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**Electrification Sustainability Program
In South Sudan
(ESP)
Cooperative Agreement No. AID-668-A-12-00002**

Quarterly Report

January 1 – March 31, 2013

**NRECA International Ltd.
April 30, 2014**

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Contents

List of Terms and Acronyms	ii
Introduction.....	3
Background.....	3
ESP Objectives.....	3
Project Team.....	4
South Sudan Government Activity.....	4
Political Turmoil and Departure from South Sudan.....	4
Security Issues	5
Program Activity Summary	5
Current and Short Term Strategic Management of ESP and Completion of Program Tasks	5
Task I – Technical and Financial Sustainability Support for Kapoeta, Maridi and Yei Electric Utilities	6
Customer Information System (CIS), Accounting and Computer Hardware / Software.....	6
Update of Computer Hardware at KAPECO and MECO.....	6
Update of CIS Software.....	6
Commercial Management Training Program	7
Quarterly Utility Operations Report.....	8
Utility Diagnostic Evaluation of KAPECO	9
Task II – Yei, Maridi Hybrid Micro-Hydro Capacity	9
Task III - Utility Evaluation and Development Support for Yambio	10
Other ESP Support Activities	10
Reimbursement Payments to Utilities	10
USAID Activity	10
Customer Meetings in Maridi	10
Project Employee Travel In / Out of Country.....	11
Key Issues and Challenges / Opportunities.....	11
Major Events – Upcoming Activity	11
Pictures of Destruction Caused by Demarcation Order in Kapoeta	11
Financial	12
Process Indicators.....	15
Output Indicators.....	17
Outcome Indicators	19
Impact Indicators.....	21

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

List of Terms and Acronyms

CIS	Customer Information System
COP	Chief of Party
DCOP	Deputy Chief of Party
ECMP-3	Electronic Module Component Panel-Model 3
ESP	Electrification Sustainability Program
RSS	Republic of Southern Sudan
KAPECO	Kapoeta Electric Company
LBG	The Louis Berger Group
MECO	Maridi Electric Company
MSF	Medecins Sans Frontieres
NGOs	Non-Government Organizations
NRECA	National Rural Electric Cooperative Association
SSREP	South Sudan Rural Electrification Project
SISP	Sudan Infrastructure Service Project
SUWASA	Sustainable Water and Sanitation in Africa
USAID	United States Agency for International Development
WES	Western Equatorial State
WFP	World Food Program
YECCO	Yei Electric Cooperative
UNHCR	United Nations High Commission for Refugees

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Introduction

Background

Since 2005, the U.S. Government has provided ongoing infrastructure and institutional support to strengthen power sector planning throughout South Sudan, and to initiate or improve service delivery in Kapoeta, Maridi, Yei and Juba. Under the South Sudan Rural Electrification Project, USAID financed design and construction of a small generation-distribution utility in Yei that has evolved into a self-sustaining municipal electric cooperative serving approximately 1,200 consumers. Thereafter, USAID financed construction of two additional market town electrification projects in Kapoeta and Maridi; these two systems began commercial operations in April, 2011 and serve approximately 500 customers – households, commercial enterprises, public institutions and NGOs – in each community.

The challenges these small utilities face are similar but not identical. In the case of Yei, the utility commercializes enough electrical energy to cover all operating expenses and has managed to finance corrective and preventative maintenance costs for the past four years. However, the staff turnover has been high, and management still requires support to achieve long-term institutional and financial sustainability.

The two nascent utilities in Kapoeta and Maridi have not yet connected enough consumers nor do they sell enough electricity to achieve financial sustainability. The cost of generated energy is quite high, house wiring costs are still high, and there simply has not been enough time to connect enough consumers to reach a break-even point between operating costs and revenues. In both cases, there is also a need for ongoing training and mentoring for the boards of directors, the management, and employees who work at both utilities.

The Electrification Sustainability Program (ESP) is designed to address the needs of all three utilities, as well as to undertake hydroelectric studies in Yei and Maridi (should additional funding become available), and to support Western Equatoria State (WES) and the Republic of South Sudan (RSS) to initiate planning for utility formation in Yambio.

This report covers the period January 1 to March 31, 2013. It summarizes ESP activities, challenges and accomplishments during the reporting period and identifies action items that will need to be addressed by NRECA International as well as issues that may require USAID attention.

ESP Objectives

The ESP is designed to support the process of achieving long-term sustainability for the electric generation-distribution utilities in Kapoeta (KAPECO), Maridi (MECO) and Yei (YECO) and to initiate utility formation in Yambio.

The program assistance will result in generation-distribution utilities that have well-established business systems and staff that are trained to manage the business systems without external oversight; to have a technical team with the capacity to manage the day-to-day operating challenges of small, islanded, vertically integrated electric utilities, including power plant management and the operation and maintenance of the distribution system.

A second project objective is to complete pre-feasibility studies to explore the potential for development of micro- and small-hydro generation near Maridi and Yei in order to reduce the cost of power supply to MECO and YECO. In the event that USAID decides to pursue these investments, the ESP program includes an option to review the feasibility of these investments and oversee the completion of final design of micro/small hydroelectric projects as proposed.

