 14 '14	[Gantt chart bar]																							
10	Bid closing & opening	1 day	Mar 19 '14	Mar 19 '14	[Gantt chart bar]																							
11	Evaluation of Bids	10 days	Mar 20 '14	Apr 2 '14	[Gantt chart bar]																							
12	Tender Committee Approval	3 days	Apr 3 '14	Apr 7 '14	[Gantt chart bar]																							
13	Notification of Award	5 days	Apr 8 '14	Apr 14 '14	[Gantt chart bar]																							
14	Execution of Contract ( Includes 7 days appeal period)	10 days	Apr 15 '14	Apr 28 '14	[Gantt chart bar]																							
15	Execution of Solar Installation Works	50 days	Apr 29 '14	Jul 7 '14	[Gantt chart bar]																							
16																												
17	<b>C) ELECTRIFICATION OF 2,100 PUBLIC PRIMARY SCHOOLS THROUGH GRID EXTENSION</b>	81 days	Mar 10 '14	Jun 30 '14	[Gantt chart bar]																							
18	<b>PROCUREMENT OF LINE CONSTRUCTION MATERIALS</b>	77 days	Mar 11 '14	Jun 25 '14	[Gantt chart bar]																							

Project: Projects Implementation chart 2  
Date: Tue 3/18/14

Task  
Split  
Progress

Milestone  
Summary  
Project Summary

External Tasks  
External Milestone  
Deadline

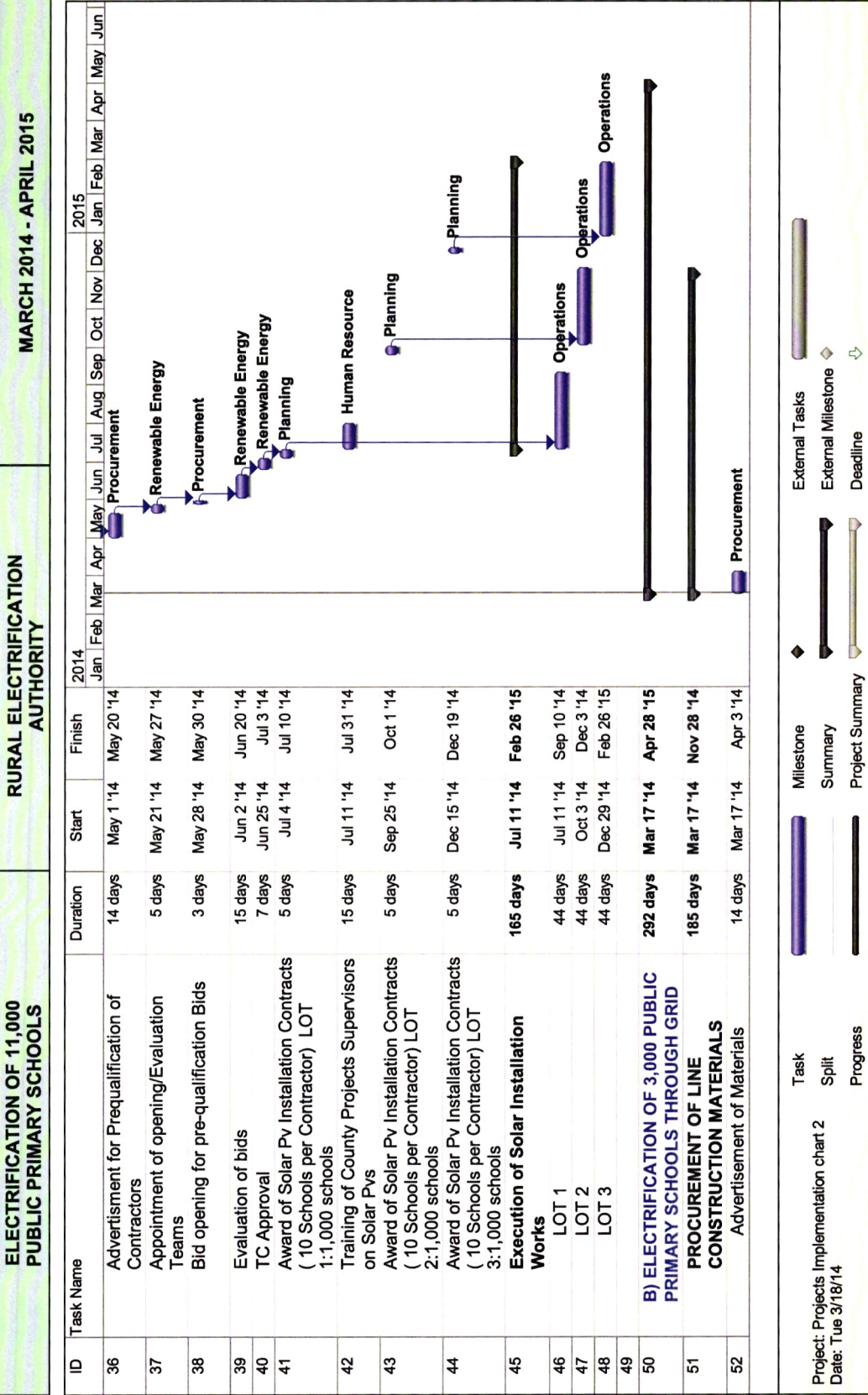




REPUBLIC OF KENYA



**Rural**  
Electrification Authority





REPUBLIC OF KENYA



**Rural**  
Electrification Authority

ELECTRIFICATION OF 11,000 PUBLIC PRIMARY SCHOOLS		RURAL ELECTRIFICATION AUTHORITY		MARCH 2014 - APRIL 2015																					
ID	Task Name	Duration	Start	Finish	2014	2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
53	Appointment of opening/Evaluation Teams	5 days	Mar 28 '14	Apr 3 '14																					
54	Opening of Tender Bids	5 days	Apr 4 '14	Apr 10 '14																					
55	Evaluation of Bids	25 days	Apr 11 '14	May 15 '14																					
56	Tender Committee Approval	10 days	May 16 '14	May 29 '14																					
57	Notification of Awards	5 days	Jun 16 '14	Jun 20 '14																					
58	Execution of Contracts	14 days	Jun 23 '14	Jul 10 '14																					
59	Delivery of materials	85 days	Aug 4 '14	Nov 28 '14																					
60	<b>DESIGN WORK</b>	<b>75 days</b>	<b>May 1 '14</b>	<b>Aug 13 '14</b>																					
61	Design of Power lines to Schools ( Based on 200 schools per week)	75 days	May 1 '14	Aug 13 '14																					
62	<b>CONSTRUCTION WORKS</b>	<b>172 days</b>	<b>Sep 1 '14</b>	<b>Apr 28 '15</b>																					
63	Award of L&T Contracts (200 Primary schools per week)	88 days	Sep 1 '14	Dec 31 '14																					
64	Execution of Construction works	172 days	Sep 1 '14	Apr 28 '15																					

Project: Projects Implementation chart 2  
Date: Tue 3/18/14

Task Split Progress

Milestone Summary Project Summary

External Tasks External Milestone Deadline





REPUBLIC OF KENYA



**5000 + MW POWER PLAN: REA CONTRIBUTION  
100 MW HYBRID SOLAR/WIND PLANT MUHORONI**

**RURAL ELECTRIFICATION  
AUTHORITY**

(FROM JULY 2013 - MARCH 2016)

ID	Task Name	Duration	Start	Finish	2013			2014			2015			2016		
					Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
30	Forward Commercial Contract to AG	5 days	May 14 '14	May 20 '14												
31	Issue no objection to Commercial Contract	10 days	May 21 '14	Jun 3 '14												
32	Sign Commercial Contract	10 days	Jun 4 '14	Jun 17 '14												
33	<b>Secure Concessional Financing, Acquisition of a PPA &amp; Generation License</b>	<b>221 days</b>	<b>Jun 24 '14</b>	<b>Apr 28 '15</b>												
34	<b>Formal Request of Loan by GOK to China Gvt</b>	<b>20 days</b>	<b>Jun 24 '14</b>	<b>Jul 21 '14</b>												
35	Application Letter by GOK to Government of China	5 days	Jul 22 '14	Jul 28 '14												
36	Formal Application to China Exim Bank	5 days	Jul 29 '14	Aug 4 '14												
37	Forward Commercial Contract & Documents to China Exim Bank	10 days	Aug 5 '14	Aug 18 '14												
38	<b>Evaluation of the project by China Exim Bank</b>	<b>66 days</b>	<b>Aug 19 '14</b>	<b>Nov 18 '14</b>												
39	<b>Signing of Loan Agreement Framework between Government of Kenya &amp; China Government</b>	<b>28 days</b>	<b>Nov 19 '14</b>	<b>Dec 26 '14</b>												
40	Letter of Support from Embassy of China	5 days	Nov 19 '14	Nov 25 '14												
41	Set out Terms of the Loan Agreement	5 days	Nov 26 '14	Dec 2 '14												
42	Inform National Treasury of Success and request date to Sign	5 days	Dec 3 '14	Dec 9 '14												
43	Sign Loan Agreement Framework	10 days	Dec 15 '14	Dec 26 '14												
44	<b>Recruitment of a Consultant for Works Supervision</b>	<b>64 days</b>	<b>Dec 29 '14</b>	<b>Mar 26 '15</b>												
45	Preparation of EOI	2 days	Dec 29 '14	Dec 30 '14												
46	Advertisement	11 days	Dec 31 '14	Jan 14 '15												
47	Evaluation of Bids	5 days	Jan 15 '15	Jan 21 '15												
48	TC Approval of Evaluation Report	5 days	Jan 22 '15	Jan 28 '15												
49	Preparation of RFP	5 days	Jan 29 '15	Feb 4 '15												
50	Issue RFP	11 days	Feb 5 '15	Feb 19 '15												
51	Evaluation of Bids	5 days	Feb 20 '15	Feb 26 '15												
52	Award by TC	5 days	Feb 27 '15	Mar 5 '15												
53	Prepare & Sign Contract	15 days	Mar 6 '15	Mar 26 '15												
54	<b>Feed-in Tariff PPA between REA &amp; KPLC</b>	<b>24 days</b>	<b>Dec 29 '14</b>	<b>Jan 29 '15</b>												
55	Apply for Feed-in-Tariff PPA	2 days	Dec 29 '14	Dec 30 '14												
56	Approval of PPA	22 days	Dec 31 '14	Jan 29 '15												

Project: 100 MW PV SOLAR AND WIND  
Date: Thu 12/2/14

Task Split

Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

Date:

Signed By:  
Ng'ang'a Munyu  
Ag CEO, Rural Electrification Authority



REPUBLIC OF KENYA



5000 + MW POWER PLAN: REA CONTRIBUTION 100 MW HYBRID SOLAR/WIND PLANT MUHORONI		RURAL ELECTRIFICATION AUTHORITY		(FROM JULY 2013 - MARCH 2016)													
ID	Task Name	Duration	Start	Finish	2013			2014			2015			2016			
					Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
57	<b>Power Generation License (Solar/Wind)</b>	<b>38 days</b>	<b>Jan 30 '15</b>	<b>Mar 24 '15</b>													
58	Issue Notice to Generate Power	11 days	Jan 30 '15	Feb 13 '15													
59	Apply for Power Generation License	5 days	Feb 16 '15	Feb 20 '15													
60	Issue Power Generation	22 days	Feb 23 '15	Mar 24 '15													
61	<b>Signing of Loan Agreement between Treasury and China Exim Bank</b>	<b>22 days</b>	<b>Dec 29 '14</b>	<b>Jan 27 '15</b>													
62	<b>Issue of Notice of Effectiveness of the Loan</b>	<b>45 days</b>	<b>Jan 28 '15</b>	<b>Mar 31 '15</b>													
63	Approval by Treasury	5 days	Jan 28 '15	Feb 3 '15													
64	Legal Opinion by Attorney General	5 days	Feb 4 '15	Feb 10 '15													
65	Sign On-Lending Agreement between MOEP & REA	10 days	Feb 11 '15	Feb 24 '15													
66	Issue letter of Confirmation of Acceptance	5 days	Feb 25 '15	Mar 3 '15													
67	Payment of Management Fee of 1%	10 days	Mar 4 '15	Mar 17 '15													
68	Open Management Fee Account	10 days	Mar 18 '15	Mar 31 '15													
69	<b>Issue of Irrevocable Notice of Drawdown</b>	<b>20 days</b>	<b>Apr 1 '15</b>	<b>Apr 28 '15</b>													
70	Approve Drawer Schedule	10 days	Apr 1 '15	Apr 14 '15													
71	Issue of performance & Downpayment Guarantees	10 days	Apr 15 '15	Apr 28 '15													
72	<b>Construction of 50 MW Solar Plant</b>	<b>238 days</b>	<b>May 1 '15</b>	<b>Mar 29 '16</b>													
73	Procurement and Delivery of Materials	65 days	May 1 '15	Jul 30 '15													
74	Construction of Civil & Mechanical Works	174 days	Jul 1 '15	Feb 29 '16													
75	Installation of Solar Modules and Associated Distribution Boards	108 days	Oct 1 '15	Feb 29 '16													
76	Construction of Transmission Line	86 days	Nov 2 '15	Feb 29 '16													
77	Testing & Commissioning	21 days	Mar 1 '16	Mar 29 '16													
78	<b>Construction 50 MW Wind Farm</b>	<b>217 days</b>	<b>May 1 '15</b>	<b>Feb 29 '16</b>													
79	Procurement & Delivery of Materials	64 days	May 1 '15	Jul 29 '15													
80	Construction of Civil Works	107 days	Jul 1 '15	Nov 26 '15													
81	Installation of wind turbines	87 days	Oct 1 '15	Jan 29 '16													
82	Construction of Transmission Line	87 days	Oct 1 '15	Jan 29 '16													
83	Testing & Commissioning	21 days	Feb 1 '16	Feb 29 '16													

