



**NRECA International Ltd.**

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## Electrification Sustainability Program In South Sudan

### FY 2014 Work Plan

**Cooperative Agreement No. AID-668-A-12-00002**

**NRECA International Ltd.**  
**August 31, 2013**

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*10/29/13* 

# Electrification Sustainability Program In South Sudan (ESP) FY 2014 Work Plan

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## Contents

List of Terms and Acronyms .....	ii
Background .....	1
Program Result.....	1
Technical and Financial Sustainability Support for Kapoeta, Maridi and Yei Electric Utilities.....	2
Benchmark Diagnostics .....	2
Training.....	2
Training Challenges .....	3
Board Training .....	3
Specialized Management and Employee Training.....	3
Technical Assistance and Mentoring .....	7
Yei, Maridi Hybrid Micro-Hydro Capacity .....	8
Utility Evaluation and Development Support for Yambio .....	8
Budget and Resource Allocation.....	9
Program Management Plan Summary .....	11
Work Plan Activity Tables.....	13

# Electrification Sustainability Program In South Sudan (ESP) FY 2014 Work Plan

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## List of Terms and Acronyms

CIS	Customer Information System
COP	Chief of Party
DCOP	Deputy Chief of Party
ESP	Electrification Sustainability Program
RSS	Republic of Southern Sudan
KAPECO	Kapoeta Electric Company
MECO	Maridi Electric Company
NGOs	Non-Government Organizations
NRECA	National Rural Electric Cooperative Association
USAID	United States Agency for International Development
WES	Western Equatorial State
YECO	Yei Electric Cooperative



# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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### 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 operating expenses and has managed to finance corrective and preventative maintenance costs for the past five 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 the administrators and line workers who work in both utilities.

The Electrification Sustainability Program (ESP) has been 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 FY 2014 work plan describes the project outputs and outcomes, roles and responsibilities of key personnel, and the ESP activity planned for the following twelve (12) months through September 30, 2014.

### Program Result

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

The goals of the program assistance provided by the Cooperative Agreement is to foster 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.

# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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USAID is also exploring the potential for development of micro- and small-hydro generation near Maridi and Yei through the pre-feasibility studies in order to reduce the cost of power supply to MECO and YECO. In the event that USAID decides to pursue those 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.

### Technical and Financial Sustainability Support for Kapoeta, Maridi and Yei Electric Utilities

#### Benchmark Diagnostics

NRECA will build on the direct experience with the participating utilities by designing specific training activities for each utility. NRECA completed a diagnostics for all three utilities in FY 2013 and the tailored programs will build off of the utility functionality identified at the program outset and the foundation of knowledge established in year number. This understanding of the current functionality of each utility will allow the team to present objective information to the utilities' boards, management and staff. The diagnostic evaluated the degree of functionality of general management, administrative (accounting, finance and human resources), commercial, and maintenance and operations functions of each utility to identify gaps in performance. The evaluation produced a diagnostic score card and the FY 2014 diagnostic will help define the first year performance of KAPECO, MECO and YECO, and will be used to determine specific capacity building needs of each individual program partner.

#### Training

The ESP training team will continue to employ a number of training modalities to provide formal and hands-on training to electric utility directors, managers, and staff to ensure maximum effectiveness of training programs. The training team will include long-term ESP staff (Chief of Party, Senior Commercial Specialist and Accountant); short-term specialists (Utility Finance Specialist, Engineering Specialist, Line worker Trainer, Board Training Specialist and others); NRECA International Foundation volunteers; and, local training resources. Scheduling formal training courses will be arranged to fit within the utilities' planning cycle per their fiscal year.

For several of the training courses described below, NRECA will determine the potential for local training partners to deliver courses or to partner with NRECA to develop the capacity to deliver courses. (This process will only focus on formal training courses, since there are not yet South Sudanese partners that can undertake the mentoring activities envisioned in the ESP program). In FY 2014 NRECA will build on the relationships made with training partners in Maridi, Yei and Juba initiating general and technical training focused on English comprehension along with technical courses in book keeping and computer operation. Following the course presentation a thorough evaluation will be completed to assess the training institution's capabilities. Following the evaluation NRECA will confer with USAID and other South Sudanese donor agencies to identify programs and resources that may be tapped to contribute to institutionalizing a long-term training program.

We will provide a full report on all training sessions including venue, number of attendees, subject material covered, etc. to USAID in the Quarterly Reports.

# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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### Training Challenges

Kapoeta, Maridi and Yei are not closely located and travel between the towns can be problematic. The distance between the towns and the limited modes of reliable transport pose significant geographic challenges for the technical and financial sustainability support provided through ESP. To address this challenge the NRECA team has established a base of operations in Maridi at the MECO compound where both the Chief of Party (COP) and accountant will be headquartered. A senior commercial specialist will be headquartered in Kapoeta and will be responsible for management oversight and CIS specific training to KAPECO. The COP and Accountant will travel to Kapoeta periodically to provide management, accounting and CIS training. The COP, senior management specialist and accountant will also travel to Yei to provide management, accounting and CIS specific training to the employees of YECO. A concerted effort will be made to hold the board training sessions along with both board and management peer to peer workshops in a location centrally located depending upon facility capabilities, cost and convenience to the trainees. To the extent centralized training activities can be used to allow training of employees from all three utilities, the ESP training team will do so. Linemen training program will be provided by short-term specialists and volunteers traveling to each utility.

### Board Training

The board training completed in year one of ESP focused on core competencies and policy development. The ESP team will build upon this foundation of knowledge designing training programs to accommodate the ongoing training needs of the boards of directors of all three boards. The board training program will consist of two primary elements: formal training sessions to include guided peer to peer workshops and local utility workshops. To improve the skill and capacity of the board of directors at the three utilities the ESP team will offer one formal training course in FY 2014 supplemented with visits to the individual utilities presenting programs on board governance and policy development along with observing, commenting on and critiquing board meetings.

1. The formal training course presented will build upon the programs from FY 2013 and continue to explore all facets of board functionality including the roles of members in the various settings found at the utility; board responsibilities; interaction of boards of directors and utility management; management of board meetings; and, other relevant functions. Included as part of this formal training will be guided peer-to-peer discussions forum designed to facilitate shared experiences and challenges held in a less formal environment to foster open discussion. This course will cover 3-4 days, is scheduled to be held in February 2014 and will impact 21 board members, 7 from each utility.

### Specialized Management and Employee Training

Management and employee training completed in year one of ESP focused on providing basic core knowledge and information to refocus the participant's on the basics of business operations as they entered into their second full year of operations. Utility staff continues to struggle in understanding utility business systems that are employed by utilities around the world. While

# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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turnover at the utilities has declined the need for employees to better understand electric utility operations and the various support mechanisms in place continues to be a top training need. The ESP training will continue to focus on carefully structured programs designed to deepen and broaden management and staff understanding of practices and procedures that will form the foundation of the administrative, commercial and technical functions found in small electric utilities.

When possible the training will be provided in a central location (Juba, Yei) with consideration given to the audience and training material to be covered. To improve the skill and capacity of the management staff the ESP team will offer the following courses in FY 2014.

### Management

The management training completed in year one of ESP focused on management and board relations; management/employee expectations; performance evaluations; introduction to financial evaluation of an electric utility; leadership; and, included a peer to peer exchange designed to enhance problem solving skills. The ESP team will build upon this foundation of knowledge to design training programs to accommodate the ongoing training needs for the management and senior employees of all three utilities.

To improve the skills and capacity of the management and senior staff the ESP will offer the following courses in FY 2014.

1. The examination of the business operations and financial position of an electric utility including revenue and expense management; the need to review financial data and operational statistics; financial and operational ratios that provide information on the operation of the utility along with its fiscal strength and stability; and, the tools available to analyze the utility system. Included in this formal training program will be guided peer-to-peer discussion forums designed to facilitate shared experiences and challenges. This forum for information exchange will be held in a less formal environment designed to enhance peer-to-peer engagement to build a sense of learning through common experiences. This course will cover 3-4 days, is scheduled to be held in March 2014 at a central location and attended by general managers and key senior staff.
2. An introduction to human resource management which will focus on human resource policies and procedures including hiring, firing, employee disciplinary practices; salary evaluations and annual performance reviews. Specific KAPECO, MECO and YECO practices and procedures will be discussed with the senior management participating in this course. This 3 day course will be presented on site to the general managers and key staff of the three utilities in May 2014.
3. An introduction to budgeting will focus on the information needed to develop a budget and how utility board, management and staff monitor the budget to evaluate financial strength and stability. This 3 day course will be presented on site to the general managers and key staff of the three utilities in November 2013.