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

The third project objective is focusing on completion of an institutional and technical evaluation of the incomplete Yambio electric generation-distribution system. The ESP engaged in a comprehensive evaluation of the engineering and construction requirements to energize the generation-distribution system, and evaluated management options to achieve sustainable operation of the utility in collaboration with WES leadership and technical-administrative staff.

Project Team

The NRECA project team assigned to support ESP this quarter includes the following team members, by position:

Person	ESP Duties	Tenure
Robert O. Ellinger	Chief of Party	Part Time
Swalleh Rajab	Senior Commercial Utility Advisor	Full Time
Mule Moses	Project Accountant – Administrative Assistant	Full Time
James VanCoevering	Electrical Engineer	Part Time
Janet Kauffman	Financial Specialist	Part Time
Md. Nazrul Islam	Customer Information System (CIS) Specialist	Contracted-Part Time
Eldon Stanley	Power Generation Specialist	Contracted-Part Time
Sam West	Utility Finance Specialist	Contracted Part Time

Additional support is being provided by the NRECA International Foundation organizing volunteer services of U.S. line workers from NRECA member cooperatives in the United States. NRECA International Foundation contributions are being managed by the Foundation Program Manager and Foundation Program Assistant.

South Sudan Government Activity

Political Turmoil and Departure from South Sudan

Due to the deteriorating security situation in South Sudan ESP is operating on a limited basis. While a ceasefire has been negotiated fighting continues in areas throughout the country. NRECA is working with USAID to examine how best to implement the various tasks included in ESP.

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Security Issues

During the January through March time period the Equatoria States where the three utilities operate remained relatively calm with no serious threats to the utility infrastructure or staff. However, while peace talks continue NRECA has received reports of fighting between the rebels and government forces in areas throughout the country, mostly to the north near the oil fields and border with Sudan. During this past quarter the following information describing security concerns was received from NRECA employees and utility staffs.

- There was a tribal conflict (raid) reported in Eastern Equatoria in Lauro payam where fourteen (14) people were killed; however, the movement along the Torit – Kapoeta road continued
- Ten (10) people were reported killed in heavy fighting which broke out in the town of Malakal, the capital city of Upper Nile State. According to reports all communication networks were cutoff and there was concern that this clash may signal a resumption of fighting between the government troops and rebels. While forces loyal to the government regained control such outbreaks are causing the residents to question the attainment of a long-lasting peace
- Clashes erupted in Juba among the armed forces with soldiers reportedly killed and injured. Reports stated the dispute was over a delay in the payment of salaries. While order was restored an underlying tension remains throughout the city.

The airlines serving the smaller more rural airports in the country have returned to operations including UN-World Food Program (WFP), Mission Aviation Fellowship (MAF) and Eagle Air. Major roads are open to travel - ESP staff travelled the Juba to Maridi and Maridi to Yei roads with no complications.

Bruce Pike (a businessman in Kapoeta) reported that within Kapoeta all is calm, though the population is less following the departure of many residents (South Sudanese & International) and business activities have been reduced. The signs of outmigration are seen at the Nadapal Border post where World Food Program (WFP), United Nations High Commission for Refugees (UNHCR) and Medecins Sans Frontieres (MSF) have erected tents for the displaced persons who will take the daily bus to Kakuma a refugee camp in Kenya.

The treason trail of several former government officials began in March and will surely feed the uncertainty throughout the country

Program Activity Summary

Current and Short Term Strategic Management of ESP and Completion of Program Tasks

NRECA will continue to support the operations of the utilities serving Kapoeta (KAPECO), Maridi (MECO) and Yei (YECO) as best as possible under the current conditions. Bob Ellinger (Chief of Party) is providing overall project management and monitoring activities on a part-time basis from the United States. Bob remains the project contact for USAID. He provides direction to the two NRECA in-country employees and maintains verbal and electronic communications with the board and management at all three utilities.

Swalleh Rajab the project's Senior Commercial Specialist returned to South Sudan in late February. He is based in Kapoeta and traveling between the three utilities. Swalleh has extensive utility operations experience and is providing guidance and mentoring to the board, management, accounting, financial and operations staffs of the three utilities.

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Mule Moses the Program Accountant / Administrative Assistant has remained in country throughout the political uprising. He is based in Maridi and traveling between the three utilities providing financial oversight, guidance and mentoring to the accounting, finance and management staffs.

Task I – Technical and Financial Sustainability Support for Kapoeta, Maridi and Yei Electric Utilities

Customer Information System (CIS), Accounting and Computer Hardware / Software

During the past quarter the ESP team worked with the financial staffs at KAPECO and MECO in the following areas of operation.

- Guided the utility staffs on the completion of financial reporting Form 1s (KAPECO through February and MECO through March). This work included correcting errors in the coding of expenses, correcting entries for monthly accruals and correcting journal entries.
- Provided guidance on the review on all CIS journal entries to ensure they are being posted correctly
- Provided guidance on the full implementation of accrual accounting with provisions for generator overhaul and uncollectable accounts.
- Helped staff complete year-end activities including cash count, updating the fuel inventory spread sheet and updating the after-service benefits spreadsheet for the current employees.