Project: 100 MW PV SOLAR AND WIND  
Date: Thu 1/2/2014

Date:

Signed By:  
Ndirang'a Munyu  
Ag CEO, Rural Electrification Authority



REPUBLIC OF KENYA



**5000 + MW POWER PLAN: REA CONTRIBUTION  
50 MW GARISSA SOLAR PLANT**

**RURAL ELECTRIFICATION  
AUTHORITY**

(JUNE 2012 - JUNE 2015)

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015
1	<b>50 MW PV SOLAR PLANT AT GARISSA</b>	<b>803 days</b>	<b>Jun 1 '12</b>	<b>Jun 30 '15</b>	Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4			
2	Signing of MOU	36 days	Jun 1 '12	Jul 20 '12	MOE&P			
3	Carry out due diligence on Contractor	10 days	Dec 3 '12	Dec 14 '12	MOE&P			
4	<b>Acquisition of Land</b>	<b>303 days</b>	<b>Jan 2 '13</b>	<b>Feb 28 '14</b>		MOE&P		
5	Request for allocation of Land	22 days	Jan 2 '13	Jan 31 '13		MOE&P		
6	Formalize acquisition of land	99 days	Oct 15 '13	Feb 28 '14			Garissa County Gov/NLCL	
7	<b>Carry Out Feasibility Study</b>	<b>66 days</b>	<b>Oct 1 '12</b>	<b>Dec 31 '12</b>				
8	Collect data	23 days	Oct 1 '12	Oct 31 '12	REA			
9	Analyse data and prepare report	43 days	Nov 1 '12	Dec 31 '12	REA			
10	<b>Carry out ESIA</b>	<b>156 days</b>	<b>Mar 14 '13</b>	<b>Oct 17 '13</b>				
11	Preparation of RFP	2 days	Mar 14 '13	Mar 15 '13	REA			
12	Issue of ESIA RFP	22 days	Mar 18 '13	Apr 16 '13	REA			
13	Evaluation of Proposals	4 days	Apr 17 '13	Apr 22 '13	REA			
14	TC Award & Notification	10 days	Apr 23 '13	May 6 '13	REA			
15	Signing of Contract	10 days	May 7 '13	May 20 '13	REA			
16	Conduct ESIA and Prepare Report	48 days	May 21 '13	Jul 25 '13	REA			
17	Submission of Report to NEMA	10 days	Jul 26 '13	Aug 8 '13	REA			
18	Issue of EIA License	50 days	Aug 9 '13	Oct 17 '13	NEMA			
19	<b>Secure Concessional Financing, Acquisition of PPA &amp; Generation License</b>	<b>411 days</b>	<b>Dec 11 '12</b>	<b>Jul 8 '14</b>				
20	Sign Commercial Contract	38 days	Dec 11 '12	Jan 31 '13	MOE&P			
21	Evaluation of the project by China Exim Bank	89 days	Oct 1 '13	Jan 31 '14			TNT, China Exim Bank	
22	Signing of Loan Agreement Framework between Government of Kenya & China Government	25 days	Feb 3 '14	Mar 7 '14			TNT	
23	Letter of support from Embassy of China	5 days	Feb 3 '14	Feb 7 '14			TNT	
24	Set out terms of the loan Agreement	5 days	Feb 10 '14	Feb 14 '14			TNT	
25	Inform National Treasury of success and request date to sign	5 days	Feb 17 '14	Feb 21 '14			TNT	

Signed by:  
Ng'ang'a Munyu  
Ag. CEO, Rural Electrification Authority

Date:





REPUBLIC OF KENYA



(JUNE 2012 - JUNE 2015)

**RURAL ELECTRIFICATION AUTHORITY**

**5000 + MW POWER PLAN: REA CONTRIBUTION  
50 MW GARISSA SOLAR PLANT**

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015
26	Sign Loan Agreement Framework	10 days	Feb 24 '14	Mar 7 '14	Q1	Q2	Q3	Q4
27	Recruitment of a consultant for Work Supervision	60 days	Mar 10 '14	May 30 '14	Q1	Q2	Q3	Q4
28	Preparation of EOI	2 days	Mar 10 '14	Mar 11 '14	Q1	Q2	Q3	Q4
29	Advertisement	11 days	Mar 12 '14	Mar 26 '14	Q1	Q2	Q3	Q4
30	Evaluation of Bids	5 days	Mar 27 '14	Apr 2 '14	Q1	Q2	Q3	Q4
31	TC Approval of Evaluation Report	5 days	Apr 3 '14	Apr 9 '14	Q1	Q2	Q3	Q4
32	Preparation of RFP	5 days	Apr 10 '14	Apr 16 '14	Q1	Q2	Q3	Q4
33	Issuance of RFP	11 days	Apr 17 '14	May 1 '14	Q1	Q2	Q3	Q4
34	Evaluation of Bids	5 days	May 2 '14	May 8 '14	Q1	Q2	Q3	Q4
35	Award by TC	5 days	May 9 '14	May 15 '14	Q1	Q2	Q3	Q4
36	Prepare and Sign Contract	11 days	May 16 '14	May 30 '14	Q1	Q2	Q3	Q4
37	Feed-in-Tariff PPA between REA & KPLC	24 days	Mar 10 '14	Apr 10 '14	Q1	Q2	Q3	Q4
38	Apply for PPA	2 days	Mar 10 '14	Mar 11 '14	Q1	Q2	Q3	Q4
39	Approval of PPA	22 days	Mar 12 '14	Apr 10 '14	Q1	Q2	Q3	Q4
40	Power Generation License	38 days	Apr 11 '14	Jun 3 '14	Q1	Q2	Q3	Q4
41	Issue Notice to Generate Power	11 days	Apr 11 '14	Apr 25 '14	Q1	Q2	Q3	Q4
42	Apply Power Generation License	5 days	Apr 28 '14	May 2 '14	Q1	Q2	Q3	Q4
43	Issue Power Generation License	22 days	May 5 '14	Jun 3 '14	Q1	Q2	Q3	Q4
44	Signing of Loan Agreement between Treasury and China Exim Bank	22 days	Mar 10 '14	Apr 8 '14	Q1	Q2	Q3	Q4
45	Issue of Notice of Effectiveness of the Loan	45 days	Apr 9 '14	Jun 10 '14	Q1	Q2	Q3	Q4
46	Approval by Treasury	5 days	Apr 9 '14	Apr 15 '14	Q1	Q2	Q3	Q4
47	Legal Opinion by Attorney General	5 days	Apr 16 '14	Apr 22 '14	Q1	Q2	Q3	Q4
48	Sign On-Lending Agreement between MOEP & REA	10 days	Apr 23 '14	May 6 '14	Q1	Q2	Q3	Q4
49	Issue letter of Confirmation of Acceptance	5 days	May 7 '14	May 13 '14	Q1	Q2	Q3	Q4
50	Payment of Management Fee of 1%	10 days	May 14 '14	May 27 '14	Q1	Q2	Q3	Q4
51	Open Management Fee Account	10 days	May 28 '14	Jun 10 '14	Q1	Q2	Q3	Q4

Task Progress  
 Summary  
 Rolled Up Task  
 Rolled Up Milestone  
 Rolled Up Progress  
 Split  
 External Tasks  
 Project Summary  
 Group By Summary  
 Deadline

Signed by: Ng'ang'a Munyu  
Ag. CEO, Rural Electrification Authority

Date:



REPUBLIC OF KENYA

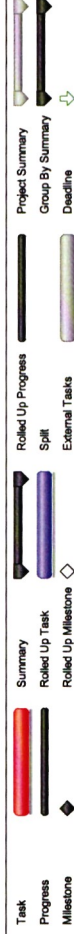


**5000 + MW POWER PLAN: REA CONTRIBUTION  
50 MW GARISSA SOLAR PLANT**

**RURAL ELECTRIFICATION  
AUTHORITY**

(JUNE 2012 - JUNE 2015)

ID	Task Name	Duration	Start	Finish	2012	2013	2014	2015
52	Issue of Irrevocable Notice of Drawdown	20 days	Jun 11 '14	Jul 8 '14	Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4			
53	Approve Drawdown Schedule	10 days	Jun 11 '14	Jun 24 '14			TNT	
54	Issue of performance & Downpayment Guarantees	10 days	Jun 25 '14	Jul 8 '14			TNT	
55	<b>Construction</b>	<b>255 days</b>	<b>Jul 9 '14</b>	<b>Jun 30 '15</b>				
56	Procurement and Delivery of Materials	65 days	Jul 9 '14	Oct 7 '14			REA	REA
57	Construction of Civil & Mechanical Works	174 days	Sep 9 '14	May 8 '15			REA	REA
58	Installation of Solar Modules and Associated Distribution Boards	108 days	Jan 1 '15	Jun 1 '15			REA	REA
59	Construction of 7Km Transmission Line	108 days	Dec 1 '14	Apr 29 '15			REA	REA
60	Testing & Commissioning	21 days	Jun 2 '15	Jun 30 '15			REA	REA
61	<b>KETRACO CONNECTION FACILITIES</b>	<b>587 days</b>	<b>Jul 2 '12</b>	<b>Sep 30 '14</b>				
62	<b>250Km Kindaruma-Mwingi- Garissa 132KV Line</b>	<b>544 days</b>	<b>Jul 2 '12</b>	<b>Jul 31 '14</b>				
63	Contract Signing Date	1 day	Jul 2 '12	Jul 2 '12		KETRACO		
64	Design	173 days	Jul 3 '12	Feb 28 '13		KETRACO		
65	Manufacture	262 days	Sep 3 '12	Sep 3 '13		KETRACO		
66	Construction	284 days	Jul 1 '13	Jul 31 '14			KETRACO	
67	<b>2*23MVA, 132/33kV Substation</b>	<b>587 days</b>	<b>Jul 2 '12</b>	<b>Sep 30 '14</b>				
68	Contract signing	1 day	Jul 2 '12	Jul 2 '12		KETRACO		
69	Design	172 days	Sep 3 '12	Apr 30 '13		KETRACO		
70	Manufacture	346 days	Nov 1 '12	Feb 27 '14			KETRACO	
71	Construction	283 days	Jul 1 '13	Jul 30 '14			KETRACO	
72	Energize, Testing and Commissioning	43 days	Aug 1 '14	Sep 30 '14			KETRACO	



Signed by:  
Ng'anga Munyu  
Ag. CEO, Rural Electrification Authority

Date:



# ENERGY REGULATORY COMMISSION

JUNE 2014

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1.	Background
2.	Overview/Mandate
3.	Key Achievements
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5.	Electricity Subsector
6.	Renewable Subsector
7.	Regulations
8.	Challenges
9.	Way Forward
8.	Appendix: Gantt charts



## 1. Background

The energy sector is a key driver of economic growth and development of a country. It also plays a key role in improving the environment of doing business. In Kenya, the energy sector has been identified as a key enabler for realization of the Vision 2030 to transform Kenya into a middle-income economy. Much has been achieved in the last ten years. The Government prepared and implemented the Sessional Paper No. 4 of 2004 on Energy and enacted the Energy Act 2006 that unbundled further the electricity sub sector and brought all energy sub sectors that is electricity, downstream petroleum and renewable energy under a single regulator.

Before the Jubilee Government took over, the country had an installed capacity of 1,586MW and 120MW of emergency power, which totaled to 1,716MW by June 2013. The Government in August 2013 retired 90MW of emergency power. Only 30MW is remaining in the system in Western Kenya to provide system stability support in the western region.

The government in September 2013 launched the project 5,000MW+ of fast tracked capacity to be implemented in 40 months to transform Kenya by increasing the generation capacity as well as transmission and distribution infrastructure in the country. Various programmes are also being implemented in the petroleum and renewable energy sub sectors.

Energy demand is expected to increase tremendously with the various initiatives that are being implemented by the National and County Governments. It is anticipated that electricity demand will rise sharply as new County Governments take shape and numerous economic activities spring up. In particular, energy intensive activities such as mining, production of iron and steel products from local iron ore deposits, irrigation of large tracts of land for food security and agro-based industry, operation of petroleum pipelines for both crude and refined fuel oils, petrochemicals production including urea, steel products based manufacturing, such as motor vehicle body parts and for earth moving equipment, electrification of designated rail lines, installation of escalators at shopping malls and airports, and new economic zones will require a lot of power.





In order to transform the economy, affordable and sustainable supply of electricity has to be provided. A roadmap to raise the generation capacity by at least 5,000MW from the current installed capacity to slightly over 6,700 MW by 2016 is proposed. Through the road map, the generation cost is projected to reduce from US¢ 11.30 to 7.41, while end-user tariffs, exclusive of taxes and levies, are projected to reduce from US¢ 14.14 to US¢ 9.00 for commercial/industrial customers and from US¢ 19.78 to 10.45 for domestic customers. The new capacity will mainly be developed from Geothermal 1,646MW, Natural Gas 1,050MW, Wind 630MW and Coal 1,920MW through IPPs under the PPP framework.

### 1.1 Mandate of the Energy Regulatory Commission

ERC is the energy sector regulator. It is established under the Energy Act, 2006 and is responsible for economic and technical regulation of the electric power, renewable energy and downstream petroleum sub-sectors, with a mandate encompassing licensing and compliance enforcement, energy pricing, dispute resolution, energy planning, competition and monitoring and protecting consumer interests.