### Accounting

NRECA has deployed a consumer information system (CIS) developed in Bangladesh at each of the utilities in Yei, Kapoeta and Maridi. The CIS has been modified to meet the requirements of

# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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these three small utilities that have relatively modest business needs, but even with these simplifications, it can still be a daunting task for professionals with limited computer, accounting and financial skills to gain mastery at the level that is needed for an enterprise system such as a CIS. The senior commercial specialist and newly hired program accountant will travel to each utility on a regular schedule to work alongside utility employees to improve the understanding and use of the CIS. Also, to improve the skill and capacity to employ the CIS, the ESP team will offer the following courses in FY 2014.

1. An accounting and financial control training module to provide additional training to accountants, bookkeeping assistants, cashiers with the knowledge and understanding to perform basic general ledger entries, to manage the billing and collection modules of the CIS; to manage the accounting module of the CIS; to produce monthly reports for use by the board and the general manager including the Form 1 monthly statistical report. This training course will also provide an overview of financial control via mandated financial checks and balances – specifying the division of labor and responsibilities between accounting, meter reading, billing clerks and revenue collection. Observance of financial checks and balances will be emphasized to ensure a high level of transparency and accountability for overall financial management of the utility. The material covered in this module will be presented in workshops at the individual utilities in – November, March, and June hosted by the senior commercial specialist and accountant.
2. A training module specifically devoted to CIS reporting functions including a) the preparation of Form 1 to include providing a full understanding of the various financial entries and how they all complement each other and flow into the Form 1 (statement of operations, balance sheet, inventory, outages, sales, power production, etc.); b) the use of the Form 1 as a management tool and to present information to a variety of audiences; c) mining the wealth of information contained in CIS and placing it in a meaningful format for use by the board of directors and management.

### Commercial Management

One of the biggest challenges that the utilities have faced is to attract, train and retain qualified revenue cycle management staff. The difficulties of finding well-trained, qualified utility professionals of high integrity can be attributed to the remoteness of the areas being served and the loss of a full generation of South Sudanese due to the trauma and insecurity resulting from thirty years of wartime conflict. With seven years of relative political stability, the situation is slowly improving, but practical training is required to strengthen the revenue cycle and financial capacities for the utility staff in KAPECO, MECO and YECO. To improve the skill and capacity of the commercial management staffs the ESP team will offer two courses in FY 2014.

1. A meter reading and data management course module will be offered in the second quarter of ESP implementation immediately following the second accounting workshop (March). This 3 day course will focus on industry best practices in meter reading and data management for control of meter readers and the meter reading process. The course will include training on the meter reading module of the CIS and the use of flags to detect anomalies in consumer consumption, potential meter reading errors and/or fraud, and the

# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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procedures that can be employed to ensure that meter reading process is carefully controlled.

2. An introduction to commercial management covering the full revenue management cycle including; connections, billing, collections and disconnects to ensure that the checks and balances of energy accounting are used by the commercial management team.

### Line Worker Training

NRECA has offered continuing line worker training for construction and maintenance staff since the beginning of the first USAID project financed in 2005. Line worker training has historically focused on a combination of safety training and skills development to ensure that linemen and groundmen learn how to work with minimal risk of injury on line construction and maintenance procedures, as well as to successively build skills in all phases of line construction and maintenance procedures. In FY 2014 will continue these efforts by working with current linemen to enhance their skills along with providing basic training to newly hired linemen.

The line worker training will be managed by a lineman-training specialist who will be assisted from time to time by NRECA linemen volunteers working on short-term assignments. The lineman trainer shall travel to South Sudan twice for three to four weeks at a time and will provide training visiting each utility at least once.

The training program will build on the 2013 diagnostic of recent service installations and recent line segment installations. This training activity will focus on diagnosing compliance and non-compliance with best work practices on randomly selected service installations and line segment installations undertaken by line staff in recent months including pole top assemblies, pole setting, transformer mounting, transformer interconnections, guying, and other construction practices. The purpose will be to note where mistakes have been made, how to correct these errors and, where necessary, observe the repair of the installations. The following lineman training courses will be offered in 2014.

