

GHANA SE4ALL NEWS

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GHANA'S SE4ALL ACTION AGENDA SEEKS TO:

- > Promote Productive Uses of Electricity
- > Improve Access to Improved Cookstove
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- > Provide Access to Electricity for Remote Communities Using Off-Grid Systems

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PROGRESS ON HIGH IMPACT PRIORITY AREAS

Promoting Productive Uses of Electricity

- * GIZ under its Energising Development (EnDev) project has began the implementation of grid-connected irrigation schemes in Keta Municipality of the Volta Region. The organisation has set up an office in Keta for the project and a 5-member local committee established to provide oversight for the project implementation. The local committee has approved support for 120 farmers out of 93 applications reviewed so far. The target for the Keta Municipality is to implement at least 120 grid-connected irrigation schemes. Connections for 20 farmers has been effected as at June 2015. Also, 120 farmers have been trained in agri-business development and management.
- * NewEnergy, a local NGO in Tamale has implemented a solar powered irrigation project in the Northern Region of Ghana. Solar powered irrigation schemes were established for four farmer associations at Tamalgu in the Karaga District, Nakpanduri in the Bunkpurugu Yunyoo District, and Datoyili and Fooshegu in the Tamale Metropolis. The installations have a total capacity of 22.5 Kilowatts and are capable of delivering up to 1 million liters of water per day. More details on this project, supported by UNDP and the Energy Commission is provided in this issue.

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Improve Access to Improved Cookstove

- * The Kwame Nkrumah University of Science and Technology (KNUST) with support from the United Nations Development Programme (UNDP) and the Energy Commission of Ghana commissioned the Cookstove Testing and Expertise Laboratory at the University Council Chamber on Tuesday, 31st March, 2015 at 10.00am. Following a competitive tendering process organized by the Energy Commission in 2013, the Technology Consultancy Centre (TCC) won the bid to host the laboratory.



The laboratory, which was commissioned by the Vice Chancellor of KNUST is a major boost for Ghana's quest to promote the manufacturing of improved cookstoves and stimulate their demand, under a UNDP partnership with the Energy Commission within the framework of the Sustainable Energy for All Initiative.

The provision of the laboratory, which is part of a series of projects under the SE4ALL initiative, comes on the heels of a recent study commissioned by UNDP and SNV that showed that cookstove testing facilities are not available to 47% of manufacturers while the few that test their stoves do not follow any standard protocols.

The uniqueness of this laboratory is the fact that it does not only seek to test cookstoves performance quality in terms of thermal efficiency and emission, but also it will provide research and development to enhance technological innovation within the cookstove manufacturing sub-sector.



Thus, this laboratory will become a hub for manufacturers, as the data generated from the tests will enable them to improve the efficiency of their stoves and expand their market.

Improving the efficiency of the more than 200,000 cookstoves distributed in Ghana annually is important to reduce the demand and the time used for collecting firewood. This will ultimately impact positively on the country's degrading forest resources.

- * The Global Alliance for Clean Cookstoves (the Alliance) partnered with the Ghana Girl Guides Association (GGGA) to develop and implement a Clean Cooking Solutions Educational Project targeted at young girls within the ages of 15-25 years. As part of the project, twenty (20) girls from Anyamam (the project community) and the GGGA were trained as "trainers" to train other girls to embark on clean cooking campaigns in their communities, to increase awareness on improved cookstoves and clean fuels and their benefits.



The participants were presented with a locally manufactured improved charcoal

stove, the "cookmate" to facilitate their adoption of improved cookstoves.

The facilitators and resource persons for the programme were drawn from the GGA, the Ghana Alliance for Clean Cookstoves and Fuels (GhACCD), 37 Military Hospital, Ministry of Power and the Energy Commission.

- * The draft national standard on cookstoves has been shared by the Ghana Standards Authority for public review and comments. Comments received will be addressed and the standard document finalized for publication.

Improved Access to LPG for Cooking

- * The Government of Ghana, under the Rural LPG Promotion Programme has provided access to LPG as clean cooking fuel to about 22,000 households in eight (8) districts. The programme has provided 6kg LPG cylinders and stoves and accessories to beneficiaries to enable them switch from the use of woodfuel on inefficient cookstoves.

Provide Access to Electricity for Remote Communities Using Off-grid Systems

- * Under the Solar Lantern Promotion Project, the Ministry of Power has facilitated the dissemination of 32,616 solar lanterns for lighting in off-grid communities. The objective of the project is to displace the use of kerosene lanterns for lighting with solar lanterns which are more economical, clean and safer to use.

SPECIAL FEATURE: SOLAR PV ENERGY MAKES SMALL FARM- ERS EXCEL

Story by Amadu Mahama, NewEnergy

NewEnergy is helping small holder farmers such as the Tamalgu Hikma Cooperative Farming Society to increase rural incomes by tapping into the inexhaustible energy re-



source of Sun.