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## 2. ERC Achievements in the Last 8 Months

- ERC working in conjunction with the Ministry of Energy and Petroleum has retired 90MW of emergency power to bring the cost of electricity down.
- Effective 1st December 2013, ERC approved realigned Retail Electricity Tariffs that will reduce the cost of electricity and the cost of energy to industry, business and households. The average cost of electricity has been revised downwards from Kshs 15.59/KWh in FY2012/13 to Kshs 15.51/KWh in December FY2013/2014. This is as a result of current efforts to bring on board cheaper and clean renewable energy largely from wind and Geothermal and the displacement of expensive emergency power in the national energy mix. These costs will reduce further in the medium term to Kshs 12.26/KWh by FY2015/16 when the 5000+MW of new generation comes on-line. The new generation has 40% of coal and 33% of Liquefied Natural Gas, which have lower tariffs compared to diesel-powered plants.
- Four Power Purchase Agreements (PPAs) have been approved during the tenure of the Jubilee Government in addition to ten other PPAs that were approved in the financial year ending June 2013. The total capacity of the new projects with approved PPAs is 941MW. Majority of these new plants will use renewable energy technologies such as wind, geothermal and hydropower technologies.



- In order to fast track the approval process in line with project 5,000MW of fast tracked new capacity, ERC has committed to approve all Power Purchase Agreements and issue licenses for new power plants within 30 days instead of the statutory 90 days.
- Thika Power Plant (87MW) was commissioned in July 2013, three months ahead of schedule.

## 2.1 Petroleum Sub Sector:

- In petroleum pricing, has continued to regulate pump prices of key products namely AGO, PMS and IK with a view to ensuring that distortions of pricing dynamics by oil marketing companies is contained. This has allowed pump prices to remain stable with international movements in crude oil reflecting on a timely basis in the pump.
- The commission has continued to help deepening of the petroleum supply market/chain to ensure quality of supply of supply while ensuring financial viability of sector utilities by licensing new service providers in the downstream sub sector. Three (3) more Oil Marketing Companies (OMCs) have been granted license to import, export and provide wholesale services.
- In the petroleum infrastructural development, the Commission has licensed an additional 31,000M3 storage for petroleum products at Konza which will be a boost to the country's petroleum storage capacity and hence alleviate supply constraints.
- Has been carrying out surveillance activities to monitor compliance with recommended petroleum pump prices as well as quality of fuel countrywide.

## 2.2 Electricity Subsector

- The Commission has continued to carry out technical audits of the licensees operations and facilities aimed at improving service delivery to electricity consumers in the country. This has resulted into reduced power black outs, reduced electricity related accidents/incidences as well as improved power supply quality and reliability.
- The Commission has continued to license electricians and electrical contractors to carry out electrical installation works for existing and new consumers of electricity in the country. This has improved the quality of electrical installations works in the country thus reducing electrical related accidents/incidences within the consumer premises. The Commission has licensed 2,949 electricians and registered 741 electrical contractors



- The Commission has set service delivery standards for Kenya Power and Lighting Company limited (KPLC) with regards to power quality, reliability and customer service. The parameters are continuously monitored and any deviations addressed immediately.
- The Commission has continued to provide an avenue for mediation on any disputes between electricity consumers and the service providers within the sector, which has reduced consumer complaints through public media. This has seen a reduction in disputes from 30 to 5 at the close of the year.

### 2.3 Renewable Energy Subsector

- Has created a renewable energy portal, which is a one-stop shop on key information and opportunities in the renewable energy sector including licensing and related requirements.
- Adopted the Standardized Power Purchase Agreements for projects under Feed-in-Tariff Policy for projects below 10MW
- Adopted the Standardized Power Purchase Agreements for projects under Feed-in-Tariff Policy for projects below 10MW

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## 3. Regulations

In the last eight months, the Commission has prepared the following regulations, which will be fully implemented once gazetted:

- The Energy (Electricity Tariffs) Regulations. These regulations are in the office of the Cabinet Secretary for Energy and Petroleum for approval before they are gazetted.
- Energy (Energy Management) Regulations 2013. These regulations are awaiting gazettelement.
- Highlights on the Designation of Industrial, Commercial and Institutional Energy Users Rules, 2013. The regulations have been gazetted.
- The Energy (Electricity Regulatory Accounts) Regulations. These regulations are in the office of the Cabinet Secretary for Energy and Petroleum for approval before they are gazetted.



- Draft Energy (Appliances' Energy Performance and Labelling) Regulations. The regulations have been approved by the Commission.
- The Energy (Lubricants Facility Construction and Business Licensing) Regulations, 2013. The regulations have been approved by the Commission and forwarded to the Cabinet Secretary, Energy and Petroleum for approval before they are gazetted.

#### 4. Challenges

The Commission faces various challenges in the course of implementing its mandate. They include the following:

- a) Lack of adequate funding from the levies (ERC electricity and petroleum regulation levies) to finance the Commission activities. Out of a total budget requirement of Ksh. 673 Million in FY 2014/15, the Commission can only raise Ksh. 376 Million from levies.
  - o Challenges in recruiting, enumerating and retention of qualified staff due to lack of funds.
  - o Not able to implement fully the strategic plan 2012-2016 due to inadequate funding.
  - o Constraints in competency development programmes
- b) Developing adequate regulations to regulate the energy sector due to capacity constraints.
- c) Coping with the expanding and dynamic energy sector with discovery of oil and gas.



## 5. Way forward

Going forward, the Commission is putting in place measures to regulate the energy sector in line with Vision 2030 and to ensure full implementation of project 5,000MW+ of fast tracked new capacity.

- Approve all PPAs and licenses for electricity sub sector within 30 days instead of the statutory 90 days.
- Harmonise its operations and mandate in line with requirements of the Constitution.
- Maintaining regulatory independence in the course of implementing its mandate and operations
- Seeking to revise its levies to achieve sustainability in financing its strategic plan and added programmes in project 5,000MW+.
- Working closely with the ministry of Energy and Petroleum to ensure better regulation of the energy sector in the country. Work closely with the National Treasury and the Public Private Partnership (PPP)-Unit to promote public and private sector investment in provision of energy services in the Country.

# APPENDIX

## ENERGY REGULATORY COMMISSION WORKPLAN

## GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF PPAs AND LICENSES

In the next forty (40) months, the Commission will be proactive in ensuring that the objectives and policy interventions by Government to increase power generation in the country by 5,000MW and investment in other sub sectors are implemented. To this end, the Commission, in line with its mandate and strategic plan objectives; commits to carry out the following:

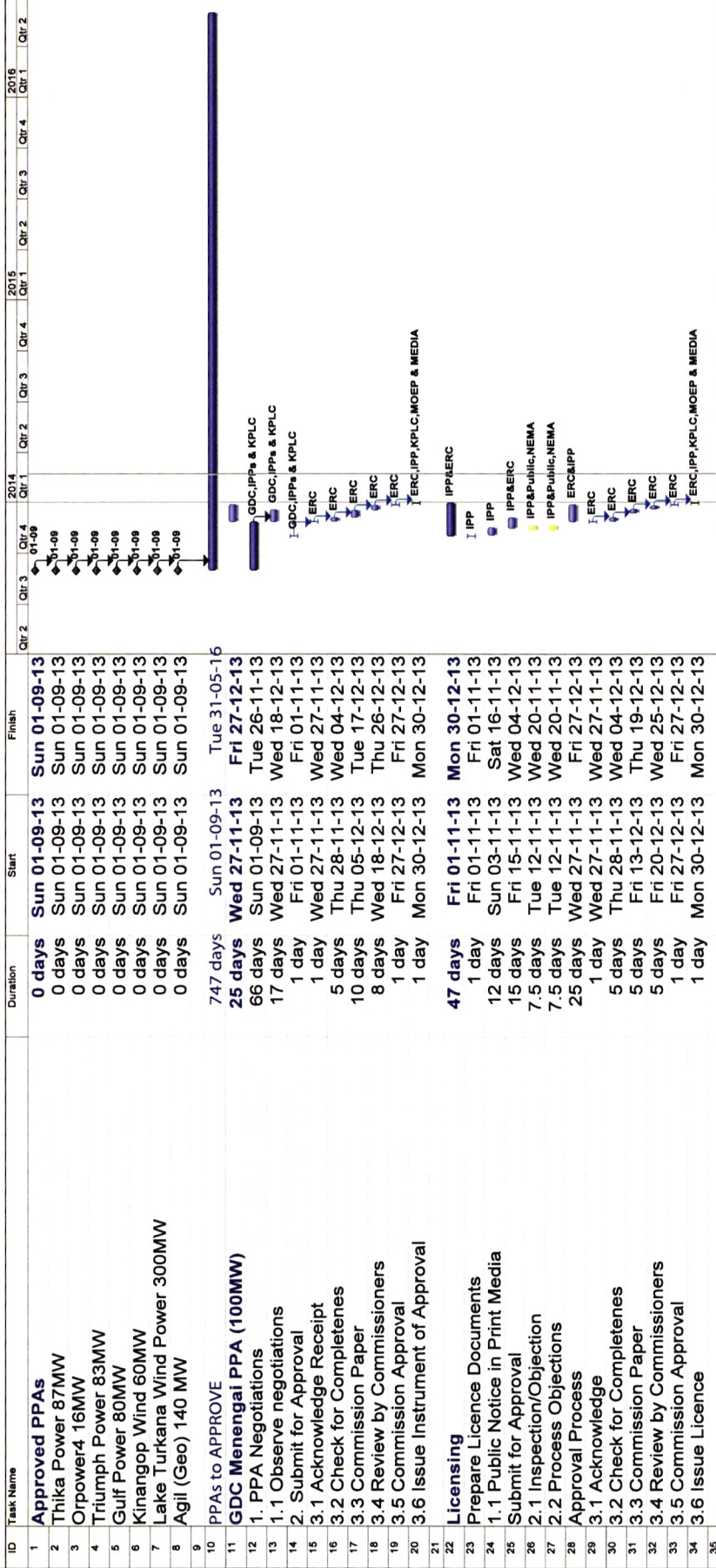
- coordinating demand-supply planning and follow up on project implementation;
- licensing the new capacity, as provided for by law to ensure prudent and safe operations and fast track implementation within 30 days;
- approving the PPAs to facilitate project financing and ultimately the trading arrangements between the off-takers and the power producers; while protecting the interests of electricity consumers within 30 days;
- approving network service contracts and establishing the Transmission-Use-of-System tariffs to facilitate conveyance of electrical energy from producers to load centers within 30 days;
- reviewing retail tariffs to facilitate the consumption of electricity while ensuring the viability of sector entities and in harmony with government policy;
- handling any complaints that might arise between and amongst sector players in the process of developing the new capacity earmarked for the fast-tracked projects; and
- assist in coordination and supervision of the energy sector
- monitor the implementation of the projects and give regular updates on project status, and
- formulation of new regulations to facilitate the emerging mid and downstream of the gas industry, for the importation of LNG, gas by pipeline, transmission, distribution and utilization of natural gas. These will include the basic standards, participants, infrastructure, rights and responsibilities. It will also cover such issues as regulatory principles of monopoly and competitive sectors, codes of practice, licensing and contracting and agreement approvals, legal principles of gas importation (LNG or Pipeline), storage, transportation by pipeline, delivery to consumers etc

POWER PURCHASE AGREEMENTS AND LICENCE APPROVALS WITHIN 30 DAYS

ENERGY REGULATORY COMMISSION

5000+MW 40 MONTH PROJECT  
SEPTEMBER 2013 - DECEMBER 2016

GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF PPAs AND LICENSES



Project: Gant Chart for Project 5000M  
Date: Thu 20-02-14

Task Split  
Progress Milestone  
Summary Project Summary  
External Tasks  
External Milestone  
Deadline

KEY: ERC: ENERGY REGULATORY COMMISSION, GDC: GEOTHERMAL DEVELOPMENT COMPANY, IPP: INDEPENDENT POWER PRODUCER, KENGEN: KENYA ELECTRICITY GENERATING COMPANY, KPLC: KENYA POWER AND LIGHTING COMPANY LIMITED, MOEP: MINISTRY OF ENERGY AND PETROLEUM, NEMA: NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY, PPP UNIT: PUBLIC PRIVATE PARTNERSHIPS UNIT