Update of Computer Hardware at KAPECO and MECO

The quarter began with Swalleh working with MECO staff to correct a computer hardware / software problem. The correction of the problem required the server computer being sent to Outsourcing Solutions an IT firm in Kampala for repair. As part of the repair Swalleh coordinated the transport of the server computer to Kampala, Uganda (via Eagle Air from Yei) where it was examined by him and the IT specialist. Swalleh worked alongside our IT Specialist to recover data from the server computer along with reviewing the data for errors / corruption. This repair was one of many completed by both KAPECO and MECO during the past year which confirmed the need to update the computer hardware at both utilities.

As part of ESP NRECA coordinated this upgrade working with Outsourcing Solutions to review the computer operations at each facility and develop a solution to improve business operations. The upgrade includes the installation of a new server network providing multiple workstation access to the CIS and the networking of the copier / printer. The upgrade also included a review of the current CIS in preparation for a software upgrade scheduled for later this year. Once the upgrade was completed and fully tested NRECA and IT professional presented training on Microsoft Office applications such as MS Word, Excel, PowerPoint and SharePoint as well as file management, virus control and basic hardware / software troubleshooting as part of the upgrade. The computer hardware upgrade began the last week in March (in Maridi) and will be completed for both utilities in April.

Update of CIS Software

The NRECA staff in South Sudan worked with NRECA financial specialist Sam West and programming specialist Nazrul Islam to prepare for an upgrade of the CIS software. We had hoped to install the software upgrade in April but have delayed the installation due to the unknown security situation throughout the country.

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Technical Assistance and Mentoring

The ESP team continues to provide daily oversight, guidance and mentoring on a variety activities, processes and procedures at all three utilities. As part of the mentoring process we provide ongoing oversight, guidance and review of daily practice and procedure. The mentoring process builds practical, day to day business skills based upon the foundation developed through the formal training programs being held. A few of the activities that took place in this reporting period included;

- Worked with MECO staff in a number of areas including: helping to calculate the social security payment due former guard Andrew Benjamin who is no longer employed due to a non-work related accident; completing year-end closing activities; and, providing guidance during billing. We also worked with staff to organize the physical count and re-arrangement of all materials in the warehouse. As part of the inventory process the warehouse manager is entering all materials into a spreadsheet which will then be submitted to the accounting section to record into the CIS. This work is a continuation of the warehouse and material management training recently completed at each utility.
- Worked with the staff at KAPECO providing assistance in all areas of financial operations to support the utility during the absence of the Assistant Accountant who is on maternity leave.
- Worked with the staff at YECO to encourage the accounting staff to make better use of the CIS by posting petty cash expenses daily and completing month end activities including the proper coding of all data entry.
- Coordinated the purchase of drill bits for the new Bosch drill purchased by YECO. The drill (and bits) will be used to install pole top hardware.
- Provided assistance to the managing directors at KAPECO and MECO in the preparation of the 2014 budgets for presentation to the board of directors. The completion of these first operations budgets represents a milestone for each utility.
- Worked with the employee charged with environmental oversight at MECO in the review of the environmental checklist and developed a plan to complete the full evaluation.
- Coordinated the renewal of the vehicle and personal accident insurance for KAPECO and MECO with UAP Insurance Company. This work included the renewal of the insurance coverage for NRECA project vehicles.
- Worked with the KAPECO power plant operator to evaluate an oil leak in one of the generators. An evaluation of the leak, which included the taking of pictures, was provided to the NRECA generator specialist in an effort to gauge the magnitude of the problem and develop a solution.
- Met with law firms in Juba to discuss services they can provide to renew South Sudan business registration for KAPECO, MECO and NRECA.
- Worked with the management and power plant operations staff at YECO staff to access generator problems being experienced by the utility. Included with this evaluation were discussions with Ezentus the local Caterpillar Generator specialists in South Sudan. Caterpillar Generator experts in the US were contacted to develop a repair plan.

Commercial Management Training Program

Janet Kauffman led a team effort to complete a commercial management and operations training program. Individual modules were developed to cover the following topics; revenue cycle management, financial and accounting goals, the importance of a clean and accurate data base, customer service, meter readings, bill preparation & delivery, collections, disconnects and & reconnections, accounts receivable and write-offs. The team is completing the course materials including instructor outlines, flow charts and PowerPoint presentations. We plan to present this program to the staffs of each utility at their home site.

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Quarterly Utility Operations Report

The utility operations report provides quarterly performance monitoring and measuring indicators established to contribute to the understanding of good business practices.

Key performance indicators (December 2013 and March 2014)

Key Performance Indicators	KAPECO		MECO		YECO**	
	December 2013	March	December 2013	March	December 2013	March
Services in Place	494	538	581	583	1,270	1,288
New Connections	110	44	101	2	170	18
Percentage Increase in Connections (Year)		8.9%		.004%		1.42%
System Peak (kW) Y-T-D	157	188	196	199	466	469
Generator Efficiency (kWh/Liter)	2.80	2.90	2.84	3.09	3.31	3.68
Percentage Increase/Decrease in Generator Efficiency-Quarter		3.57%		8.8%		11.2%
Average Run Hours per Day***	13	10	16	14	17	16
Outages (Year)	4	1	7	1	10	4
Outage Hours per Consumer Year to Date	6.569	0.014	.462	1.15	9.99	2.679

** Numbers for YECO are estimates from data submitted.

*** The average run hours per day were sharply reduced following the beginning of hostilities in mid-December. The utilities are exploring the resumption of full operations.