1. A lineman training program at each utility focused on new service installations and consisting of inspection of the consumer premises, including extension of the service drop from the distribution transformer to the meter; meter mounting and interconnection with the house wiring circuit; inspection of internal house wiring; and instructions to provide to the home or shop owner. The training will also extend to local electricians and county inspectors providing them with the technical knowledge to perform their duties.
2. The lineman training will also include a training module on construction of short primary line extensions covering pole excavation, pole top structure assembly, pole setting, guying, conductor pulling, and transformer mounting procedures.
3. The Trainer will further provide training on the inspection of customers' generator disconnect switchgear, identifying switchgear that do not comply with utility standards or are not being used properly leading to improved line worker safety. This course will be offered with regular mentoring throughout the year.
4. A general maintenance workshop training module which will cover more central themes during which the trainer will demonstrate a common maintenance activity, and will coach



# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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linemen participants to replicate it as part of a practical training session. This course will be offered with regular mentoring throughout the year.

### Generation Training

NRECA has offered continuing generation training for management and operations staff since the beginning of the first USAID project financed in 2005. Generation training has historically focused on a combination of generator operation training and skills development to ensure that all parties involved with the operation of the electric generation system are knowledgeable of correct operation and maintenance procedures.

1. The generation training for operations management and line staff will focus on proper operations and maintenance of the generator equipment including operation and monitoring procedures, fuel monitoring and procurement, proper scheduling of equipment maintenance and what organizations are available to offer assistance with operation and maintenance issues. This training will be presented in cooperation with training programs presented by Ezentus, the local Caterpillar dealership in Juba at various times throughout the year.

### Proper Warehousing and Joint Procurement

Following the initial evaluations of the utilities early in ESP it was found that additional work and analysis is needed to be undertaken in the management and procurement of materials and current monitoring and storage of materials and supplies. In the first year of ESP a team of specialists evaluated the inventory/warehouse control processes as well as conducted a full physical count of existing material. The ESP team also explored opportunities for the exchange of material between the utilities and the development of a supplier network within East Africa.

Following the completion of the preliminary assessment the team developed template documents and forms along with a supplier network listing. In an effort to institute utility best practices in the procurement and management of supplies and materials the team will visit each utility in January / February 2014 to work with management and staff to institute the recommended procedures to improve utility performance in these areas.

### Technical Assistance and Mentoring

While much emphasis has been placed on the above training programs and their importance to the success of ESP, technical assistance tasks will be undertaken concurrently to expand management's understanding of administrative, commercial, organizational, and operating capabilities at each of the three utilities. On-site mentoring by the ESP team will serve to supplement the learning process and address specific issues as they arise. In addition to formal training sessions, the team of experts will observe, provide guidance and help with corrective action and mentor employee management and staff. The technical assistance and mentoring process is designed to build practical, day to day business skills based upon the sound foundation developed through the formal training program.



# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

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The ESP team will continue to monitor the financial strength and stability of KAPECO and MECO working with them to develop a financial plan to increase revenues and reduce expenses to reach a breakeven operating position. This will be an ongoing effort throughout the year and will include close cooperation with the board and management.

The ESP team will evaluate strategies that may be employed to overcome barriers to new connections, given that the financial health of KAPECO, MECO and YECO are dependent upon growth of electricity sales. The teams will also review means of encouraging more sales per consumer given that more unit sales will concurrently contribute directly to financial viability.

NRECA has developed a board member certification program for use in other countries and will explore its implementation in South Sudan and administered by local training institutions. In FY 2014 the NRECA will continue the evaluation of training institutional capabilities to determine if such a program can be implemented and by which institutions.

### Yei, Maridi Hybrid Micro-Hydro Capacity

USAID is exploring the potential for development of micro- and small-hydro generation near Maridi and Yei through pre-feasibility studies in an effort to reduce the cost of power supply to MECO and YECO. While 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 there is currently no funding for this task thus activities will not be included in the FY 2014 work plan.

While the micro-hydro evaluation remains unfunded, NRECA will continue to explore the introduction of renewable energy alternatives into the mix of power generation options to reduce production costs and solidify electricity's contribution to the promotion of agricultural production and marketing to improve livelihoods and food security.

### Utility Evaluation and Development Support for Yambio

As part of the RSS power sector infrastructure program, a 2 MW power plant was installed in Yambio, together with the beginnings of a medium voltage (11 kV) distribution system. While the power plant is of high quality and was professionally installed, the distribution system will require significant improvements and modifications before it can be of service. No efforts have been made as of yet to establish an electric distribution utility, but the WES Government intends to have a substantial role in power supply planning.

#### FY 2014 Activity

The NRECA team will build upon the information gathered in the diagnostic analysis (technical and institutional) performed in 2013 to present options for the improvement and expansion of the electric distribution system to provide more complete coverage to the Yambio community, as well as providing options to satisfy the goals of a public-private partnership to manage both power generation and commercialization of electric service. A complete diagnostic report will be submitted to USAID 30 days after all data collection and field work are complete. The presentation of the full report and exploration of options with all stakeholders will occur in the October / November timeframe.



# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

### Budget and Resource Allocation

**Table: FY 2014 Project Budget**

Cost Element	FY 2014 Budget			
	KAPECO	MECO	YECO	Total
Personnel 1	\$93,844	\$120,656	\$53,625	\$268,125
Fringe Benefits 2 & 3	\$47,077	\$60,528	\$26,901	\$134,507
Travel 4	\$28,758	\$36,975	\$16,433	\$82,167
Equipment 5	\$10,500	\$13,500	\$6,000	\$30,000
Supplies	\$894	\$1,149	\$511	\$2,554
Contractual 6	\$37,532	\$48,255	\$21,447	\$107,234
Other 7	\$26,890	\$34,573	\$15,366	\$76,829
Utility Non-Fuel Operating Costs 8	\$40,500	\$49,500	\$0	\$90,000
Indirect Charges 9	\$111,215	\$142,991	\$63,552	\$317,758
<b>Total</b>	<b>396,216</b>	<b>\$507,140</b>	<b>\$205,818</b>	<b>\$1,109,174</b>

*Notes*

- 1- The salaries for staff are based on job level and expertise required as well as past salary history. Merit increases of 3.5% effective each March during the Life of the Project (LOP) have been factored into the salary cost in accordance with NRECA's personnel policies. Personnel costs are calculated by: Annual Base Salary/260 workdays = Base Daily Rate - Level of Effort X Base Daily Rate = Salary Cost.
- 2- U.S. Personnel fringe benefits and leave rates are calculated at NRECA's provisional NICRA and leave is calculated at 18.21% of salaries. Fringe Benefits are calculated @ 36.73% of salaries and leave.
- 3- CCN Fringe Benefits rate includes applicable leave and fringe benefits in accordance with labor laws in South Sudan and include severance, life insurance, medical insurance and pension.
- 4- International average airfare unit cost is for roundtrip travel from Washington D.C. to South Sudan and is based on historical costs for program implementation in South Sudan and R&R trips to designated location. In-Country travel unit cost is for roundtrip travel from Yei to Kapoeta, Juba or Maridi. In-country travel includes air travel or travel through a car service. Lodging and M&IE for Juba are budgeted using current daily rate in accordance with the U.S. Department of State Foreign Per Diem Rates Schedule. M&IE for Field is budgeted based on historical costs for program implementation in South Sudan. Lodging for field travel will be provided by the utilities. Lodging & M&IE for Nairobi are budgeted based on historical costs for NRECA's staff travel to Nairobi which is lower than the U. S. Department of State current per diem rate for Nairobi.
- 5- Maintenance, License, Insurance and administrative fees associated with operating project vehicles.
- 6- USAID Form 1420s for all proposed consultants were included with the Cost Application.
- 7- Includes among other items; VSAT Communications (\$ 1,500 / mo.), Danger Pay and Post Differential (Post differential and danger pay are budgeted for the Chief of Party and Deputy Chief of Party, expatriates who will reside in Maridi. In addition, danger pay is budgeted for staff who will travel on TDY to South Sudan. Post differential and danger pay are budgeted in accordance with rates from the U.S. Department of State Standardized Regulations), Security (For the NRECA office and compound is budgeted based on historical costs for project implementation in South Sudan) and one computer (valued at \$1,000 will be purchased for project use.)
- 8- Utility Non-Fuel Operating Costs represents the financial support to MECO and KAPECO, as per the RFA page 4, until such time as the customer base can be expanded to spread the fixed costs of operations over increased rates. The amount is estimated on the basis of diminishing this support from the level provided in the predecessor program, to zero, during the three-year ESP program.
- 9- Indirect rate is applied to salaries, leave and fringe benefits at NRECA's provisional NICRA.

# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

**Table: FY 2014 Project Budget**

Cost Element	Quarter Cost Projects				
	Oct.-Dec.	Jan.-Mar.	April-June	July-Sept.	Total
Personnel	\$59,902	\$76,348	\$76,241	\$55,634	\$268,125
Fringe Benefits	\$29,415	\$39,468	\$38,896	\$26,728	\$134,507
Travel	\$17,969	\$24,111	\$23,760	\$16,327	\$82,167
Equipment	\$7,500	\$7,500	\$7,500	\$7,500	\$30,000
Supplies	\$558	\$750	\$738	\$508	\$2,554
Contractual	\$23,451	\$31,466	\$31,009	\$21,308	\$107,234
Other	\$16,801	\$22,544	\$22,218	\$15,266	\$76,829
Utility Non-Fuel Operating Costs	\$45,000	\$45,000	\$0	\$0	\$90,000
Indirect Charges	\$69,490	\$93,239	\$91,888	\$63,141	\$317,758
<b>Total</b>	<b>\$270,086</b>	<b>\$340,426</b>	<b>\$292,250</b>	<b>\$206,412</b>	<b>\$1,109,174</b>



# Electrification Sustainability Program In South Sudan (ESP)

## FY 2014 Work Plan

### Program Management Plan Summary

A brief summary of the program management plan is provided herein to clarify the roles and responsibilities of the key personnel in the program.

The ESP will be managed by the NRECA South Sudan team, with oversight and quality control support provided by the NRECA home office. The program team will consist of NRECA employees, local personnel hired for the program period, and consultants hired for their expertise for specific project tasks.

The Chief of Party will be Robert Ellinger who will oversee the work of all NRECA team members, serving as the designated contact person for overall management activities and business relationship with USAID. He will be responsible for all operations of the ESP project including administration, logistics, procurement, budgeting and supervision of project staff. Mr. Ellinger will ensure that NRECA & USAID policies and procedures are properly put into practice and maintained. He will provide project management, oversight, monitoring, evaluation and reporting of NRECA's program implementation, progress and quality of performance including the generation and delivery of regular reports. Mr. Ellinger will directly participate in mentoring and training activities.

Swalleh Rajab will serve as the Senior Commercial Advisor headquartered in Kapoeta but offering training and guidance to all three utilities. He will be responsible for providing training and guidance to management and staff focusing on commercial and financial activities. Mr. Rajab will participate with program accountant in training activities designed to improve financial and commercial capacities of utility management and staff.

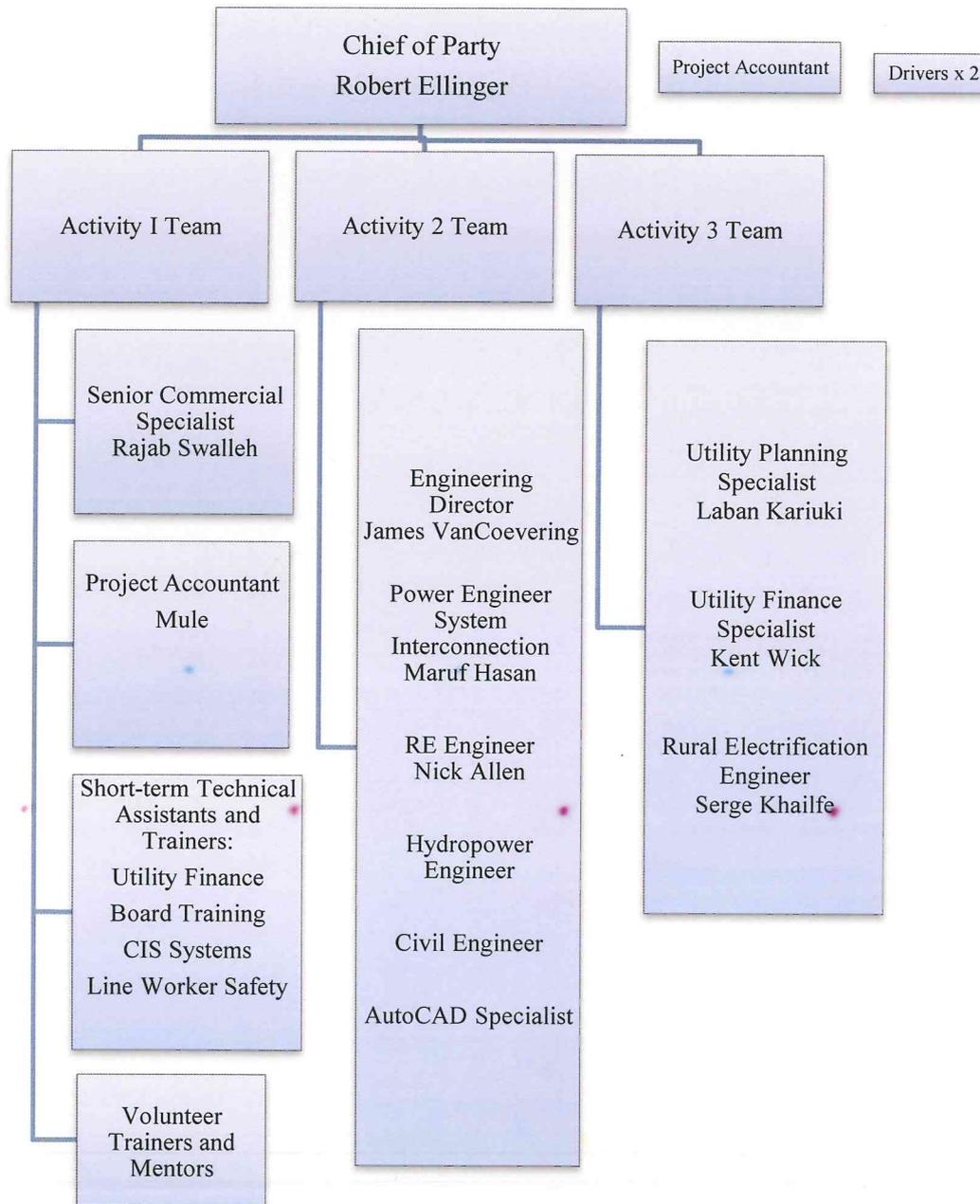
The Program Accountant has been identified and offered a position in ESP. The accountant will be headquartered in Maridi and serve as the lead resource for providing training in all activities related to accounting and financial control functions of the distribution utilities. The accountant will also provide administrative assistance to Mr. Ellinger with regard to ESP management and administration as required from time to time.