Signature  Dr. Frederick Nyang' Ag. Director General, 30/09/2013

**POWER PURCHASE AGREEMENTS AND LICENCE APPROVALS WITHIN 30 DAYS**

**ENERGY REGULATORY COMMISSION**

**5000+MW 40 MONTH PROJECT  
SEPTEMBER 2013 - DECEMBER 2016**

**GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF PPAs AND LICENSES**

ID	Task Name	Duration	Start	Finish	2014				2015				2016				
					Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4		
36	<b>Kipeto Wind (100MW)</b>	119 days	Sun 01-09-13	Sun 02-02-14													
37	PPA Negotiations	88 days	Sun 01-09-13	Tue 24-12-13													
38	1.1 Observe Negotiations	88 days	Sun 01-09-13	Tue 24-12-13													
39	2. Submit for Approval	24 days	Thu 02-01-14	Fri 31-01-14													
40	3. Approval Process	24 days	Wed 01-01-14	Thu 30-01-14													
41	3.1 Acknowledge	2 days	Wed 01-01-14	Thu 02-01-14													
42	3.2 Check for Completeness	5 days	Fri 03-01-14	Wed 08-01-14													
43	3.3 Commission Paper	10 days	Thu 09-01-14	Tue 21-01-14													
44	3.4 Review by Commissioners	6 days	Wed 22-01-14	Wed 29-01-14													
45	3.5 Commission Approval	1 day	Fri 31-01-14	Fri 31-01-14													
46	3.6 Issue Instrument of Approval	1 day	Sun 02-02-14	Sun 02-02-14													
47	<b>Licensing</b>	118 days	Sun 01-09-13	Fri 31-01-14													
48	Prepare Licence Documents	30 days	Sun 01-09-13	Thu 10-10-13													
49	1.1 Public Notice in Print Media	30 days	Thu 10-10-13	Sat 16-11-13													
50	Submit for Approval	30 days	Tue 19-11-13	Thu 26-12-13													
51	2.1 Inspection/Objection	10 days	Fri 27-12-13	Wed 08-01-14													
52	2.2 Process Objections	8.67 days	Tue 21-01-14	Fri 31-01-14													
53	Approval Process	25 days	Wed 01-01-14	Fri 31-01-14													
54	3.1 Acknowledge	2 days	Wed 01-01-14	Thu 02-01-14													
55	3.2 Check for Completeness	5 days	Fri 03-01-14	Wed 08-01-14													
56	3.3 Commission Paper	10 days	Thu 09-01-14	Tue 21-01-14													
57	3.4 Review by Commissioners	6 days	Wed 22-01-14	Wed 29-01-14													
58	3.5 Commission Approval	1 day	Thu 30-01-14	Thu 30-01-14													
59	3.6 Issue Licence	1 day	Fri 31-01-14	Fri 31-01-14													
60	<b>Kwale Intern. Sugar Co. (18MW)</b>	118 days	Sun 01-09-13	Fri 31-01-14													
61	PPA Negotiations	88 days	Sun 01-09-13	Tue 24-12-13													
62	1.1 Observe Negotiations	88 days	Sun 01-09-13	Tue 24-12-13													
63	2. Submit for Approval	24 days	Wed 01-01-14	Thu 30-01-14													
64	3. Approval Process	24 days	Wed 01-01-14	Thu 30-01-14													
65	3.1 Acknowledge	2 days	Wed 01-01-14	Thu 02-01-14													
66	3.2 Check for Completeness	5 days	Fri 03-01-14	Wed 08-01-14													
67	3.3 Commission Paper	10 days	Thu 09-01-14	Tue 21-01-14													

Project: Gokit Chart for Project 5000M  
Date: Thu 20-02-14

Task Split


Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

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Signature  **Dr. Frederick Nyang-Ag, Director General, 30/09/2013**



**POWER PURCHASE AGREEMENTS AND LICENCE  
APPROVALS WITHIN 30 DAYS**

**ENERGY REGULATORY COMMISSION**

**5000+MW 40 MONTH PROJECT  
SEPTEMBER 2013 - DECEMBER 2016**

**GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF  
PPAs AND LICENSES**

ID	Task Name	Duration	Start	Finish	2014	2015	2016			
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
105	2.2 Process Objections	15 days	Fri 01-11-13	Mon 18-11-13						
106	Approval Process	22 days	Sat 01-03-14	Fri 28-03-14						
107	3.1 Acknowledge	3 days	Sat 01-03-14	Mon 03-03-14						
108	3.2 Check for Completeness	5 days	Tue 04-03-14	Mon 10-03-14						
109	3.3 Commission Paper	10 days	Tue 11-03-14	Mon 24-03-14						
110	3.4 Review by Commissioners	6 days	Tue 25-03-14	Mon 31-03-14						
111	3.5 Commission Approval	1 day	Tue 01-04-14	Tue 01-04-14						
112	3.6 Issue Licence	1 day	Wed 02-04-14	Wed 02-04-14						
113										
114	<b>Marine Power(Geo.) 70 MW</b>	<b>187 days</b>	<b>Mon 09-09-13</b>	<b>Wed 30-04-14</b>						
115	PPA Negotiations (KPLC+ Marine)	161 days	Sun 01-09-13	Tue 25-03-14						
116	1.1 Observe Negotiations	161 days	Fri 06-09-13	Mon 31-03-14						
117	Submit for Approval	1 day	Tue 01-04-14	Tue 01-04-14						
118	Approval Process	25 days	Mon 14-04-14	Fri 09-05-14						
119	3.1 Acknowledge	2 days	Wed 02-04-14	Thu 03-04-14						
120	3.2 Check for Completeness	5 days	Fri 04-04-14	Tue 08-04-14						
121	3.3 Commission Paper	8 days	Wed 09-04-14	Fri 18-04-14						
122	3.4 Review by Commissioners	8 days	Sat 19-04-14	Sat 26-04-14						
123	3.5 Commission Approval	1 day	Mon 28-04-14	Mon 28-04-14						
124	3.6 Issue Instrument of Approval	1 day	Wed 30-04-14	Wed 30-04-14						
125										
126	<b>Licensing</b>	<b>190 days</b>	<b>Mon 09-09-13</b>	<b>Sat 03-05-14</b>						
127	Prepare Licence Documents	102 days	Sun 01-09-13	Fri 10-01-14						
128	Public Notice in Print Media	22.5 days	Mon 06-01-14	Mon 03-02-14						
129	Submit for Approval	44 days	Fri 01-11-13	Wed 25-12-13						
130	2.1 Inspection/Objection	22.5 days	Fri 14-02-14	Wed 12-03-14						
131	2.2 Process Objections	10.5 days	Tue 18-03-14	Mon 31-03-14						
132	Approval Process	28 days	Fri 01-11-13	Thu 05-12-13						
133	3.1 Acknowledge	3 days	Sun 06-04-14	Tue 08-04-14						
134	3.2 Check for Completeness	5 days	Wed 09-04-14	Tue 15-04-14						
135	3.3 Commission Paper	9 days	Wed 16-04-14	Thu 24-04-14						
136	3.4 Review by Commissioners	6 days	Fri 25-04-14	Thu 01-05-14						
137	3.5 Commission Approval	1 day	Fri 02-05-14	Fri 02-05-14						
138	3.6 Issue Licence	1 day	Sat 03-05-14	Sat 03-05-14						
139										

Project: Gantt Chart for Project 5000M  
Date: Thu 20-02-14

Task Split

Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

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Signature  Dr. Frederick Nyang- Ag. Director General, 30/09/2013

**POWER PURCHASE AGREEMENTS AND LICENCE APPROVALS WITHIN 30 DAYS**

**ENERGY REGULATORY COMMISSION**

**5000+MW 40 MONTH PROJECT SEPTEMBER 2013 - DECEMBER 2016**

**GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF PPAs AND LICENSES**

ID	Task Name	Duration	Start	Finish	2014	2015	2016
					Qtr 3	Qtr 4	Qtr 1
140	Lamu 900-1000MW Coal Project	192 days	Wed 04-09-13	Fri 02-05-14			
141	Issue RFPs	5 days	Mon 04-11-13	Fri 08-11-13			
142	Days for responses and Site Visit	55 days	Mon 11-11-13	Sat 18-01-14			
143	Sanction from PPP Unit	1 day	Fri 01-11-13	Fri 01-11-13			
144	Evaluation of RFPs and Award	27 days	Tue 21-01-14	Fri 21-02-14			
145	Negotiate Fuel Supply Agreement	37 days	Mon 24-02-14	Tue 08-04-14			
146	Negotiate PPA	37 days	Mon 24-02-14	Tue 08-04-14			
147	Observe negotiations	1 day	Mon 24-02-14	Tue 08-04-14			
148	Signing of Fuel Supply Agreement	1 day	Tue 08-04-14	Tue 08-04-14			
149	Initialing of PPA	1 day	Tue 08-04-14	Tue 08-04-14			
150	Approval process	1 day	Fri 02-05-14	Fri 02-05-14			
151	Submit PPA for Approval	1 day	Wed 09-04-14	Wed 09-04-14			
152	3.1 Acknowledge	1 day	Fri 11-04-14	Sat 12-04-14			
153	3.2 Check for Completeness	5 days	Mon 14-04-14	Fri 18-04-14			
154	3.3 Commission Paper	5 days	Sat 19-04-14	Wed 23-04-14			
155	3.4 Review by Commissioners	6 days	Thu 24-04-14	Wed 30-04-14			
156	3.5 Commission Approval	1 day	Thu 01-05-14	Thu 01-05-14			
157	3.6 Issue Instrument of Approval	1 day	Fri 02-05-14	Fri 02-05-14			
158							
159	Licensing	192 days	Wed 04-09-13	Fri 02-05-14			
160	Prepare Licence Documents	30 days	Mon 04-11-13	Wed 11-12-13			
161	Public Notice in Print Media	30 days	Fri 13-12-13	Mon 20-01-14			
162	Submit for Approval	29 days	Thu 23-01-14	Wed 26-02-14			
163	2.1 Inspection/Objection	15 days	Wed 22-01-14	Sat 08-02-14			
164	2.2 Process Objections	15 days	Tue 11-02-14	Thu 27-02-14			
165	Approval Process	26 days	Tue 01-04-14	Tue 29-04-14			
166	3.1 Acknowledge	2 days	Wed 02-04-14	Thu 03-04-14			
167	3.2 Check for Completeness	5 days	Fri 04-04-14	Thu 08-04-14			
168	3.3 Commission Paper	7 days	Thu 10-04-14	Fri 18-04-14			
169	3.4 Review by Commissioners	9 days	Sat 19-04-14	Mon 28-04-14			
170	3.5 Commission Approval	1 day	Wed 30-04-14	Wed 30-04-14			
171	3.6 Issue Licence	1 day	Fri 02-05-14	Fri 02-05-14			
172							
173	Kitui 900-1000MW Coal Project	195 days	Sun 01-09-13	Fri 02-05-14			

Project Gantt Chart for Project 5000M  
Date: Thu 22-02-14

Task Split

Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

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**POWER PURCHASE AGREEMENTS AND LICENCE APPROVALS WITHIN 30 DAYS**

**ENERGY REGULATORY COMMISSION**

**5000+MW 40 MONTH PROJECT  
SEPTEMBER 2013 - DECEMBER 2016**

**GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF PPAs AND LICENSES**

ID	Task Name	Duration	Start	Finish	2014	2015	2016			
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
174	Issue RFPs	5 days	Mon 04-11-13	Fri 08-11-13						
175	Days for responses and Site Visit	55 days	Mon 11-11-13	Sat 18-01-14						
176	Evaluation of RFPs and Award	27 days	Tue 21-01-14	Fri 21-02-14						
177	Function from PP Unit	1 day	Sun 23-02-14	Sun 23-02-14						
178	Negotiate Fuel Supply Agreement	37 days	Mon 24-02-14	Tue 08-04-14						
179	Negotiate PPA	37 days	Mon 24-02-14	Tue 08-04-14						
180	Observe negotiations	1 day	Tue 08-04-14	Tue 08-04-14						
181	Signing of Fuel Supply Agreement	1 day	Tue 08-04-14	Tue 08-04-14						
182	Initialing of PPA	1 day	Fri 01-11-13	Fri 01-11-13						
183	Approval process	1 day	Wed 09-04-14	Wed 09-04-14						
184	Submit PPA for Approval	1 day	Fri 11-04-14	Sat 12-04-14						
185	3.1 Acknowledge	5 days	Mon 14-04-14	Fri 18-04-14						
186	3.2 Check for Completeness	5 days	Sat 19-04-14	Wed 23-04-14						
187	3.3 Commission Paper	6 days	Thu 24-04-14	Wed 30-04-14						
188	3.4 Review by Commissioners	1 day	Thu 01-05-14	Thu 01-05-14						
189	3.5 Commission Approval	1 day	Fri 02-05-14	Fri 02-05-14						
190	3.6 Issue Instrument of Approval	195 days	Sun 01-09-13	Fri 02-05-14						
191	Licensing	30 days	Mon 04-11-13	Wed 11-12-13						
192	Prepare Licence Documents	30 days	Fri 13-12-13	Mon 20-01-14						
193	Public Notice in Print Media	29 days	Thu 23-01-14	Wed 26-02-14						
194	Submit for Approval	15 days	Wed 22-01-14	Sat 08-02-14						
195	2.1 Inspection/Objection	15 days	Tue 11-02-14	Thu 27-02-14						
196	2.2 Process Objections	26 days	Tue 01-04-14	Tue 29-04-14						
197	Approval Process	2 days	Wed 02-04-14	Thu 03-04-14						
198	3.1 Acknowledge	5 days	Fri 04-04-14	Tue 08-04-14						
199	3.2 Check for Completeness	7 days	Thu 10-04-14	Fri 18-04-14						
200	3.3 Commission Paper	9 days	Sat 19-04-14	Mon 28-04-14						
201	3.4 Review by Commissioners	1 day	Wed 30-04-14	Wed 30-04-14						
202	3.5 Commission Approval	1 day	Thu 01-05-14	Thu 01-05-14						
203	3.6 Issue Licence	194 days	Mon 02-09-13	Fri 02-05-14						
204	LNG 700-800MW POWER PROJECT	19 days	Tue 01-10-13	Fri 25-10-13						
205	Issue EO									

Project: Gantt Chart for Project 5000M  
Date: Thu 20-02-14

Task Split

Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

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Signature: Dr. Frederick Nyang' Ag. Director General, 30/09/2013