Key issues and activities at the utilities:

KAPECO

- Generators 01 & 02 were serviced with engine oil along with oil and fuel filters changed
- Generator radiators and air filters cleaned
- Shortage of materials (poles & wire) limiting utility's ability to connect new consumers
- Short line extension construction taking place
- Working with county on demarcation of road and property lines
- Hired two new linemen
- Recruiting replacement for recently resigned commercial manager
- Land Demarcations – The Kapoeta town authority has started to establish boundaries for roads and property within the town. More than 100 customers have been affected. While demarcation is providing an opportunity for new construction and the extension of electric lines there are

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

many customers whose business and/or house have been destroyed. Collection of bills from the displaced customers is a big challenge. (We have included two pictures at the end of this report.)

- Completed physical count of inventory and reorganization of the warehouse as part of the tasks associated with the inventory and material management training program
 - Materials will be organized and labeled for posting to CIS
- Preparing to form a procurement committee

MECO

- Generators 01 & 02 were serviced changing engine oil along with oil and fuel filters
- Generator radiators and air filters cleaned
- Right-of-way inspection and tree trimming underway
- No new connections being made because of lack of connectors
- Reviewing line personnel staffing in wake of resignation of two linemen (for personal reasons)

YECCO

- Diesel engine for generator #1 has failed – working with EZENTUS and NRECA to repair
- Following overhaul of generator #2 oil began leaking into coolant fluid working with Ezentus and NRECA to repair
- General cleaning of power house and generator compound including slashing of grass
- Extending primary and secondary lines to serve newly developing areas

Operation Challenges

- While there is a slow return of customers (residential and commercial) the three utilities are still recovering less revenue that prior to the political unrest. Unpaid bills and the loss of kWh sales will continue to lead to less revenue collected causing financial instability. We expect this situation to take several months to return to relative normalcy once peace is restored to the country.
- The retail price of fuel (diesel and petrol) is increasing and fuel supply is limited. Use of vehicles is restricted to conserve fuel limiting work outside of the utility compounds

Utility Diagnostic Evaluation of KAPECO

Swalleh and Mule completed the utility diagnostics at KAPECO. The diagnostic evaluation explored the enterprise functionality at the utility and is conducted by direct interviews with board members, management and staff along with field observations made throughout the utility's compound and service area. This annual assessment provides objective information regarding improvements made to business operations and financial standing of the utility as compared to the baseline performance established last year during program implementation. The evaluation will help determine the specific capacity building needs unique to KAPECO.

Task II – Yei, Maridi Hybrid Micro-Hydro Capacity

A second project objective is to complete pre-feasibility studies to explore the potential for development of micro- and small-hydro generation near Maridi and Yei in order to reduce the cost of power generation to MECO and YECCO. At the current time this task has yet to be funded by USAID; however, NRECA has proceeded to move forward and complete a study evaluating the installation of diesel / solar hybrid generation systems at KAPECO and MECO. The installation of the diesel / solar hybrid systems and the commitment to explore the mini-hydro options will require additional funding by USAID and NRECA

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

has submitted a proposal for consideration. The lack of funding did not allow us to make any progress on this activity.

Task III - Utility Evaluation and Development Support for Yambio

The third project objective is focusing on completion of an institutional and technical evaluation of the incomplete Yambio electric generation-distribution system. In FY 2013 the ESP team engaged in a comprehensive evaluation of the engineering and construction requirements to energize the generation-distribution system, and evaluate management options to achieve sustainable operation of the utility in collaboration with Western Equatoria State (WES) leadership and administrative-technical staff. The estimated cost to rehabilitate the system is \$1.6 million while the institutional support program, which would be a multi-year effort, is estimated to cost from \$3.85 million for three (3) years while the five (5) year total would be \$5.78 million. NRECA has submitted a proposal to USAID for consideration.

During the past quarter NRECA traveled to Yambio on several occasions to make a courtesy call on the State Minister for Physical Infrastructure and his staff - the Director General and the Director of Electricity. WES officials provided an update on the current status of security in Yambio (reported very secure) and reported that there had been very few negative impacts throughout the State from the current political uprising. During these visits the electric generation and distribution system was inspected and found to have suffered no damage and all is in good order.

Other ESP Support Activities

Reimbursement Payments to Utilities

There were no payments made for the reimbursement of non-fuel operating expenses.

Utility	January - March	Quarter Total	FY-T-D
KAPECO	\$ 0	\$ 0	\$ 35,795
MECO	\$ 0	\$ 0	\$ 37,200
		\$ 0	\$ 72,995

USAID Activity

Activity and Program Personnel Reports Provided During Time of Political Unrest

NRECA has maintained regular contact with USAID following all directives regarding project administration during this time of political unrest. NRECA provides regular updates on program activities and location / movement of program personnel. NRECA re-evaluated the current work plan and proposed activities in light of the current political situation. As requested revised and extended work plan proposals were submitted along with an updated evacuation plan.

Customer Meetings in Maridi

During the month of March three customer meetings were held throughout the service area of MECO. Discussion topics focused on safety awareness and safety measures including the importance of reporting any possible safety hazards such as tree branches growing near the power lines to MECO. Other topics of discussion included productive uses of electricity and the need for the prompt payment of electric bills.



Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Project Employee Travel In / Out of Country

Swalleh Rajab, the ESP Senior Commercial Specialist returned to South Sudan February 23rd.

Key Issues and Challenges / Opportunities

Current Political Climate and Return to South Sudan – NRECA is following the news reports from South Sudan and will maintain regular contact with USAID in an effort to plan a return to the country as soon as possible.

Loss of Revenue – As reported earlier, the slow return of customers (residential and commercial) is causing all three utilities suffer financially. KAPECO, MECO and YECO are still recovering less revenue than they did prior to the political unrest. Unpaid bills and the loss of kWh sales will continue to lead to less revenue collected causing financial instability. NRECA expects this situation to take several months (if not years) to return to relative normalcy following the restoration of peace to the country.

High Cost and Shortage of Fuel – The retail price of fuel (diesel and petrol) is increasing and fuel supply is limited. Use of vehicles is restricted to conserve fuel limiting work outside of the utility compounds.

Major Events – Upcoming Activity

- Continuation of the utility day to day mentoring and CIS / accounting training at the utilities serving Kapoeta, Maridi and Yei
- Maintaining regular contact with all three utilities while providing USAID with regular updates on utility operations and the status of security in the service areas
- Working with the IT professional to complete the computer hardware upgrade and training in Kapoeta
- Develop plans to address generator problems at KAPECO and YECO including the forming of a team to return to South Sudan to troubleshoot the units and make necessary repairs
- Following the signing of a ceasefire we are looking forward to a quick return to South Sudan

Pictures of Destruction Caused by Demarcation Order in Kapoeta



Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Financial

Financial Status (as of end of reporting period - 12-31-2013)	
a. Project Start Date:	8/8/2012
b. Project Completion Date:	8/7/2015
c. Estimated Life of Activity (months):	36
d. Expired Life of Activity (months):	20
e. Total Estimated Cost:	3,870,000
f. Unilateral Obligation	3,594,000
g. Bilateral Sub-obligation	0
h. Total Obligation:	3,594,000
i. Mortgage (e-h):	276,000
j. Expenditures:	2,260,598
k. Pipeline as of end of reporting period (h-j):	1,333,402
l. Historical Monthly Burn Rate (j/d):	113,030
m. Average Monthly Burn Rate (Last Quarter):	90,334
n. Length of Pipeline in Months (k/m):	14.76
o. Cumulative Expenditures as % of Obligations:	62.90%

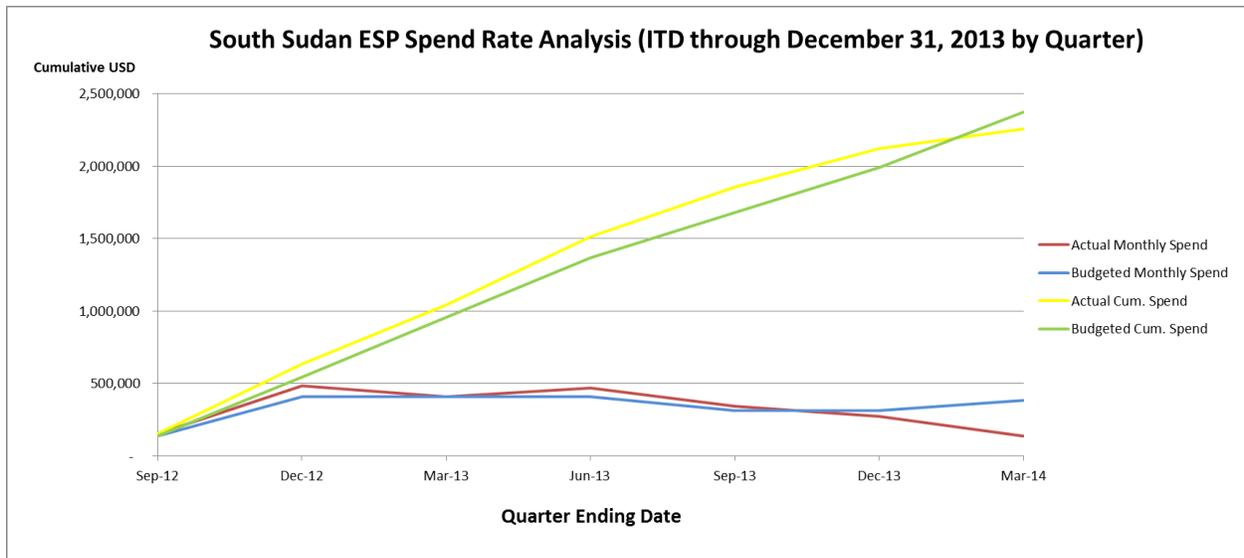
Spend Rate Compared to Budget (FY 2014)		
Month	Actual	Budget
October	131,823	104,315
November	98,123	104,315
December	41,055	104,315
January	43,566	127,725
February	43,026	127,725
March	48,621	127,725
Total	406,214	696,120

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Spend Rate Analysis and Graph