The SE4ALL initiative in Ghana is gaining traction. In October 2014 NewEnergy launched a solar-powered irrigation project in Northern Ghana, with support from the Energy Commission and the UNDP under the auspices of the SE4ALL initiative. The goal of the project is to make sustainable energy accessible to smallholder farmers for productive uses.

Under the programme four (4) solar-powered irrigation pumps have been installed in four communities to pump water for irrigating up to 15 hectares of land to facilitate all year round farming for four farmer associations at Tamalgu in the Karaga District, Nakpanduri in the Bunkpurugu Yunyoo District and Datoyili and Fooshegu in the Tamale Metropolis. The installations have a total capacity of 22.5 Kilowatts capable of delivering up to 1 million liters of water per day.



Lorentz PSk solar pump

Using trusted brands in the solar equipment market such as Deng Panels and Lorentz DC Pumps from Germany, the installations were completed over a three month period and put immediately into use since December 2014. All the equipment has performed flawlessly over the last seven months. The farmers have been trained on how to operate the equipment and carry out routine maintenance such as panel cleaning, operating irrigation valves and allocating water among users.



15 Kilowatt solar PV array at Tamalgu

The system at Tamalgu which has an installed power of 15Kilowatts is equipped with advanced communication and monitoring capabilities which enables us to monitor and control the operation of the pump remotely via the internet. While this may sound a bit high tech for a small farmer operation, in reality it turns out to be an invaluable tool for us to detect any abnormal issues and rectify them before they actually become problems. The monitoring

system also keeps track of actual system production and efficiency, a capability that will become very important as we move forward to establish an equitable billing and revenue collection system for each of the installations.

The project is not only delivering energy for water pumping, but goes beyond to create a hotbed for sustainable innovations in farming for 48 male and 30 female farmers and their families. The project has also upgraded the functioning of the community water supply system in parts of Nakpanduri, supplying clean drinking water to over 900 inhabitants. Working in partnership with experts in irrigation and soil management, we have introduced drip and micro-sprinkler irrigation technology, biochar for soil amendments and improved seeds for nine crops that have been cultivated this dry season.

The results are there for all to see!

This is what the Deputy Minister of Agriculture, Hon. Dr Alhassan Yakubu had to say when he visited the project at Tamalgu in February 2015, "I am highly impressed about the technology in use here, and the enthusiasm and commitment of the farmers, and I wish you every success in the work ahead."

Paolo Dalla Stella from UNDP was not exaggerating when he pointed out during a monitoring mission to the project in February this year that this project was delivered in record time, within budget, and to the satisfaction of all stakeholders.

The Chief Executive of Afram Plains Development Organization and the Director of Pronet, (both are leading NGOs in Ghana), have indicated their intentions to collabo-

rate and replicate this initiative in their respective areas of operation.

The project has had numerous visitors:



In this picture: Paolo Dalla Stella of UNDP, the SE4ALL National Coordinator, and implementing partners from NewEnergy at Tamale during a monitoring visit

many farmers, extension workers, agriculture input dealers, local NGOs, officials from the Savannah Accelerated Development Authority (SADA), Ministry of Agriculture, Universities and Research Centres have come to see how the energy of the sun can be harnessed to improve farming.

But most importantly, the farmers are very appreciative of this project which represents the biggest single piece of on-farm agricultural infrastructure in the whole district of Karaga. Although it is too early to catalogue the impact of this project, (the harvest season is yet to begin), it is clear that as a result of the project the inhabitants of Tamale and surrounding districts can count on premium vegetables produced using clean irrigation water, and safe agricultural practices. With assistance from NewEnergy, the farmers have established good links with reputable off-takers who take the headache out of selling farmers' produce.

The future is looking good. With the imminent completion of the Tamale International Airport in 2016, farmers could easily gain access to premium markets for crops such as sweet potato, strawberry, and other

fruits and vegetables that can be produced very effectively under irrigation and exported to the EU and Middle-eastern markets.

With expert training and coaching from the Department of Cooperatives, two of the farmer groups have completed the processes for receiving their certification as Cooperative Societies. They have elected their leaders, operate bank accounts and have their Constitutions.

Much work still remains to be done; a business model is still being evolved to put the water user cooperatives fully in charge of operation and maintenance, setting of tariff, and revenue collection. The exit strategy is gradual and clearly mapped out. NewEnergy has undertaken to remain in control of the more technical aspects of the equipment maintenance over the next two years during which period the cooperatives will be supported to implement sustainable tariff setting and revenue collection systems, refine operational procedures and establish an operation and maintenance fund. The cooperatives will also be supported to raise additional funds to increase the sizes of the solar arrays to increase the pumping capacity as the demand for water increases.



Solar powered drip irrigation at Datoyili

The Nasia-Nabogu river basin has extensive irrigation potential and NewEnergy will work in partnership with other stakehold-

ers to upscale solar water pumping for irrigation and other purposes in the coming years.

Come and join us!!