**POWER PURCHASE AGREEMENTS AND LICENCE APPROVALS WITHIN 30 DAYS**

**ENERGY REGULATORY COMMISSION**

**5000+MW 40 MONTH PROJECT**  
**SEPTEMBER 2013 - DECEMBER 2016**

**GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF PPA's AND LICENSES**

ID	Task Name	Duration	Start	Finish	2014	2015	2016
					Qtr 1	Qtr 2	Qtr 3
242	3.1 Acknowledge	2 days	Wed 12-03-14	Thu 13-03-14			
243	3.2 Check for Completeness	5 days	Thu 13-03-14	Wed 19-03-14			
244	3.3 Commission Paper	10 days	Thu 20-03-14	Tue 01-04-14			
245	3.4 Review by Commissioners	8 days	Wed 02-04-14	Wed 09-04-14			
246	3.5 Commission Approval	1 day	Thu 10-04-14	Thu 10-04-14			
247	3.6 Issue Instrument of Approval	1 day	Fri 11-04-14	Fri 11-04-14			
248	<b>Licensing</b>	<b>218 days</b>	<b>Mon 02-09-13</b>	<b>Tue 03-06-14</b>			
249	Prepare Licence Documents	175 days	Sun 01-09-13	Wed 09-04-14			
250	Public Notice in Print Media	15 days	Thu 10-04-14	Sun 27-04-14			
251	Submit for Approval	15 days	Fri 11-04-14	Mon 28-04-14			
252	2.1 Inspection/Objection	15 days	Mon 28-04-14	Wed 14-05-14			
253	2.2 Process Objections	15 days	Thu 15-05-14	Wed 04-06-14			
254	Approval Process	30 days	Sat 26-04-14	Tue 03-06-14			
255	3.1 Acknowledge	2 days	Mon 28-04-14	Tue 29-04-14			
256	3.2 Check for Completeness	5 days	Wed 30-04-14	Sun 04-05-14			
257	3.3 Commission Paper	7 days	Mon 05-05-14	Tue 13-05-14			
258	3.4 Review by Commissioners	10 days	Wed 14-05-14	Tue 27-05-14			
259	3.5 Commission Approval	1 day	Wed 28-05-14	Wed 28-05-14			
260	3.6 Issue Licence	1 day	Tue 03-06-14	Tue 03-06-14			
261	<b>REA Hybrid Solar Wind Plan-Muhoroni (100MW)</b>	<b>390 days</b>	<b>Mon 09-09-13</b>	<b>Thu 29-01-15</b>			
262	PPA Negotiations	366 days	Thu 05-09-13	Fri 26-12-14			
263	Submit Application for Approval	24 days	Wed 31-12-14	Thu 29-01-15			
264	3.1 Acknowledge	2 days	Mon 29-12-14	Tue 30-12-14			
265	3.2 Check for Completeness	5 days	Thu 01-01-15	Wed 07-01-15			
266	3.3 Commission Paper	8 days	Thu 08-01-15	Thu 15-01-15			
267	3.4 Review by Commissioners	7 days	Fri 16-01-15	Mon 26-01-15			
268	3.5 Commission Approval	1 day	Tue 27-01-15	Tue 27-01-15			
269	3.6 Issue Instrument of Approval	1 day	Wed 28-01-15	Wed 28-01-15			
270	<b>Licensing</b>	<b>436 days</b>	<b>Sun 01-09-13</b>	<b>Mon 23-03-15</b>			
271	Prepare Licence documents	390 days	Mon 09-09-13	Thu 29-01-15			
272	Public Notice in Print Media	15 days	Fri 30-01-15	Thu 19-02-15			
273	Submit for Approval	15 days	Tue 24-03-15	Mon 13-04-15			

Project: Gantt Chart for Project 5000M  
Date: Thu 20-02-14


Task Split

Progress Milestone

Summary Project Summary External Milestone

Deadline

**KEY:** ERC: ENERGY REGULATORY COMMISSION, GDC: GEOTHERMAL DEVELOPMENT COMPANY, IPP: INDEPENDENT POWER PRODUCER, KENGEN: KENYA ELECTRICITY GENERATING COMPANY, KPLC: KENYA POWER AND LIGHTING COMPANY LIMITED, MOEP: MINISTRY OF ENERGY AND PETROLEUM, NEIMA: NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY, PPP UNIT: PUBLIC PRIVATE PARTNERSHIPS UNIT

Signature:  Dr. Frederick Nyang-Ag, Director General, 30/09/2013

**POWER PURCHASE AGREEMENTS AND LICENCE APPROVALS WITHIN 30 DAYS**

**ENERGY REGULATORY COMMISSION**

**5000+MW 40 MONTH PROJECT SEPTEMBER 2013 - DECEMBER 2016**

ID	Task Name	Duration	Start	Finish	2014				2015				2016							
					Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2			
277	2.1 Inspection/Objection	15 days	Fri 20-02-15	Mon 09-03-15																
278	2.2 Process Objections	15 days	Fri 20-02-15	Mon 09-03-15																
279	Approval Process	22 days	Mon 23-02-15	Fri 20-03-15																
280	3.1 Acknowledge	2 days	Mon 23-02-15	Tue 24-02-15																
281	3.2 Check for Completeness	5 days	Wed 25-02-15	Sun 01-03-15																
282	3.3 Commission Paper	7 days	Mon 02-03-15	Tue 10-03-15																
283	3.4 Review by Commissioners	7 days	Wed 11-03-15	Thu 19-03-15																
284	3.5 Commission Approval	1 day	Fri 20-03-15	Fri 20-03-15																
285	3.6 Issue Licence	1 day	Mon 23-03-15	Mon 23-03-15																
286																				
287	KenGen Isiolo (Meru) Wind Project (100MW)	507 days	Sun 01-09-13	Tue 30-06-15																
288	Negotiate PPA	20 days	Tue 05-05-15	Mon 01-06-15																
289	Submit Application for Approval	20 days	Tue 02-06-15	Mon 29-06-15																
290	3.1 Acknowledge	2 days	Wed 03-06-15	Thu 04-06-15																
291	3.2 Check for Completeness	5 days	Thu 04-06-15	Wed 10-06-15																
292	3.3 Commission Paper	5 days	Thu 11-06-15	Wed 17-06-15																
293	3.4 Review by Commissioners	7 days	Thu 18-06-15	Fri 26-06-15																
294	3.5 Commission Approval	1 day	Mon 29-06-15	Mon 29-06-15																
295	3.6 Issue Instrument of Approval	1 day	Tue 30-06-15	Tue 30-06-15																
296																				
297	Licensing	87 days	Sun 01-03-15	Mon 29-06-15																
298	Prepare Licence Documents	23 days	Sun 01-03-15	Tue 31-03-15																
299	Public Notice in Print Media	15 days	Wed 01-04-15	Tue 21-04-15																
300	Submit for Approval	15 days	Wed 22-04-15	Tue 12-05-15																
301	2.1 Inspection/Objection	15 days	Wed 13-05-15	Tue 02-06-15																
302	2.2 Process Objections	15 days	Wed 03-06-15	Tue 23-06-15																
303	Approval Process	19 days	Wed 03-06-15	Mon 29-06-15																
304	3.1 Acknowledge	2 days	Wed 03-06-15	Thu 04-06-15																
305	3.2 Check for Completeness	5 days	Fri 05-06-15	Thu 11-06-15																
306	3.3 Commission Paper	5 days	Fri 12-06-15	Thu 18-06-15																
307	3.4 Review by Commissioners	6 days	Fri 19-06-15	Fri 26-06-15																
308	3.5 Commission Approval	1 day	Mon 29-06-15	Mon 29-06-15																
309	3.6 Issue Licence	1 day	Mon 29-06-15	Mon 29-06-15																
310																				
311	KenGen-OLKARIA VI Geothermal (140MW)	418 days	Sun 01-09-13	Fri 27-02-15																

Project: Gantt Chart for Project 5000M  
Date: Thu 20-02-14

Task Split


Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

**KEY:** ERC: ENERGY REGULATORY COMMISSION, GDC: GEOTHERMAL DEVELOPMENT COMPANY, IPP: INDEPENDENT POWER PRODUCER, KENGEN: KENYA ELECTRICITY GENERATING COMPANY, KPLC: KENYA POWER AND LIGHTING COMPANY LIMITED, MOEP: MINISTRY OF ENERGY AND PETROLEUM, NEMA: NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY, PPP UNIT: PUBLIC PRIVATE PARTNERSHIPS UNIT

Signature  Dr. Frederick Nyang-Ag, Director General, 30/09/2013

**GOK-PROJECT 5,000 MW+ FAST TRACKED NEW CAPACITY TO TRANSFORM KENYA: ENERGY REGULATORY COMMISSION APPROVAL OF PPAs AND LICENSES**

ID	Task Name	Duration	Start				Finish				
			Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	
312	Negotiate PPA	30 days	Fri 09-01-15	Tue 17-02-15							
313	Submit Application for Approval	30 days	Sat 21-02-15	Tue 31-03-15							
314	3.1 Acknowledge	2 days	Fri 20-02-15	Sat 21-02-15							
315	3.2 Check for Completeness	5 days	Mon 23-02-15	Fri 27-02-15							
316	3.3 Commission Paper	10 days	Sat 28-02-15	Wed 11-03-15							
317	3.4 Review by Commissioners	9 days	Thu 12-03-15	Tue 24-03-15							
318	3.5 Commission Approval	1 day	Wed 25-03-15	Wed 25-03-15							
319	3.6 Issue Instrument of Approval	1 day	Fri 27-03-15	Fri 27-03-15							
320											
321	<b>Licensing</b>	<b>433 days</b>	<b>Mon 09-09-13</b>	<b>Thu 26-03-15</b>							
322	Prepare Licence Documents	30 days	Mon 01-12-14	Wed 07-01-15							
323	Public Notice in Print Media	15 days	Sat 10-01-15	Wed 28-01-15							
324	Submit Application for Approval	21 days	Fri 02-01-15	Wed 28-01-15							
325	2.1 Inspection/Objection	15 days	Wed 21-01-15	Tue 10-02-15							
326	2.2 Process Objections	15 days	Wed 11-02-15	Sat 28-02-15							
327	Approval Process	30 days	Wed 18-02-15	Thu 26-03-15							
328	3.1 Acknowledge	2 days	Thu 19-02-15	Fri 20-02-15							
329	3.2 Check for Completeness	5 days	Sat 21-02-15	Thu 26-02-15							
330	3.3 Commission Paper	10 days	Fri 27-02-15	Tue 10-03-15							
331	3.4 Review by Commissioners	10 days	Wed 11-03-15	Tue 24-03-15							
332	3.5 Commission Approval	1 day	Wed 25-03-15	Wed 25-03-15							
333	3.6 Issue Licence	1 day	Thu 26-03-15	Thu 26-03-15							
334											
335											
336	<b>KenGen-OLKARIA V Geothermal (140MW)</b>	<b>422 days</b>	<b>Tue 03-09-13</b>	<b>Thu 05-03-15</b>							
337	Negotiate PPA	20 days	Mon 12-01-15	Fri 06-02-15							
338	Submit Application for Approval	20 days	Mon 09-02-15	Tue 03-03-15							
339	3.1 Acknowledge	2 days	Tue 10-02-15	Wed 11-02-15							
340	3.2 Check for Completeness	5 days	Thu 12-02-15	Wed 18-02-15							
341	3.3 Commission Paper	6 days	Thu 19-02-15	Wed 25-02-15							
342	3.4 Review by Commissioners	6 days	Thu 26-02-15	Tue 03-03-15							
343	3.5 Commission Approval	1 day	Wed 04-03-15	Wed 04-03-15							
344	3.6 Issue Instrument of Approval	1 day	Thu 05-03-15	Thu 05-03-15							
345											
346	<b>Licensing</b>	<b>424 days</b>	<b>Sun 01-09-13</b>	<b>Thu 05-03-15</b>							
347	Prepare Licence Documents	20 days	Mon 03-11-14	Fri 28-11-14							

Project: Gantt Chart for Project 5000M  
Date: Thu 20-02-14

Task Split

Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

**KEY:** ERC: ENERGY REGULATORY COMMISSION, GDC: GEOTHERMAL DEVELOPMENT COMPANY, IPP: INDEPENDENT POWER PRODUCER, KENGEN: KENYA ELECTRICITY GENERATING COMPANY, KPLC: KENYA POWER AND LIGHTING COMPANY LIMITED, MOEP: MINISTRY OF ENERGY AND PETROLEUM, NEMA: NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY, PPP UNIT: PUBLIC PRIVATE PARTNERSHIPS UNIT

Signature \_\_\_\_\_  
Dr. Frederick Nyang- Ag. Director General, 30/09/2013







# NATIONAL OIL CORPORATION OF KENYA

JUNE 2014

## CONTENTS

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2.	Overview
3.	Financial Highlights and Key KPI
4.	Projects Update a. Upstream b. Midstream c. Downstream
5.	Challenges
6.	Next Steps
7.	Conclusion
8.	Appendix: Gantt Charts

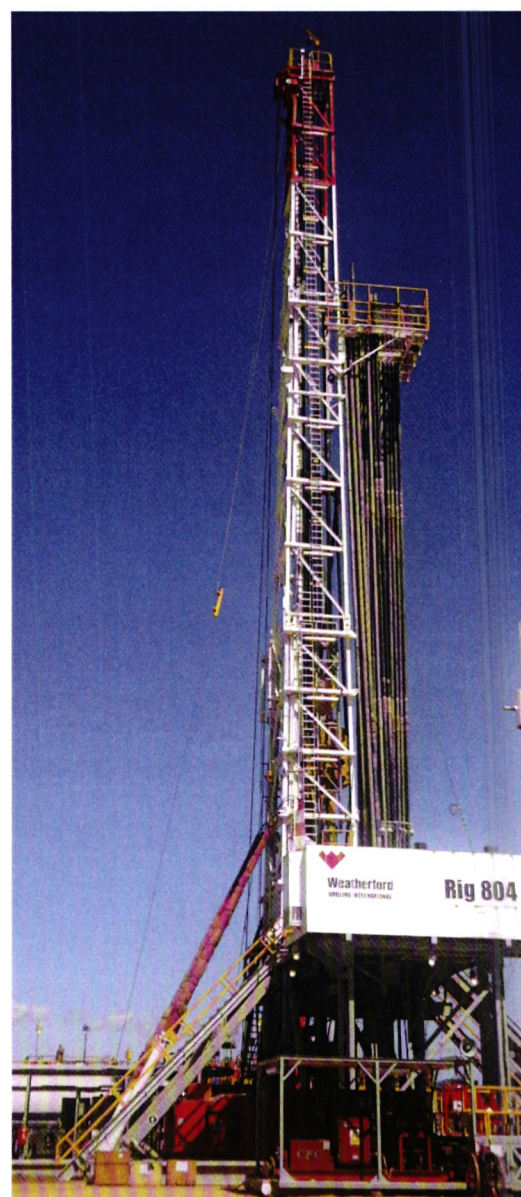


## 1.0 Background

The National Oil Corporation of Kenya is a limited company incorporated by the Government of Kenya in April 1981 under the Companies Act, Cap 486 of the Laws of Kenya. At its formation, the Corporation was charged with participation in all aspects of the petroleum industry. The company is 100% owned by the Government of Kenya through the Ministry of Energy and the Treasury.

The formation of National Oil Corporation was precipitated by the oil crisis of the 1970's (1973/74 and 1979/80) and the corresponding supply disruptions and price hikes. This necessitated the need for the Government to have greater control of this crucial factor of the economy's performance by having a company, which would act as an instrument of government policy in oil matters.

The Corporation became operational in 1984 with initial activities mainly consisting of exploration activities delegated from the Ministry of Energy. In March 1988, the need for the company to enter into downstream activities (petroleum importation and distribution) was identified. National Oil has since grown to be among the leading oil companies in Kenya with a rapidly expanding retail network and growing its presence in petroleum midstream and downstream to be among Africa's foremost fully integrated national oil companies.



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## 2.0 Overview

The period July 2013-June 2014 was characterized by increased activity on the oil and gas exploration front following the string of successes by Tullow in the Lokichar Basin. Tullow now estimates the Lokichar area to hold an estimated 600M barrels of oil with an upswing of in excess of 1B barrels anticipated with additional drilling and appraisal activity.



On the petroleum downstream front, following the decline in petroleum consumption experienced in the build up to the elections, consumption picked up sluggishly during the first quarter of the financial year and gathered momentum during the second quarter. We are however confident that the momentum picked up in the second quarter will be sustained and that 2013/14 financial year will see increased volume of products sold compared to the previous financial year.

### 3.0 Financial Highlights and Key KPI

During the first half of the current financial year as observed in the overview above, activity began picking up after slowdown in the build up to the election. The Corporation therefore recorded a slight decline in the first half year compared to same period previous year but we anticipate improved performance during the second half of the year and are confident to surpass the performance of the previous year. Table 1 and 2 below captures the financial highlights and key KPI compared to same period previous year.

**Table 1: Corporate Financial Highlights**

Item Description	Half Year FY 2012/13	Half Year FY 2013/14
Turnover (Kshs '000)	12,670,151	12,140,815
Other Income (Kshs '000)	48,528	40,477
Gross Profit (Kshs '000)	702,471	710,675
Profit Before Tax	133,877	53,887
Upstream Data Sales (Kshs '000)		94,000

**Table 2: Key Operational Indicators**

Item Description	Half Year FY 2012/13	Half Year FY 2013/14
Sales Volumes (M3)	126,061	119,480
NNT Throughput Volumes (M3)	98,818	98,550
Number of Retail Stations	102	114



## 4.0 Projects Update

With petroleum set to play a central role as a key infrastructural enabler of the Vision 2030 coupled with the increasing central role of national oil companies, National Oil is committed to playing a central role towards the attainment of the Vision by ensuring access to affordable petroleum products. To achieve this, the Corporation is focusing on the following initiatives:

### Short term

- Scale up retail network expansion
- Secure government – to – government contracts for supply of petroleum to Kenya
- Active oil and gas exploration
- Development of oil and gas support services business units

### Medium Term

- Petroleum infrastructure development
- Positioning Kenya as a regional hub for oil and gas exploration support services

### Long Term

Positioning Kenya as a petroleum trading logistics hub

For each of the above broad initiatives, the corporation has outlined and embarked on a number of projects in petroleum upstream, midstream and downstream.

In this respect during the first half of the current financial year the Corporation pursued the following initiatives:

## 4.1 Upstream Projects

### 4.1.1 Multiclient Seismic Data Acquisition

The Corporation in partnership with Schlumberger WesternGeco entered into partnership to acquire multiclient seismic 2D and 3D data in offshore blocks. The objective of this initiative is to enhance the amount and quality of seismic data available to enhance the prospectiveness of Kenya's offshore acreage.

The revenue generated from this multiclient seismic survey will be used by the Corporation to set up a modern Data Centre at the Energy Centre which shall incorporate:

- Online data store
- Seismic processing centre
- Data visualization facility



The Data Center will provide specialised data and seismic support services to oil and gas exploration companies operating in the region locally thus reducing costs and turnaround time. It will also serve to position Kenya as an East African upstream services hub.

#### **4.1.2 Block 14T Work Programme**

National Oil is the PSC licensee and operator of Block 14T. During the first half of the year, the Corporation undertook community sensitization and GPS ground mapping in readiness for undertaking a seismic campaign over the Block. The Corporation also signed a contract with Polaris & Schlumberger for acquisition of seismic and magneto-telluric data respectively over the Block. The seismic campaign commenced in the month of January 2014.

#### **4.1.3 Capacity Building**

During the period under review, the Corporation hired 34 Management Trainees to be engaged in the various upstream roles within the company as the Corporation seeks to build capability in readiness for production. The Management Trainees have been attached to various functions within the Corporation and are set to be sent to universities overseas for various oil and gas postgraduate programmes.

The Corporation also signed MOUs with the University of Nairobi and Kenyatta University for collaboration in various areas of research and capacity building. The objective of these collaborations is to support the local universities to build capacity to provide specialist oil and gas programmes locally.

#### **4.1.4 Government Participation Interest**

The Corporation has requested the Ministry of Energy and Petroleum for formal nomination to exercise the Government back in participation interest in the blocks where commerciality is set to be declared behalf of Government. The objective is to ensure that the Corporation begins at an early stage to explore the various financing options for realizing this participation. This will ensure that the Government has at the outset a participation interest in the blocks where commercial oil discoveries have been made as per PSC obligations. It will also serve to secure potentially commercial natural gas resources in Block 9 to meet domestic supply obligations for power generation and industrial development.





## 4.2 Midstream Projects

### 4.2.1 Petroleum Offshore Jetty and Tankfarm Project

The objective of this project is to build sufficient petroleum loading and offloading as well as storage capacity help position the Kenyan coast as a petroleum trading logistics hub for the region. In December the Corporation conducted stakeholder forums in Nairobi and Mombasa to review the feasibility report for this project. The input from the stakeholders is now being incorporated in the report with the same set to be finalized within the month of February 2013. The offshore jetty is also among the 47 projects that have been prioritized by Treasury for implementation under the PPP model.

## 4.3 Downstream Projects

### 4.3.1 Nairobi National Terminal LPG Storage and Filling Plant

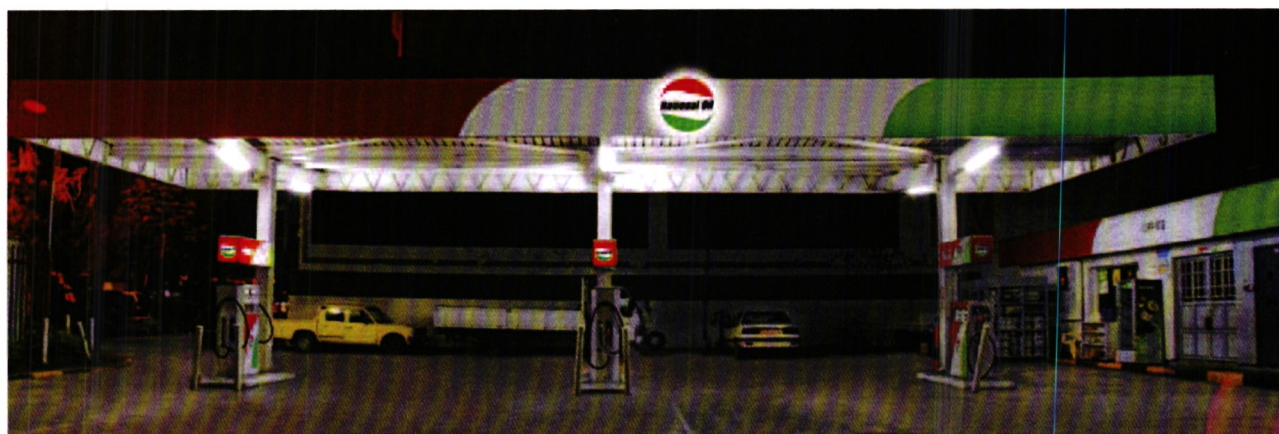
To ease the constraints currently being faced by the country in the availability of LPG storage and filling infrastructure, the Corporation in September 2013 commenced construction of this plant at its Nairobi National Terminal. The plant will have a storage capacity of 90MT and in addition to serving the Corporation will also provide hospitality to the many upcoming LPG players in the country thus serving to enhance the penetration of LPG in the country. Completion and testing of the plant is slated for April 2014.





### 4.3.2 Retail Expansion

The density and distribution of retail petrol stations in Kenya is skewed to major towns and major highways. Fewer than 1,500 retail petrol stations currently serve a population of 40M Kenyans. In South Africa for example, Gauteng province alone with a population of 10M people and an area of only 18,178 square kilometers has 1,582 stations.



As a measure to increase security of supply and cushion the public against supply shocks, National Oil is working on enhancing its national footprint of stations from 109 to 150 by the year 2016. This will enable the Corporation to have a retail presence in every county headquarter in Kenya as well as in rural market centers and smaller towns across the country. During the first half of the year, the Corporation brought onboard an additional four stations in Kamulu, Nyeri, Nakuru and Ngong.

### 4.3.3 MOU with Indian Oil Company

Indian Oil is one of the four national oil companies in India and the single largest company in India. The company is mostly focused on midstream and downstream petroleum activities including refining, petrochemicals, pipelines, R&D, aviation and retailing of petroleum. Due to its impressive and diverse capabilities in midstream and downstream petroleum activities, National Oil has commenced engagements with Indian Oil with a view to partnering in developing the various facets of National Oil's downstream business and achieving market leadership. The engagements are set to culminate in the signing of an MOU between the two companies in the next few weeks.

## 5.0 Challenges

While the above achievements have been realised, a number of challenges have been encountered. Key among these challenges are highlighted below.



### **a. Inadequate Financing**

Petroleum business is highly capital intensive and while National Oil has an aggressive growth plan, the company remains largely undercapitalized with total assets of Kshs 8B. This has continued to hamper the ability of the company to grow faster.

#### **Mitigation**

Moving forward there may be need for the Government to consider injecting additional capital into National Oil and/or other forms of support (through for example allocation of land for infrastructure projects, letters of comfort or guarantees to financiers and partners where applicable) to enable the company achieve faster growth and participate in high capital petroleum infrastructure projects.

### **b. Constrained and Aged National Petroleum Distribution Infrastructure**

The existing petroleum infrastructure in the country is aged and limited in capacity thus necessitating the need for the same to be shared among the over 60 registered oil marketing companies operating in Kenya on the basis of historical sales data/market share. This has however posed operational and logistical challenges to National Oil which has been on a steep growth trajectory as allocation of space (ullage) in the existing facilities using historical sales trends does not take immediate cognizance of the expanded network.

#### **Mitigation**

There will be need therefore to develop a master plan for the modernization of the national petroleum infrastructure with a view to only address the present constraints, but also develop infrastructure to support the oil and gas discoveries in Kenya and East Africa with a view to positioning Kenya as a regional petroleum trading logistics hub.

### **c. Petroleum Supply**

Importation of petroleum to the country is wholly through spot arrangements which can predispose the country to supply shocks and often results in price volatilities. Best practice worldwide for net petroleum importers is to provide for a mix of spot purchases and term contracts.

#### **Mitigation**

There is need therefore to facilitate the National Oil Corporation of Kenya to enter into term contracts with producing national oil companies under government-to-government contracts particularly under the 30% quota with a view to ensuring stability in the supply of petroleum into the country.



#### **d. Legislative Framework**

The current legal framework governing upstream oil and gas operations dates back to 1986. The industry and the region has rapidly changed since then and in the recent past oil and gas discoveries have been made in Kenya and the region.

#### **Mitigation**

There is therefore need for urgent review of the legislative framework to provide for a robust operational and institutional framework to govern the nascent industry. Some of the laws that are immediately needed include those to:

- **Provide for fair fiscal terms for both oil and gas**
- **Govern the establishment of a National Data Centre, data management as well as data sharing**
- **Local Content**
- **Establish a clear role for the Ministry, National Oil Corporation and the establishment of a Regulator for the emerging upstream sector**
- **Provide for the establishment of a robust environmental law that addresses concerns related to oil and gas exploration activities**

#### **e. Public Procurement Process**

As a state corporation, National Oil is subject to the Public Procurement and Disposal Act. However as a commercial entity in a fully competitive environment and mandated to play a pivotal role in securing petroleum supply in the country, the lengthy procurement process can hamper speed of execution. In addition it is anticipated that as Kenya records more oil discoveries and moves into production, working within the provisions of the current Public Procurement and Disposal Act will be an impediment to National Oil further entrenching itself in the upstream field.