FY 2014 Levels of Effort for key program staff (long and short-term):

Title	LOE (days)	Title	LOE (days)
Chief of Party (CoP)	240	CIS Specialist	25
Senior Commercial Advisor	240	Utility Finance/Management Specialist	25
Program Accountant	240	Utility Planning Specialist	15
Lineman Training Specialist	67	Board training Specialist	11

The program organizational chart is shown below:

# Electrification Sustainability Program In South Sudan (ESP) FY 2014 Work Plan



Additional support will be provided by the NRECA International Foundation, which is donating volunteer services of U.S. line workers from NRECA member cooperatives in the United States. NRECA International Foundation contributions will be managed by the Foundation Program Manager and Foundation Program Assistant.

# Electrification Sustainability Program In South Sudan (ESP) FY 2014 Work Plan

## FY 2014 International Travel

Type	Rate	Number of Flights	Total Amt.
US or Resident Country	\$2,200.00	8 <sup>1</sup>	17,600.00
R&R	\$1,100.00	1	\$1,100.00
Regional Travel	\$500	5 <sup>2</sup>	\$2,500

## Work Plan Activity Tables

The following tables describe the Activities and associated Tasks in the ESP program, along with implementation period and expected milestones. The Activity headings closely follow the Project Timeline section (page 11) of NRECA International's application in response to the USAID | South Sudan RFA-668-12-000003.

<sup>1</sup> Flights include the following: CoP-2, CIS Specialist-1, Training Specialists-5

<sup>2</sup> Regional R&R Flights – Quarterly: CoP-3, Commercial Specialist-2



No.	Activities and Tasks	Duration	Task Descriptions	Milestones	Planned Completion Date
1.0	Project Development Activities				
1.1	Program Work Plan and M&E Plan established		2014 Work Plan and Monitoring / Evaluation Plan developed and submitted to USAID/South Sudan for comment (No change in Branding and Marketing Plan.)	Project plans completed	31-Aug-2013
1.2	Program Work Plan and M&E Plan reviewed		USAID Provides comments on various project plans for revision	Comments received from USAID	15-Sept-2013
1.3	Work Plan & M&E Plan revised and approved		Final Submittal to USAID and Approval	Plan Approved by USAID	24-Sept-2013
1.4	Year #2 kick-off meeting with USAID/South Sudan		Program review with USAID/SS AO & AOR.	Meeting conducted	01-Oct-2013
1.5	Review of year one diagnostics and progress made		Evaluation of the utilities current financial and operations strength and review of project baselines using diagnostic assessment checklist	Year two baselines established	20-Oct-2013
2.0	Technical assistance and mentoring program	Month 14 to Month 26			
2.1	Board training		Training covering all facets of board functionality including: elections, board responsibilities, interaction of boards of directors and utility management including peer-to-peer discussions to explore shared experiences and challenges	Training workshop completed	28-Feb-2014
2.2	Board training		Board governance and policy development along with observing, commenting on and critiquing board meetings	On-going sessions conducted at local utilities	31-July-2014
2.3	Management Training-Budgeting		An introduction to budgeting will focus on the information needed to develop a budget and how utility board, management and staff monitor the budget to evaluate financial strength and stability.	Training module completed	30-Nov-2013
2.4	Management Training-Finance		The examination of the business operations and financial position of an electric utility including revenue and expense management; the need to review financial data and operational statistics; financial and operational ratios that provide information on the operation of the utility along with its fiscal strength and stability; and, the tools available to analyze the utility system.	Training module completed	31-Mar-2014
2.5	Management Training-Human Resources		An introduction to human resource management which will focus on human resource policies and procedures including hiring, firing, employee disciplinary practices; salary evaluations and annual performance reviews.	Training module completed	31-May-2014
2.6	Accounting and finance control training		This training module will provide accountants, bookkeeping assistants and cashiers with the knowledge and understanding to perform basic general ledger entries, to manage the accounting module of the CIS, including generation of monthly financial reports.	Training module and workshops completed	30-June-2014

No.	Activities and Tasks	Duration	Task Descriptions	Milestones	Planned Completion Date
2.7	CIS		A training module specifically devoted to CIS reporting functions	Training Module Completed	31-May-2014
2.8	Meter reading and data management		This training module will focus on best practice policies and procedures for control of meter readers and the meter reading process.	Training module and workshops completed	30-June-2014
2.9	Commercial management		An introduction to commercial management dealing with the total management of the revenue cycle covering connections, billing, collections and disconnects to ensure that the checks and balances of energy accounting are used by the commercial management team	Training module completed	31-July-2014
2.10	Line worker and safety training		A training module on new service installations consisting of inspection of the consumer premises, including extension of the service drop from the distribution transformer to the meter; meter mounting and interconnection with the house wiring circuit; inspection of internal house wiring; and instructions to provide to the home or shop owner.	Training module and workshops completed	31-July-2014
2.11	Line worker and safety training		A training module on the construction of short primary line extensions covering pole excavation, pole top structure assembly, pole setting, guying, conductor pulling, and transformer mounting procedures.	Training module and workshops completed	31-July-2014
2.12	Line worker and safety training		Training on the inspection of customers' generator disconnect switchgear identifying switchgear that do not comply with utility standards or are not being used properly leading to improved line worker safety.	Training module and workshops completed	31-July-2014
2.13	Line worker and safety training		A general maintenance workshop training module which will cover more central themes during which the trainer will demonstrate a common maintenance activity, and will coach linemen participants to replicate it as part of a practical training session.	Training module and workshops completed	31-July-2014
2.14	Generation training		This training for management and line staff will focus on proper operations and maintenance of the generator equipment including operation and monitoring procedures, proper scheduling of maintenance and maintenance partners along with fuel monitoring and procurement.	Training module and workshops completed	30-Sept-2014
3.0	Maridi, Yei Hybrid Micro-Hydro Capacity	Month 14 to Month 26	The micro-hydro option, should additional funding come available, is for final design of one or more viable micro/small hydro generation projects in Yei and Maridi.	Funding source not yet identified	N/A
3.1	Renewable Energy Evaluation		Exploration of the introduction of renewable energy alternatives into the mix of power generation options to reduce production.	Proposal presented to USAID for review	30-Oct-2014

No.	Activities and Tasks	Duration	Task Descriptions	Milestones	Planned Completion Date
4.0	WES and Yambio Electric Utility Assistance	Month 14 to Month 26			
4.1	Diagnostic report		Diagnostic report completed and presented	Diagnostic report completed and presented	30-Oct-2013
4.2	Rural electrification planning workshop with Western Equatoria State (WES) government		Discussion of the opportunities available and the necessary steps to introduce rural electrification into WES	Workshop held	30-Nov-2013
4.4	WES Training		In the event funding is made available and an external firm is contracted to manage the operation of the power generation and distribution systems, the ESP team will further evaluate the training that will be required for WES Ministry of Physical Infrastructure staff to oversee the management contractors. The implementation of the diagnostic study will be combined with training sessions for WES staff on rural electrification planning.	Training workshops completed	28-Feb-2014