For more information on this project, contact:
Amadu Mahama,
NewEnergy, Tamale
Email: mahama.amadu@gmail.com

OTHER ISSUES AND EVENTS

U.S. Department of State Organises Fifth Mission to Ghana

The U.S. Department of State team made up of Mark Kissel (team lead), Don Hertzmark, John Wasielewski and Martha Demos organised a fifth SE4ALL mission to Ghana from 27 April – 1 May 2015. The mission had five objectives: 1) deliver the draft Project Opportunity Report (POR, also known as the Investment Prospectus) for Ghana, 2) facilitate meetings with private sector finance on SE4ALL projects, 3) emphasize the key role of the private sector in SE4ALL-Ghana, 4) participate in the fourth Financing Working Group meeting, and 5) meet with private sector firms developing or operating renewable energy projects in Ghana.

The main outcomes of the mission were: 1) acceptance of the draft POR by the Government of Ghana (represented by the Ministry of Power and the Energy Commission) with the assurance that the report will be finalized by the government and use to attract support to implement SE4ALL projects identified, and 2) advancement of engage-

ment with financing institutions (specifically Barclays, Standard Chartered, Standard Bank and Acumen) on potential support to finance SE4ALL relevant project identified in the POR.

The team also met with other renewable energy project developers to discuss progress being made in developing the market for off-grid solutions.

Ghana Participates in the Second Annual UN SE4ALL Forum in New York

Ghana was represented by three delegates from the Energy Commission at the Second Annual UN SE4ALL Forum in New York from 18-21 May 2015. The delegates; Dr. Kwame Ampofo, Board Chair of the Energy Commission (representing the Minister of Power) participated in panel discussion on "ECOWAS Regional Sustainable Energy Policies supporting national SE4ALL Actions"; Dr. Nii Darko Asante, Director of Technical Regulation and Paula Edze, SE4ALL National Coordinator presented on Ghana's SE4ALL Action Agenda and Investment Prospectus.

The delegates also met with Deputy Assistant Secretary, Robert Ichord and Bernard Link of the US Department of State to touch base on collaborations between the State Department and the Government of Ghana through the Energy Commission. DAS Ichord briefed the team on their work in Bangladesh and affirmed their commitment to continue supporting the SE4ALL process in Ghana.

The delegates paid a courtesy call on the Ghana mission in New York to interact with the staff and brief them on SE4ALL implementation progress in Ghana. The staff were also briefed on the energy crisis in Ghana and steps being taken to address the situation.



Delegates at the Ghana Embassy in New York with a staff of the Embassy (second from right)

SE4ALL Ghana Trains Stakeholders to use a Solar Home System and Mini-Grid Decision Tool

IT Power Consulting and the SE4ALL Secretariat have organised workshops for twenty (20) stakeholders from government and private institutions, and selected SE4ALL development partners from 29 June to 3 July 2015 at the City Escape Hotel in Accra.

The workshops were organised to:

- ⇒ share the draft Monitoring, Evaluation and Reporting (MER) framework document for Ghana and receive inputs from stakeholders to finalise the document;
- ⇒ report on solar home system (SHS) and mini-grid financing models being used in Ghana and other good practices around the globe, and train stakeholders on application of a decision tool to select the type of decentralised renewable energy

system and its delivery models for a given community based on techno-economic and socio-economic issues; and

- ⇒ share the result of a survey to assess the capacity of selected institutions from government ministries and agencies, private sector, research and academia to transfer SE4ALL related technologies on renewable energy and energy efficiency.

On sustainable financing models for SHS, IT Power Consulting was of the view that daily payment for electricity services is better than the weekly or monthly payment model which is popular in Ghana. They recommend capital subsidy by government on the cost of mini-grid projects to private investors instead of running subsidy to the consumer or end-user. A 5-year technical assistance plan was also proposed for Ghana to help build the receptive capacity of key institutions to transfer technology to support the implementation of SE4ALL activities.



Some participants and trainers of the workshop on technology transfer

Link to the Ghana SE4ALL Action
Plan: [http://energycom.gov.gh/
files/SE4ALL-GHANA%
20ACTION%20PLAN.pdf](http://energycom.gov.gh/files/SE4ALL-GHANA%20ACTION%20PLAN.pdf)

Contributors

- * Amadu MAHAMA, NewEnergy, Tamale
- * Doris DUODU, Ministry of Power, Accra
- * Dorothy Akua Yeboah ADJEI, Energy Commission, Accra
- * Fatawu ISSAH, Ministry of Petroleum, Accra
- * Mark KISSEL, U.S. Department of State, Washington D.C.
- * Nii Darko ASANTE, Energy Commission, Accra
- * Samuel ADOBOE, GIZ, Accra

Ghana SE4ALL Secretariat

Sustainable Energy for All



C/O Energy Commission
Ghana Airways Avenue
PMB, Accra
Phone: +233 302 813756
Fax: +233 302 813764
E-mail: