

FIRM EXPERIENCE

GLOBAL SYNERGY LINK LIMITED

August 2012



Firm Name:	rm Name: GLOBAL SYNERGY LINK LIMITED	
Assignment Name: Energy Sector Recovery Project SCADA /EME System Upgrade		Country/Location: Kenya / Country wide
Name of Client: The Kenya Power & Lighting Company Limited		Total No of staff-months of the assignment for staff provided by your firm: 15 man - weeks
Address: Stima Plaza, Kolobot Road P.O Box 30099, 00100 KENYA		Approx. value of the services provided by your firm under the contract (in current USD): USD 30,000
Start date (month/year): Sept 2003 Completion date (month/year): June 2004		No of professional staff-months provided by associated Consultants: 63 man - weeks
Name of associated Consultants, if any: Main Consultant Fichtner International Consultants		Key personnel provided by your firm (positions): Local Expert

L .K Kariuki - Local Expert

Narrative description of Project:

Funded by the World Bank as part of Energy Recovery Project, it involved preparation of:

- 1. Feasibility study for the proposed new or rehabilitated substations
 - a) Rehabilitation/Expansion options telecommunication, control system hierarchy and hardware
 - b) Cost estimates
 - c) Economic Analysis
 - d) Financial Analysis
- 2. Detailed Design for the recommended option
- 3. Preparation of Draft Bid Documents
 - a) Computer hardware infrastructure
 - b) SCADA and Operating Applications
 - c) Telecommunications network

Description of actual services provided by your staff within the assignment:

- Local logistics and project activities coordination between Fichtner and KPLC.
- Data collection
- Site Survey at grid and distribution primary stations
- Review of reports as part of assurance process



Firm Name:	GLOBAL SYNERGY LINK LIMITED	
Assignment Name: Energy Sector Recovery Project Distribution Reinforcement and Upgrade		Country/Location: Kenya / Country wide
Name of Client: The Kenya Power & Lighting Company Limited		Total No of staff-months of the assignment for staff provided by your firm: 16 man-weeks
Address: Stima Plaza, Kolobot Road P.O Box 30099, 00100 KENYA		Approx. value of the services provided by your firm under the contract (in current USD): USD 30,000
Start date (month/year): March 2004 Completion date (month/year): July 2004		No of professional staff-months provided by associated Consultants: 23 man-weeks
Name of associated Consultants, if any: Main Consultant Norplan A .S Norway		Key personnel provided by your firm (positions): Local Team Leader/Power system Analyst Design Engineer System Losses Expert

L.K Kariuki - Local Team Leader/Power system Analyst

C.N Njungu - Design Engineer

S.M Abdallah - System Losses Expert

Narrative description of Project:

Funded by the World Bank as part of Energy Recovery Project involved preparation of:

- 1. Feasibility study for proposed new or rehabilitated substations
 - a) Preliminary design
 - b) Cost estimates
 - c) Economic Analysis
 - d) Financial Analysis
 - e) System losses reduction proposals
 - f) Review of performance indicators
- 2. Preparation of Draft Bid Documents
 - a) Power Lines and Cables
 - b) Substations and switchgear
 - c) Mt Kenya Trunked Radio system
 - d) Loose items such as Capacity Banks, transformers and energy meters



- Local logistics and project activities coordination between the study team and KPLC
- Data collection
- Site Survey at grid and distribution primary stations
- Preliminary design of proposed new and rehabilitated 132/33KV, 66/11KV and 33/11KV
 Substations including switchgear and outgoing circuits
- Preparations of Draft Bid Documents to IDA Guidelines
- Cost estimates
- Assessment of System Losses
- Review of technical performance indicators

Firm Name:	Firm Name: GLOBAL SYNERGY LINK LIMITED	
Assignment Name: Consulting Services for implementation of Kiambere Optimization Project		Country/Location: Kenya / Eastern Province
Name of Client: Kenya Electricity Generating Company Limited (KenGen)		Total No of staff-months of the assignment for staff provided by your firm: 11.5 staff months
Address: Stima Plaza, Kolobot Road P.O Box 47936 00100 Nairobi KENYA		Approx. value of the services provided by your firm under the contract (in current USD): USD 115,292.22
Start date (month Completion date	/year): Jan 2005 (month/year): Dec 2007	No of professional staff-months provided by associated Consultants: 14.6 man-months
	ed Consultants, if any: Norplan A.S , Norway	Key personnel provided by your firm (positions): Team leader / Electrical Engineer Mechanical Engineer Electrical Engineer Electrical Engineer

Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):

L.K Kariuki - Team leader / Electrical Engineer

N.K Gichuki - Mechanical Engineer

V.J Ongewe - Electrical Engineer

C Njungu - Electrical Engineer



Narrative description of Project:

Consulting services for update of feasibility study report, design and supervision of implementation of Raising of Masinga. The scope of work is summarized below:

- 1. Update of Feasibility Study
 - Review the feasibility study report
 - Update the cost and implementation period of the selected option, and asses the economic feasibility
 - Carryout environmental scoping and prepare TOR for detailed assessment
- 2. Carry out basic design of project features including but not limited to the embankment, spillway, saddle dam and other related structures and instrumentation for Masinga reservoir, related equipment and civic works.
- 3. Prepare Bid Documents
- 4. Carry out construction supervision of the works and witness commissioning

Description of actual services provided by your staff within the assignment:

- Participation in conceptual design and procurement
- Preparation of Bid documents and procurement
- Construction supervision at site and Logistics and coordination with KenGen from Nairobi
 Office
- Electrical side Coordination with KenGen from Nairobi office

Firm Name:	irm Name: GLOBAL SYNERGY LINK LIMITED	
Assignment Name: Update of feasibility study report, design and supervision of implementation of raising Masinga dam		Country/Location: Kenya / Eastern Province
Name of Client: Kenya Electricity Generating Co. Ltd (KenGen)		Total No of staff-months of the assignment for staff provided by your firm: 12 man-weeks
Address: Stima Plaza, Kolobot Road P.O. Box 47936, 00100 Nairobi KENYA		Approx. value of the services provided by your firm under the contract (in current USD): USD 28,000
Start date (month/year): Dec 2005 Completion date (month/year): Dec 2007		No of professional staff-months provided by associated Consultants: 54 man-months
Name of associated Consultants, if any: Main Consultant: Norplan A.S, Norway		Key personnel provided by your firm (positions): Local Liaison Mechanical Engineer



L.K Kariuki - Local Liaison

N.K Gichuki - Mechanical Engineer

Narrative description of Project:

Consulting services for update of feasibility study report, design and supervision of implementation of Raising of Masinga. The scope of work is summarized below:

- 1. Update of Feasibility study
 - Review the feasibility study report
 - Update the cost and implementation period of the selected option, and asses the economic feasibility
 - Carryout environmental scoping and prepare TOR for detailed assessment
- 2. Carry out basic design of project features including but not limited to the embankment, spillway, saddle dam and other related structures and instrumentation for Masinga reservoir, related equipment and civil works
- 3. Prepare Bid Documents
- 4. Carry out construction supervision of the works and witness commissioning

Description of actual services provided by your staff within the assignment:

The GSL team will be working closely with the main consultant in the following

- 1. Review and update of the energy output from the increased reservoir
- 2. Evaluation of reservoir level and gate options
- 3. Design of gates if the gate option is selected

GSL is also providing the local logistics and coordination with the client

Firm Name:	GLOBAL SYNERGY LINK LIMITED	
Assignment Name:		Country/Location:
Olkaria Geothern	nal Optimisation project	Kenya / Olkaria Naivasha
Name of Client: Kenya Electricity Generating Co. Ltd (KenGen)		Total No of staff-months of the assignment for staff provided by your firm: Seven Staff Months
Address: Stima Plaza, Kolobot Road P.O. Box 47936, 00100 Nairobi KENYA		Approx. value of the services provided by your firm under the contract (in current USD): USD 73,000
Start date (month/year): Jan 2005 Completion date (month/year): Jan 2007		No of professional staff-months provided by associated Consultants: 24 months



Name of associated Consultants, if any:

Main Consultant: WESTJEC

Key personnel provided by your firm (positions):

Local Co-coordinator

Optimization Reservoir Engineer

plant Facility Expert

Sub-Station Engineer

Design Engineer

Local Environmentalist

Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):

L.K Kariuki - Local Co-coordinator

W.J Ambusso - Optimization Reservoir Engineer

N.K Gichuki - plant Facility Expert

V.J Ongewe - Sub-Station Engineer

C.K Njungu - Design Engineer

S.O Kasuku - Local Environmentalist

Narrative description of Project:

- a) To determine the size, availability and quality of the geothermal resources in the joined fields currently assigned to Olkaria I and Olkaria II power plants and the adjacent field of Olkaria IV. With this objective, the geothermal conceptual model of the joined areas, which is already developed by KenGen, will be refined, followed by the mathematical modeling of the geothermal reservoir. Reservoir behavior under different exploitation and re-injection scenarios must be simulated. The results should include confirmation of the amount of steam available and recommendations on the feasibility of using the steam not only to stabilize the geothermal electric power generation, with the capacity already in existence, but to expand the installed capacity by 35 MWe through addition of a third unit in Olkaria II utilizing the available steam from Olkaria I and II steam fields
- b) Determine where and how to access the geothermal resource for the sustainable production and re-injection of the existing installed capacity, plus the additional found capacity including, if justified, the installation of the 35 MW unit in Olkaria II

Description of actual services provided by your staff within the assignment:

- General Technical Coordination in Kenya
- Field Optimization, Well and Reservoir Engineering
- Geothermal Power Plant Engineering
- Sub-Station and Electric Engineering
- Design Engineering
- Environmental Expertise
- Logistic Services
- Liaison Services



Firm Name:	GLOBAL SYNERGY LINK LIMITED	
Assignment Name:		Country/Location:
Bulk Tariff Study		Kenya / Nairobi
Name of Client: ECOGEN (K) LTD		Total No of staff-months of the assignment for staff provided by your firm: 2 Months
Address: ECOGEN (KENYA) Limited P.O Box 1931 - 00200 Nairobi KENYA Fax +(254) 20 4347439 Email: ecogen@wananchi.com		Approx. value of the services provided by your firm under the contract (in current USD): USD 21,500
Start date (month/year): May 2004 Completion date (month/year): June 2004		No of professional staff-months provided by associated Consultants: 50 man-days
Name of associate GSL was the only	ed Consultants, if any: consultant	Key personnel provided by your firm (positions): Project Leader Business Financial Analyst System Analyst Financial modeling Expert Financial modeling Expert

L.K Kariuki - Project Leader

E. G Githiaka - Business Financial Analyst

S.N Muthiora - System Analyst

H.K Kimani - Financial modeling Expert

S. K Murimi - Financial modeling Expert

Narrative description of Project:

Study and recommend the level of bulk tariffs and propose adjustments (if needed) to the retails tariffs so as to ensure the continued viability of the proposed South of Lake Naivasha (SLN) electricity utility.

The scope of work includes the following:

- Prepare and review with EcoGen the tariff study assumptions
- Assist EcoGen in preparation of electricity demand of the SLN
- Assist EcoGen in preparation of electricity losses projections of the SLN
- Analyze the current billing to estimate the average monthly and annual sales yield from consumption data provided by EcoGen
- Undertake financial projections for a period of at least 5 years (2005 2010) with sensitivities on key assumed parameters.
- Propose a Bulk Supply Tariff for the EcoGen SLN utility and the retail tariffs.



All the services included the scope of work

Firm Name:	GLOBAL SYNERGY LINK LIMITED	
Assignment Name: Kenya Power Sector Survey Report and Justification of Sondu APP		Country/Location: Kenya / Nairobi
Name of Client: NIPPON KOEI		Total No of staff-months of the assignment for staff provided by your firm: 1 man -month
Address:		Approx. value of the services provided by your firm under the contract (in current USD): USD 10,000
Start date (month/year): August 2005 Completion date (month/year): October 2005		No of professional staff-months provided by associated Consultants: 3-months
Name of associated Consultants, if any: GSL		Key personnel provided by your firm (positions): Power Sector Expert

Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):

L.K Kariuki - Power Sector Expert

Narrative description of Project:

Task 1. To review the present status of Kenya Power system and in particular the: Existing power facilities and their performance, power balance; progress of committed power plants under construction, and planned power plants and power exchange in regional countries

Task 2: The review the least cost power development plan taking into account the:

The power demand forecast, the present status and progress of existing, committed and planned power plants, the practical power balance between the power demand and supply

Task 3: To justify the necessity of the Sondu/Miriu APP by considering the reviewed least cost development plan



- (1) To review the power demand forecast
- (2) To review the present status of existing power plants
- (3) To review the present status of progress of committed power plants, power plants under constructions and planned power plants
- (4) To review the present status of power exchange in regional countries
- (5) To review the least cost power development plan by taking into account 1) the power demand forecast, and 2) the present status and progress of existing, committed and planned power plants, and 3) the practical power balance between the power demand and supply
- (6) To justify the necessity of the Sondu / Miriu APP by considering reviewed the least cost development plants before field works in Kenya sector survey.

Firm Name:	Name: GLOBAL SYNERGY LINK LIMITED	
Assignment Name: Management Diagnostic Study		Country/Location: Uganda / Kampala
Name of Client: Uganda Electricity Transmission Company Ltd (UETCL)		Total No of staff-months of the assignment for staff provided by your firm: 14 man-weeks
Address: Amber House Plot No 29/33 Kampala Road P.O. Box 7625 Kampala - Uganda Fax + (256) 41 341 789 Email: trance@uetcl.com Nakasero Kampala		Approx. value of the services provided by your firm under the contract (in current USD): USD 25,000
Start date (month/year): March 2004 Completion date (month/year): Dec 2004		No of professional staff-months provided by associated Consultants: 9-months
Name of associated Consultants, if any: Main Consultant Norplan A.S, Norway		Key personnel provided by your firm (positions): Power Sector Expert
Name of senior professional staff of your firm involved and functions performed (indicate most		

significant profiles such as Project Director/Coordinator, Team Leader):
L.K Kariuki - Electricity Transmission Systems Expert



Narrative description of Project:

Assessment of the performance of UETCL and to recommend appropriate actions and investments required to ensure that the utility is able to adequately perform its functions in the reformed power sector. The scope of work involves the following major tasks:

- 1. Assessment of UETCL'S management capability and system efficiency
- 2. Assessment of the following factors and how they impact on the operations of the utility:
 - · Corporate plan
 - Financial situation
 - Technical Operations
 - Human Resources Management, and
 - Regulatory environment

Based on the findings of the assessments prepare a plan for the improvement of UETCL management capability including implementation schedule, investment program and recommend actions plans

Description of actual services provided by your staff within the assignment:

The tasks carried out in the TECHNICAL AREA included:

- 1. Review objectives and functions
- 2. Review technical challenges in the reformed power sector
- 3. Reviewing of UETCL management capabilities and systems
- 4. Analyzing possible improvement actions
- 5. Developing management improvement plan
- 6. Output: Technical recommendations, procedures and benchmark for achieving acceptable standards for operations and sustainability. In particular as it relates to:
 - Quality and performance
 - ✓ Interruption Rate
 - ✓ Operation Complaints
 - √ Accommodation Demand
 - √ Execution of Capital Projects
 - √ Technical Losses
 - Productivity Indicators
 - ✓ Operation and maintenance Expenses
 - ✓ System Loss Levels

Firm Name:	GLOBAL SYNERGY LINK LIMITED	
Assignment Name: JICA BASELINE STUDY FOR GEOTHEMRAL ENERGY DEVELOPMENT IN EASTRN AFRICAN REGION		Country / Location: Kenya / Country wide Uganda / Country wide Tanzania / Country wide Ethiopia / Country wide Djibouti / Country wide
Name of Client: WEST JAPAN ENG	INEERING CONSULTANTS, INC.	Total No of staff-months of the assignment for staff provided by your firm: Seven Staff Months



Address: General Manager, Tokyo Office,	Approx. value of the services provided by your firm under the contract (in current Japanese Yen):
West Japan Engineering Consultants, Inc.	YEN 6,482,000
Take Bldg. 5 th Floor, 11-6, 2-Chome, Uchikanda	
Chiyoda-ku, Tokyo 101-0047, Japan	
Tel: +81-3-3252-7341; Fax: +81-3-3252-7340	
e-mail: m-kaneko@wjec.co.jp	
Start date (month/year): March 15, 2010	No of professional staff-months provided by associated Consultants:
Completion date (month/year): October 15,2010	Seven Months
Name of associated Consultants, if any: Main Consultant: WESTJEC	Key personnel provided by your firm (positions): Power Sector Expert
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L.K Kariuki - Power Expert

Narrative description of Project:

- (1) To collect relevant information of the Power Sector in each country.
 - Electric power sector system, the current situation of power demand and supply,
 - Power demand forecast and a long-term electric power plant development plan,
 - Current situation of IPP participation,
- (2) To consider the role of geothermal energy in electric power development plan in each country. (To answer such questions as why geothermal power is necessary in each power system and/or how much capacity of geothermal power is necessary etc.)
- (3) To compile the above-mentioned report (Interim Report and Final Report)



- (1) 1st Mission (21 days in-between late March and middle April)
- a. Objectives

To visit relevant institutions in each country and to exchange views on the possibility of geothermal development in each country as well as to obtain necessary data from them in electric power sector as much as possible.

- b. Destination Kenya, Ethiopia, Djibouti, Tanzania, and Uganda
- (2) Discussions in Japan (8 days from August 28th to September 4th tentatively)
- a. Objectives

To have discussions with West JEC study team to compile the final report

b. Destination Fukuoka, Japan (West JEC headquarter)

GSL to undertake logistic services for West JEC as it carry out the Study, which covers Kenya, Ethiopia, Djibouti, Uganda and Tanzania.

Firm Name:	GLOBAL SYNERGY LINK LIMITED	
Assignment Name: UPDATE OF GEOTHERMAL DEVELOPMENT COMPANY BUSINESS AND STRATEGIC PLAN		Country / Location: Kenya / Country wide
Name of Client: GeothermEx, INC.		Total No of staff-months of the assignment for staff provided by your firm: Six Staff Months
Address: 3260 BLUME DRIVE, SUITE 220 RICHMOND, CALIFORNIA 94806, USA PHONE: (510) 527 - 9876 FAX: (510) 527 - 8164 www.geothermex.com		Approx. value of the services provided by your firm under the contract Euro 14,199.00
Start date (month/year): February, 2012 Completion date (month/year): December 31, 2012 Ongoing		No of professional staff-months provided by associated Consultants: 4 weeks
Name of associated Consultants, if any: Main Consultant: GeothermEx		Key personnel provided by your firm (positions): Power Sector Expert Legal expert

Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):

L.K Kariuki - Power Sector Expert Geoffrey Imende - Legal Expert



Narrative description of Project:

Preparation of business and Strategic Plan

GSL Activities

- Kenya and regional power sectors analysis
- Power Sector Legal and regulatory environment
- Study inputs by local counterpart