#### **Mitigation**

Developing countries such as India, China, Malaysia, Brazil among others that have spurred their national oil companies to become global players have sought to provide special dispensations that have saved their NOCs from the rigors of the public procurement laws but at the same time providing appropriate safeguards that ensure these NOCs still remain accountable to the government and the public.

#### **f. Inadequate Technical Skills**

The country lacks adequate skills in the technical areas of oil and gas upstream and midstream. These skills will be critical if National Oil is to effectively play its role as a fully integrated company and for the Government to pursue an effective local content policy for the emerging oil and gas upstream and midstream functions.



## Mitigation

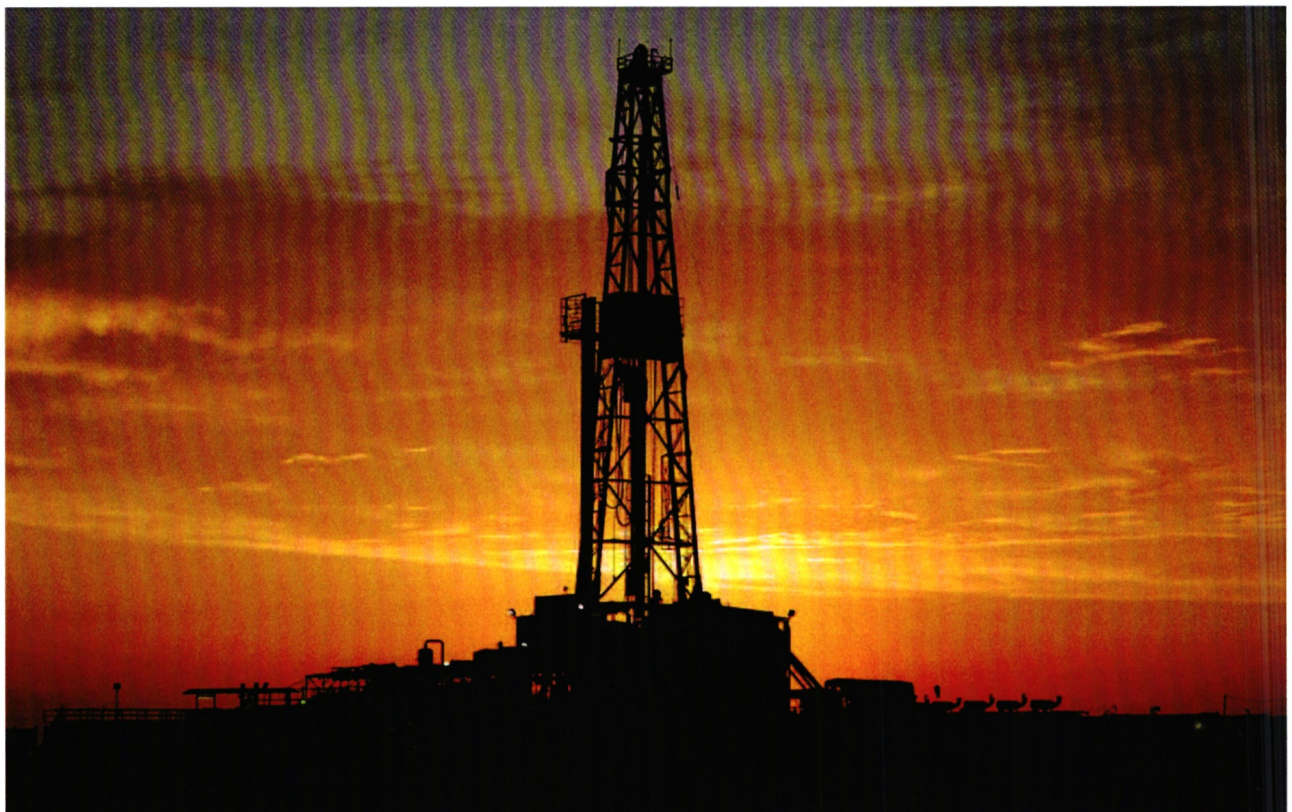
In this respect there will be need for a grand marshal plan as done in Trinidad & Tobago, Brazil, Malaysia among others to build local competencies in these areas with National Oil working with other stakeholders to drive this agenda.

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## 6.0 Next Steps

In July 2013, the Corporation commenced implementation of its 2013-16 Strategic Plan which aims to lay a robust foundation for a world class fully integrated national oil company of the future. The Strategic Plan focuses on the following key areas:

- **Achieving 10% global market share by 2016**
- **Developing world class petroleum infrastructure**
- **Developing world class Upstream Business**
- **Transforming ICT to a key enabler of business and a driver of competitiveness**
- **Developing world class Human Resources**
- **Positioning National Oil as a major player in the global oil and gas industry**





Over the last few years there has been growing interest in East Africa's oil and gas exploration acreage. However companies coming to conduct exploration in the region have to rely on support services such as geochemical and geophysical analysis, data services, and equipment sourced from outside the region. National Oil is committed to ensuring that Kenya addresses this gap by acting as a hub for these services within the region.

To this end in the second half of the year the Corporation will commence the process of establishing a modern data centre that will allow remote access to oil and gas data enabling persons interested in the data to access it from wherever they may be in the world as well as a data visualization and seismic processing centre.

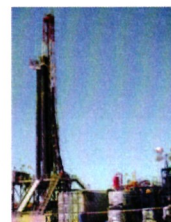
The Corporation will also embark on offshore geochemical analysis to identify oil seeps and generate multiclient geochemical data. Sales of this data will help in the setting up of a modern national geochemical laboratory to provide hydrocarbon analysis for the East African region.

Through the support of the World Bank under the Kenya Petroleum Technical Assistance Project (KEPTAP) and in collaboration with the Ministry of Energy and Petroleum, the Corporation will also be looking to spearhead development of a Local Content Policy and Legislation to ensure that Kenyans begin participating in the oil and gas sector at an early stage. Under the KEPTAP the Corporation will also be looking to undertake a commercialization study to inform on the various commercialization options for the oil discovered in Turkana. This study shall inform participation by the Corporation in the field development engagements with Tullow to ensure the most optimal field development plan is implemented for the benefit of the country.

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## 7.0 Conclusion

Increasingly, the role of national oil companies in the realization of national development agendas is becoming more pronounced. This is more so in the emerging economies of Asia, Africa and South America where national oil companies are now one of the most important tools of economical transformation. National Oil is rising to the occasion to support realization of the development objectives espoused in the Vision 2030.



# APPENDIX

NATIONAL OIL CORPORATION OF KENYA  
WORKPLAN



# BLOCK 14T EXPLORATION PROJECT

# NATIONAL OIL CORPORATION OF KENYA

# NATIONAL ENERGY PROJECTS 2014-2020 2ND JAN. 2014 - 6TH DEC. 2017 48 MONTH PROJECT

ID	Task Name	Duration	Start	Finish
1	<b>BLOCK 14T EXPLORATION</b>			
2	Geophysical Data Acquisition	1055 days	Thu 1/2/14	Wed 1/17/18
3	Pre-acquisition Field Scouting, Route Clearance	658 days	Mon 7/11/16	Mon 7/11/16
4	Mobilisation of Equipment	45 days	Thu 1/2/14	Wed 3/5/14
5	Seismic Parameter Testing	15 days	Thu 3/6/14	Wed 3/26/14
6	GPS Survey	22.5 days	Thu 3/27/14	Mon 4/28/14
7	MT Preparation and Acquisition	45 days	Thu 4/8/14	Mon 6/9/14
8	2D Seismic Acquisition	45 days	Thu 3/6/14	Wed 5/7/14
9	2D Seismic Acquisition	50 days	Mon 3/2/14	Fri 7/18/14
10	Interpretation and MT/Seismic Data Integration	45 days	Mon 7/21/14	Fri 9/19/14
11	Source Financing for 3D Seismic Campaign	174 days	Mon 12/1/14	Thu 7/30/15
12	Seek Budget Support from Treasury in the 2015/16 Budget for the NOC Contribution	45 days	Mon 12/1/14	Fri 1/30/15
13	Funding Commitment from Japan Oil, Gas, and Metals Company (JOGMEC)	45 days	Mon 12/1/14	Fri 1/30/15
14	Obtain Treasury Funding	22 days	Wed 7/1/15	Thu 7/30/15
15	3D Seismic Acquisition and/or Infill 2D Seismic	105 days	Tue 9/7/15	Mon 1/25/16
16	3D Seismic Data Processing and Interpretation	120 days	Tue 1/26/16	Mon 7/11/16
17	Risk Analysis	90 days	Mon 1/13/14	Fri 5/16/14
18	Community Engagement & Sensitisation	530 days	Mon 1/13/14	Fri 1/22/16
19	Financing of Drilling and Appraisal	127 days	Tue 7/12/16	Wed 1/4/17
20	NOC/LOGMEC Working Committee Engagements	15 days	Tue 7/12/16	Mon 8/1/16
21	Shareholder Approvals	45 days	Tue 8/2/16	Mon 10/5/16
22	Farmout	67 days	Tue 10/4/16	Wed 1/4/17
23	Prepare Data Room and Avail Data	14 days	Tue 10/4/16	Fri 10/21/16
24	Identify and Engage Potential Farm In Partners	15 days	Tue 10/4/16	Mon 10/24/16
25	Invite RFP	21 days	Tue 10/25/16	Mon 11/22/16
26	Evaluate RFP	15 days	Wed 11/23/16	Tue 12/13/16
27	Participation Negotiations	1 day	Wed 1/4/17	Tue 1/3/17
28	Sign Joint Operating agreement	338 days	Mon 10/3/16	Wed 1/17/18
29	Drilling	30 days	Mon 10/3/16	Wed 1/17/18
30	Prepare Tender Documents for Rig Services	21 days	Mon 10/3/16	Fri 11/17/16
31	Invite RFPs	15 days	Mon 11/14/16	Mon 12/12/16
32	Evaluate RFP	1 day	Tue 12/13/16	Mon 12/13/16
33	Tender Award	60 days	Tue 1/3/17	Tue 3/28/17
34	Rig Mobilisation	310 days	Mon 10/3/16	Fri 12/23/17
35	EIA	30 days	Mon 10/3/16	Fri 12/8/17
36	Community Engagement & Sensitisation	45 days	Mon 10/3/16	Fri 12/8/17
37	Land Access and Resettlement Action Plan	60 days	Mon 10/3/16	Fri 12/8/17
38	NEMA Approval	1 day	Wed 12/8/17	Fri 12/8/17
39	Spud	120 days	Wed 12/8/17	Tue 6/20/17
40	Drilling	30 days	Thu 6/22/17	Wed 12/6/17
41	Analysis of Drilling Results and Decision on Next Steps			
42				

Project: BLOCK 14T EXPLORATION

Task Split

Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline

**SUMAYYA HASSAN - ATHIMANI**  
 CEO NATIONAL OIL CORPORATION OF KENYA  
 15TH JANUARY 2014



REPUBLIC OF KENYA



ENERGIZING KENYA

**ENHANCE SECURITY OF PETROLEUM SUPPLY & PETROLEUM SUPPLY & GROW MARKET SHARE**

**NATIONAL OIL CORPORATION OF KENYA**

**NATIONAL ENERGY PROJECTS 2014-2020**  
13TH JAN. 2014 - 29TH JUN. 2017

ID	Task Name	Duration	Start	Finish	2014	2015	2016	2017
1	ENHANCE SECURITY OF PETROLEUM SUPPLY & GROW MARKET SHARE	783 days	Mon 7/1/13	Wed 6/29/16				
2	30% Quota	140 days	Mon 2/3/14	Fri 8/15/14				
3	Ullage Restoration for 30% Quota including PMS	30 days	Mon 2/3/14	Fri 3/14/14				
4	Seek approval from MOE&P and Vessel Scheduling Committee	1 day	Mon 3/17/14	Mon 3/17/14				
5	Receive Date Range from MOE&P	15 days	Tue 3/18/14	Mon 4/7/14				
6	Negotiate and Secure Short term Supply Agreements	30 days	Tue 4/8/14	Mon 5/19/14				
7	Negotiate and Secure long term Supply Agreements	120 days	Mon 3/3/14	Fri 8/15/14				
8	Arrival and Discharge of Initial Cargo	3 days	Tue 5/20/14	Thu 5/22/14				
9	Grow Market Channels and Market Share	783 days	Mon 7/1/13	Wed 6/29/16				
10	Attain Preferred Government Supplier Status for Fuel	35 days	Wed 2/19/14	Tue 4/8/14				
11	Seek Approval of Treasury and the Head of Public Service through MoE&P	15 days	Wed 2/19/14	Tue 3/11/14				
12	Approval for Preferred Government Supplier Status for Fuel	20 days	Wed 3/12/14	Tue 4/8/14				
13	Attain Aviation Supply Partnership for Security Forces	25 days	Wed 2/19/14	Tue 3/25/14				
14	Seek Approval of the Min. of State for Defence and Min. of Internal Security through MOE&P	15 days	Wed 2/19/14	Tue 3/11/14				
15	Approval of the Min. of State for Defence and Min. of Internal Security	10 days	Wed 3/12/14	Tue 3/25/14				
16	Attain Preferred Fuel Supplier Status for Upstream Activities	40 days	Tue 2/19/14	Tue 4/15/14				
17	Seek Support of MOE&P	10 days	Wed 2/19/14	Tue 3/4/14				
18	Engage with Exploration Companies	30 days	Wed 3/15/14	Tue 4/15/14				
19	Attain Government-to-Government Export Opportunities for Neighbouring Landlocked Countries	10 days	Wed 2/19/14	Tue 3/4/14				
20	Seek Support of Min. of Commerce, Tourism & EAC Affairs through MoE&P	92 days	Mon 3/10/14	Tue 7/15/14				
21	Enhance Retail Presence	2 days	Mon 3/10/14	Tue 3/11/14				
22	Present Retail Masterplan to MOE&P	90 days	Wed 3/12/14	Tue 7/15/14				
23	Obtain Concession of Government Owned Land Aligned to the Masterplan	30 days	Mon 3/3/14	Fri 4/11/14				
24	KPRL	30 days	Mon 3/3/14	Fri 4/11/14				
25	Obtain Approval to Use the Facility as a Storage, Truck Loading and National Strategic Reserves	30 days	Mon 3/3/14	Fri 4/11/14				
26	Shareholder Equity Support through Petroleum Development Levy	90 days	Mon 3/3/14	Fri 7/4/14				
27	Obtain Shareholder Equity Support from Treasury through MOE&P for the Expanded Business	90 days	Mon 3/3/14	Fri 7/4/14				
28	Expand Retail Network from 98 stations to 150 stations	783 days	Mon 7/1/13	Wed 6/29/16				
29	Grow retail network to 115 stations	261 days	Mon 7/1/13	Mon 6/30/14				
30	Grow retail network to 132 stations	261 days	Tue 7/1/14	Tue 6/30/15				
31	Grow retail network to 150 stations	261 days	Mon 7/1/13	Wed 6/29/16				
32	Increase Sales Volumes from 285,000M3 to 543,000M3	783 days	Mon 7/1/13	Wed 6/29/16				
33	Grow sales volumes to 310,000M3	261 days	Mon 7/1/13	Mon 6/30/14				
34	Grow sales volumes to 469,000M3	261 days	Tue 7/1/14	Tue 6/30/15				
35	Grow sales volumes to 543,000M3	261 days	Wed 7/1/15	Wed 6/29/16				