Quarter End	Actual Expenses	Budgeted Expenses	Cumulative Actual	Cumulative Budget
Sept. 2012	\$150,216	\$136,641	\$150,216	\$136,641
Dec. 2012	\$482,600	\$409,922	\$632,816	\$546,563
Mar. 2013	\$411,303	\$409,941	\$1,044,119	\$956,504
June 2013	\$469,120	\$409,922	\$1,513,239	\$1,366,426
Sept. 2013	\$341,145	\$312,946	\$1,854,384	\$1,649,372
Dec. 2013	\$271,001	\$312,946	\$2,125,385	\$1,992,318
March 2103	\$135,214	\$383,174	\$2,260,598	\$2,375,492



Electrification Sustainability Program In South Sudan Quarterly Report, January - March 2014

Breakdown in Project Costs by Specific Element		
	Quarter	Project TD
Personnel	22,472	491,841
Fringe Benefits	15,682	249,994
Travel	12,065	162,181
Equipment	3,022	84,865
Supplies	6,296	12,951
Contractual	25,105	272,491
Other	11,795	185,522
Non-Fuel operating Costs	240	279,933
Indirect Charges	32,537	514,821
Totals	135,214	2,260,598

The Actual Spend and Cumulative Actual amounts spend This number is 75,884 less than reported at 12/31/2013 due to a true up for final 2013 NICRA leave, fringe and OH rates.

The current political turmoil within South Sudan and the resulting changes made in project management and program activities is clearly exhibited in the numbers for the most recent quarter. Project expenses have fallen bringing most all cost centers to a level less than budgeted. While we expected the four major cost centers that were over budget to see a reduction in spending in FY 2014 the reductions have been magnified by the cutback in project activities.

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Process Indicators

The table below shows the process indicators that will be used to track progress in the program as compared to initial benchmarks for all activities and tasks. The process indicators for the ESP program are drawn from the program work plan, in which completion milestones have been set for each Task within the three Activities of the program. More details on each Activity and Task are available in the ESP program work plan.

Work plan No.	Activities and Tasks	Milestones	Completion (Planned)	Completion (Actual)
1.0	Yei, Maridi, Kapoeta Technical & Financial Sustainability Support			
1.1	Review of year #1 benchmarks and progress	Evaluation of the utilities' financial and operation strength-weakness	20-Oct-2013	8-March-2014
1.2	Board training courses	Board members complete training courses	28-Feb-2014	Delayed
1.3	Board training courses	Board members participate in peer-to-peer sessions	31-July-2014	
1.4	Management Training – Budgeting	Utility managers and key staff complete training courses	30-Nov-2013	30-Nov-2013
1.5	Management Training – Finance	Utility managers and key staff complete training courses	31-Mar-2014	Delayed
1.6	Management Training – Human Resources	Utility managers participate in peer-to-peer sessions	31-May-2014	
1.7	Accounting and Financial Control Training	Utility financial and commercial staffs complete training courses	30-June-2014	
1.8	Commercial Management – CIS & Data Mgmt.	Utility financial and commercial staffs complete training courses	31-May-2014	
1.9	Commercial Management – Meter Reading	Utility financial and commercial staffs complete training courses	30-June-2014	
1.10	Commercial Management – Revenue Cycle	Utility financial and commercial staffs complete training courses	31-July-2014	
1.11	Line worker safety training	Line workers complete training courses.	31-July-2014	
1.12	Power Generation Training	Power plant O&M training for plant operators and key staff	30-Sept-2014	
2.0	Yei, Maridi Hybrid Micro-Hydro Capacity			
2.1	Hydrology data and community coordination	Review completed.	TBD	
2.2	Civil engineering design	Design work completed	TBD	
2.3	Generation and substation design	Design work completed	TBD	
2.4	Power line interconnection design	Design work completed	TBD	
2.5	Cost estimates	Request for Quotes (RFQ) completed	TBD	
2.6	Financial model	Modelling completed	TBD	
2.7	Report delivered	Design report delivered.	TBD	
2.8	Renewable Energy Evaluation	Exploration of the introduction of power generation alternatives	30-Oct-2013	30-Oct-2013
3.0	WES & Yambio Electric Utility Assistance			
3.1	Diagnostic fieldwork, initial recommendations	Fieldwork completed, report containing recommendations delivered.	30-Oct-2013	30-Oct-2013
3.1	Planning workshop with WES Government	WES participates in workshop.	30-Nov-2013	Delayed
3.2	Implementation of Follow-up Training Activity	Follow-on training activity implemented (TBD)	28-Feb-2014	Delayed

Electrification Sustainability Program In South Sudan Quarterly Report, January - March 2014

Work plan No.	Activities and Tasks	Milestones	Completion (Planned)	Completion (Actual)
4.0	Program Management, Monitoring, Evaluation and Reporting			
4.1	Work Plan and MEP submitted	Annual work plan and MEP submitted to USAID	31-Aug-2013	31-Aug-2013
4.3	Work Plan and MEP revised	Revised work plan and MEP delivered.	24-Sept-2013	05-Oct-2013
4.4	Quarterly Progress Reports	Quarterly progress reports delivered within 30 days of end of quarter.	Jan, April and July 2014	31-Jan-2014, 30-April-2014
4.5	Project Final Report	Final project progress report delivered within 30 days of end of FY	Oct-30-2014	
4.6	Quarterly Financial Reports	Quarterly financial reports delivered within 45 days of end of quarter.	Feb, May and August 2014	28-Feb-2014
4.7	Year 3 - Work plan and MEP submitted	Year 3 – Work Plan and MEP submitted to USAID	31-Aug-2014	

Electrification Sustainability Program In South Sudan Quarterly Report, January - March 2014

Output Indicators

Indicator No.	Indicator Name	Indicator Definition, Description, Data Source, and Discussion	Baseline (2012)	2013 Actuals	FY 2014 YTD		Program Actuals
					T	A	
Output 1.0	Board training.	<p>Definition: Number of people receiving USG supported training in roles and responsibilities of electric utility board members.</p> <p style="text-align: right;">KAPECO</p> <p style="text-align: right;">MECO</p> <p style="text-align: right;">YECCO</p> <p>Description: Total number of participants in electric utility board training sessions, disaggregated by gender and utility.</p> <p>Data Source: NRECA project reports.</p> <p>Discussion: This is an ESP indicator that closely resembles the USAID standard indicator for management training (see Output 2.0 indicator below). While this indicator is disaggregated by gender, the target is not disaggregated because the program has no influence over the gender of board members selected or elected in the three communities.</p>	0	1-0	M-F	M-F	M-F
					6-1		1-0
					6-1		6-1
					6-1		<u>6-0</u>
							13-1
Output 2.0	Management training.	<p>Definition: Number of people receiving USG supported training in energy related business management systems.</p> <p style="text-align: right;">KAPECO</p> <p style="text-align: right;">MECO</p> <p style="text-align: right;">YECCO</p> <p>Description: Total number of participants in utility management basic training, and administrative training, disaggregated by gender.</p> <p>Data Source: NRECA project reports.</p> <p>Discussion: This is a USAID standard indicator. While this indicator and reporting is disaggregated by gender, the target is not disaggregated because the program has little influence over selection of utility personnel in the three utilities, and therefore should not set a target as to their gender. Note that the management training and the administrative and financial training envisioned in the program have been combined into this one indicator.</p>	0	4-2	M-F	M-F	M-F
					4-2		4-2
					5-0		4-0
					4-2		<u>3-2</u>
							11-4

Electrification Sustainability Program In South Sudan Quarterly Report, January - March 2014

Indicator No.	Indicator Name	Indicator Definition, Description, Data Source, and Discussion	Baseline (2012)	2013 Actuals	FY 2014 YTD T - A		Program Actuals
Output 3.0	Electric lineworker training.	<p>Definition: Number of people receiving USG supported training in electric line and power plant generation work.</p> <p style="text-align: right;">KAPECO MECO YECCO</p> <p>Description: Total number of participants in lineworker and power plant generation training, disaggregated by gender.</p> <p>Data Source: NRECA project reports.</p> <p>Discussion: This is an ESP indicator that closely resembles the USAID standard indicator for management training (see Output 2.0 indicator above). While this indicator and reporting is disaggregated by gender, the target is not disaggregated because the program has little influence over selection of utility personnel in the three utilities, and therefore should not set a target as to their gender.</p>	0		M-F	M-F	M-F
			0	10-0	10-1		10-0
			0	10-1	10-1		10-1
			0	17-0	14-0		<u>17-0</u>
							37-1

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Outcome Indicators

(Indicators No. 2-5 are based on year end 2012 figures-3 month lag)

Indicator No.	Indicator Name	Indicator Definition, Description, Data Source, and Discussion	Baseline (2012)	2013 Actual	FY 2014 YTD T - A		Program Total
Outcome 1.0	Improved electric service.	Definition: Number of beneficiaries receiving improved infrastructure services due to USG assistance.	7,400	1,364	440	704	2,068
		KAPECO	1,350	328	70	224	552
		MECO	1,550	636	90	128	764
		YECO	4,400	400	280	352	752
		Yambio	0				0
		Description: Total number of customers connected to the three primary beneficiary utilities (MECO, KAPECO and YECO), and to a potential new rural utility in Yambio, multiplied by four. This multiplier is used, rather than a higher number of average household size in South Sudan utilized in other analyses, because some of the electric service customers will be small commercial establishments rather than households. No attempt is made to count beneficiaries such as users of public lighting, beneficiaries of public institutions and NGOs, etc. The indicator therefore will provide a conservative estimate of beneficiaries of improved utility management and operations.					
		Baseline and targets determined following utility diagnostics (Nov-2012)					
		Data Source: NRECA project reports and utility records.					
		Discussion: This is a USAID standard indicator. In the ESP, this indicator is not disaggregated by gender because it will not be directly measured; i.e. the number of people with electric service will not be directly counted in each customer (household, commercial establishment, public institutions, etc.); therefore any gender disaggregation would be an estimate only.					
Indicator No.	Indicator Name	Indicator Definition, Description, Data Source, and Discussion	Baseline (2012)	2013 Actual	FY 2014 YTD T - A		Program Total
Outcome 2.0	Utility cost recovery.	Definition: Cost recovery index-(Indicators No. 2-5 are based on 2013 figures through September)					
		KAPECO	85%	92.7%	95.0%	85.3	92.7%
		MECO	75%	88.1%	90.0%	78.1	78.1%
		YECO (YECO Reports Incomplete)	66%	86.0%	88.0%	---	86.0%
		Description: This standard index will measure the commercial cycle efficacy of each utility (MECO, KAPECO and YECO) as the product of collection rates and losses for each utility. A utility with 95% collection rates and 10% losses would have a cost recovery index of 0.95 * 0.90 or 0.855.					
		Baseline and targets to be set following utility diagnostics (Nov- 2012)					
		Data Source: NRECA project reports and utility records.					
		Discussion: This is not a USAID standard indicator. Disaggregation by utility					

Electrification Sustainability Program In South Sudan

Quarterly Report, January - March 2014

Indicator No.	Indicator Name	Indicator Definition, Description, Data Source, and Discussion	Baseline (2012)	2013 Actual	FY 2014 YTD T - A		Program Total
Outcome 3.0	Utility expenditure management.	<p>Definition: O&M expenses per kWh sold, normalized for fuel costs. (Indicators No. 2-5 are based on 2013 figures through September)</p> <p style="text-align: right;">KAPECO MECO YECO (YECO Reports Incomplete)</p> <p>Description: The ratio of operation and maintenance expenses per period to kilowatt hours sold in the same period. This ratio will be normalized for variation in fuel costs to ensure that the indicator tracks utility management behavior and not variations in the fuel markets.</p> <p>Baseline and targets to be set following utility diagnostics.</p> <p>Data Source: NRECA project reports and utility records.</p> <p>Discussion: This is not a USAID standard indicator. Disaggregation by utility.</p>	2.1 SSP 1.9 SSP 2.5 SSP	1.58 SSP 3.26 SSP 0.33 SSP	1.60 SSP 1.90 SSP 0.60 SSP	1.62 1.83 ---	1.58 SSP 1.83 SSP 0.33 SSP
Outcome 4.0	Utility operating margins.	<p>Definition: Operating margins per kWh generated. (Indicators No. 2-5 are based on 2013 figures through September)</p> <p style="text-align: right;">KAPECO MECO YECO (YECO Reports Incomplete)</p> <p>Description: The operating margins for each of the three utilities (MECO, KAPECO and YECO) will be tracked and reported. It should be noted that this indicator is <u>not</u> a proxy measure of effectiveness of the ESP program, since fuel costs and other variables in the economic context of each service territory will influence this metric, but it will still be a useful data set for USAID in considering the implications of its investments in utility start-up in South Sudan.</p> <p>Baseline and targets to be set following utility diagnostics.</p> <p>Data Source: NRECA project reports and utility records.</p> <p>Discussion: This is not a USAID standard indicator. Disaggregation by utility.</p>	-1.1 SSP -1.3 SSP -1.5 SSP	-0.65 -2.50 -0.09	-0.88 -1.04 -1.2	-0.49 -1.77 ---	-0.65 -1.77 -0.09

Electrification Sustainability Program In South Sudan Quarterly Report, January - March 2014

Indicator No.	Indicator Name	Indicator Definition, Description, Data Source, and Discussion	Baseline (2012)	2013 Actual	FY 2014 YTD T - A		Program Total
Outcome 5.0	Mgmt. Staff Turnover Percentage	<p>Definition: Management Staff Turnover Percentage (Indicators No. 2-5 are based on 2013 figures through September)</p> <p style="text-align: right;">KAPECO MECO YECO</p> <p>Description: A high turnover of key management staff may be an indicator of internal strife and disruption within an organization. While there is little information on utility standards in this area comparisons can be made from project start (possibly a year or two prior) to end dates.</p> <p>Baseline and targets to be set following utility diagnostics. Data Source: NRECA project reports and utility records. Discussion: This is not a USAID standard indicator. Disaggregation by utility.</p>	24%	24%	6%	0%	24%
			0 %	0%	0%	0%	0%
			100%	6%	10%	0%	6%

Impact Indicators

The ESP program will be focused on improving utility management and operations, and therefore will not track high-level impact indicators. However, while there is no direct correlation with project training activities to the indicator, an attempt will be made to measure the number of new businesses or expanded businesses connecting to the distribution grid during the project; possibly as a percentage of businesses receiving electric service from the distribution grid.

Indicator No.	Indicator Name	Indicator Definition, Description, Data Source, and Discussion	Baseline (2012)	2013 Actual	FY 2014 T - A		YTD Program Total
Impact 1.0	Number of new / expanded business connections.	<p>Definition: Number of new or expanded business connections (Impact Indicator is current through Quarterly Report period)</p> <p style="text-align: right;">KAPECO MECO YECO Yambio</p> <p>Description: While there is no direct correlation between the project training and mentoring activities and the number of new businesses or expanding businesses receiving electric service, an attempt will be made to measure the number of new or expanded businesses connecting to the distribution grid during the project.</p> <p>Baseline and targets to be set following utility diagnostics. Data Source: NRECA project reports and utility records. Discussion: This is not a USAID standard indicator. Disaggregation by utility.</p>	# of Business				
			238	66	50	21	87
			237	57	40	19	76
			740	45	30	43	88
			0				0