Project: MARKET SHARE & SECURITY OF PETROLEUM SUPPLY



**SUMAYYA HASSAN - ATHMANI**  
CEO NATIONAL OIL CORPORATION OF KENYA  
15TH JANUARY 2014

Task Split

Progress Milestone

Summary Project Summary

External Tasks External Milestone

Deadline



REPUBLIC OF KENYA



## KENYA OIL AND GAS INDUSTRY REQUIREMENTS STUDY

## NATIONAL OIL CORPORATION OF KENYA

## NATIONAL ENERGY PROJECTS 2014-2020

3RD FEB, 2014 - 18TH MAY, 2015  
14 MONTH PROJECT

ID	Task Name	Duration	Start	Finish	2014	2015	2016
1	<b>KENYA OIL AND GAS INDUSTRY REQUIREMENTS STUDY</b>						
2	Engage Consultant	351 days	Fri 5/2/14	Fri 9/4/15	Q1	Q2, Q3, Q4	Q1, Q2
3	Request for support under KEPTAP for Study	152 days	Fri 5/2/14	Mon 12/1/14	Q1	Q2, Q3, Q4	
4	Prepare TORs for Consultant	45 days	Fri 5/2/14	Thu 7/3/14	Q1	Q2, Q3, Q4	
5	Advertise EOI	15 days	Fri 7/4/14	Thu 7/24/14	Q1	Q2, Q3, Q4	
6	Evaluate EOI	21 days	Fri 7/25/14	Fri 8/22/14	Q1	Q2, Q3, Q4	
7	Prepare RFP	10 days	Mon 8/25/14	Fri 9/5/14	Q1	Q2, Q3, Q4	
8	Invite RFPs	15 days	Mon 9/8/14	Fri 9/26/14	Q1	Q2, Q3, Q4	
9	Evaluate RFP	21 days	Mon 9/29/14	Mon 10/27/14	Q1	Q2, Q3, Q4	
10	Award Tender	10 days	Tue 10/28/14	Mon 11/10/14	Q1	Q2, Q3, Q4	
11	Contract Negotiations and Signing	1 day	Tue 11/11/14	Tue 11/11/14	Q1	Q2, Q3, Q4	
12	Oil and Gas Industry Requirements Study	14 days	Wed 11/12/14	Mon 12/1/14	Q1	Q2, Q3, Q4	
13	Conduct Study and Prepare Report	199 days	Tue 12/2/14	Fri 9/4/15	Q1	Q2, Q3, Q4	
14	Circulate Report for Stakeholder Feedback	180 days	Tue 12/2/14	Mon 8/10/15	Q1	Q2, Q3, Q4	
15	Stakeholder Review Workshop	10 days	Tue 8/11/15	Mon 8/24/15	Q2	Q3, Q4	
16	Incorporate Stakeholder Comments	1 day	Tue 8/25/15	Tue 8/25/15	Q2	Q3, Q4	
17	Present Study to MoE&P	7 days	Wed 8/26/15	Thu 9/3/15	Q2	Q3, Q4	
		1 day	Fri 9/4/15	Fri 9/4/15	Q2	Q3, Q4	

KENYA OIL AND GAS INDUSTRY REQUIREMENTS STUDY

SUMAYYA HASSAN - ATHIMANI  
CEO NATIONAL OIL CORPORATION OF KENYA  
15TH JANUARY 2014

Task  
Split  
Progress

Milestone  
Summary  
Project Summary

External Tasks  
External Milestone  
Deadline



REPUBLIC OF KENYA



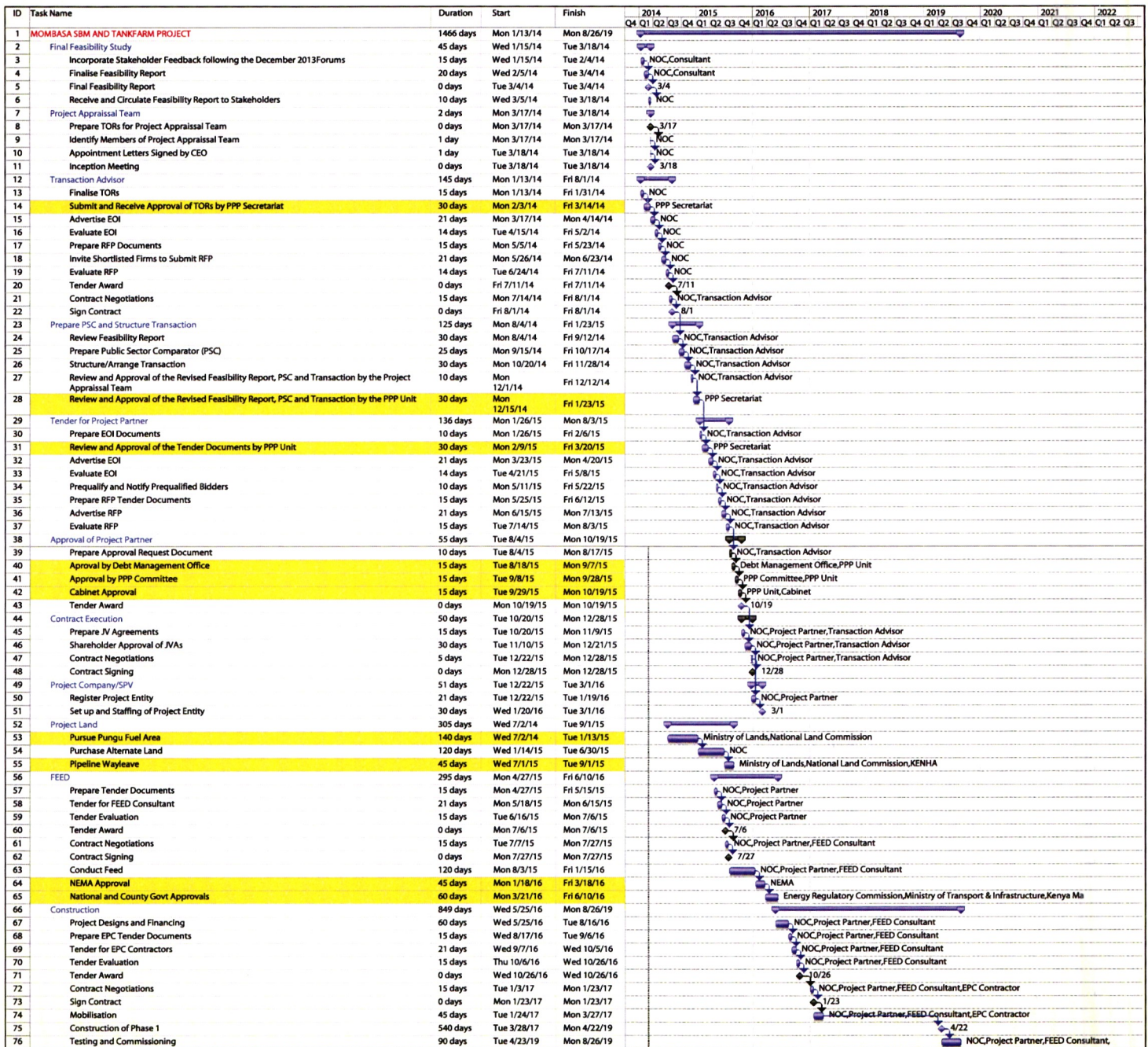
ENERGIZING KENYA

# MOMBASA SBM AND TANKFARM PROJECT

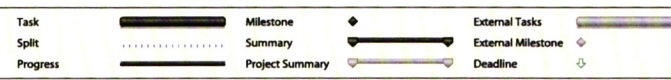
# NATIONAL OIL CORPORATION OF KENYA

# NATIONAL ENERGY PROJECTS 2014-2020

13TH JAN. 2014 - 26TH AUG. 2019  
66 MONTH PROJECT



Project: MOMBASA PETROLEUM TRADING HUB



**SUMAYYA HASSAN - ATHMANI**  
CEO NATIONAL OIL CORPORATION OF KENYA  
15TH JANUARY 2014



REPUBLIC OF KENYA



ENERGIZING KENYA

**MONETISATION OF  
LOKICHAR SUB-BASIN  
OIL RESOURCES**

**NATIONAL OIL  
CORPORATION OF KENYA**

**NATIONAL ENERGY  
PROJECTS 2014-2020**  
3RD FEB. 2014 - 5TH JUL. 2016  
19 MONTH PROJECT

ID	Task Name	Duration	Start	Finish	2014	2015	2016
					Q4	Q1	Q2
1	<b>MONETISATION OF PETROLEUM RESOURCES</b>						
2	Exercise Government Back-in Right	445 days	Mon 2/3/14	Fri 10/16/15			
3	Appointment of NOC to Exercise Right on Behalf of CoK	416 days	Mon 2/3/14	Mon 9/7/15			
4	Develop Joint Participation Agreement subject to confirmation of Commerciality	45 days	Mon 2/3/14	Fri 4/4/14			
5	Engagement with Shareholder on the Joint Participation Agreement	60 days	Mon 8/6/14	Fri 10/24/14			
6	Sign Joint Participation Agreement with Operator	45 days	Mon 10/27/14	Fri 12/26/14			
7	Engage with Operator on Field Development Programme (FDP) Development	1 day	Tue 12/29/14	Mon 12/29/14			
8	Financing Back-in Participation Right	180 days	Tue 12/30/14	Mon 9/7/15			
9	Obtain support under KEPTAP for Transaction Advisor	381 days	Fri 5/2/14	Fri 10/16/15			
10	Prepare TORs for Transaction Advisor (TA)	45 days	Fri 7/4/14	Thu 7/3/14			
11	Advertise EOJ	30 days	Fri 8/15/14	Thu 8/14/14			
12	Evaluate EOJ	21 days	Mon 9/15/14	Fri 9/12/14			
13	Prepare RFP	14 days	Fri 10/3/14	Thu 10/2/14			
14	Invite RFPs	15 days	Fri 10/24/14	Thu 10/23/14			
15	Evaluate RFP	21 days	Mon 11/24/14	Fri 11/21/14			
16	Award Tender	14 days	Mon 11/24/14	Thu 12/11/14			
17	Contract Negotiations, Preparation and Signing	1 day	Mon 12/1/14	Fri 12/1/14			
18	Structure Financing	10 days	Mon 12/15/14	Fri 12/26/14			
19	<b>Shareholder Approval for Financing Plan</b>	60 days	Mon 3/23/15	Fri 6/12/15			
20	Fundraising and Closure	90 days	Mon 6/15/15	Fri 10/16/15			
21	Commercialisation Options for Turkana Oil	266 days	Fri 5/2/14	Fri 5/28/15			
22	Obtain support under KEPTAP for Commercialisation Study	45 days	Fri 5/2/14	Thu 7/3/14			
23	Prepare TORs for Consultant	30 days	Fri 7/4/14	Thu 8/14/14			
24	Advertise EOJ	21 days	Fri 8/15/14	Fri 9/12/14			
25	Evaluate EOJ	14 days	Mon 9/15/14	Mon 10/2/14			
26	Prepare RFP	30 days	Fri 10/3/14	Thu 11/13/14			
27	Invite RFPs	21 days	Fri 11/7/14/14	Fri 12/12/14			
28	Evaluate RFP	14 days	Mon 12/15/14	Thu 11/11/15			
29	Award Tender	1 day	Mon 1/2/15	Fri 1/2/15			
30	Contract Negotiations, Preparation and Signing	15 days	Mon 1/5/15	Fri 1/23/15			
31	Commercialisation Study for Turkana Oil	60 days	Mon 1/26/15	Fri 4/17/15			
32	Shareholder Review and Approval of Commercialisation Report	15 days	Mon 4/20/15	Fri 5/28/15			

MONETISING OF PETROLEUM RESOURCES

*(Signature)*

**SUMAYYA HASSAN - ATHMANI**  
CEO NATIONAL OIL CORPORATION OF KENYA  
15TH JANUARY 2014

