

GHANA SE4ALL NEWS

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GHANA SE4ALL
SECRETARIAT

GHANA'S SE4ALL ACTION AGENDA SEEKS TO:

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

PROGRESS ON HIGH IMPACT PRIORITY AREAS

PROMOTE PRODUCTIVE USES OF ENERGY

The provision of energy has been proven to be a significant driver of economic transformation and social progress in most developing countries. Even though access rate to electricity in Ghana is currently above 80%, the level and pace of uptake of electricity powered economic interventions in electrified communities often lag behind expectation. It is in the light of the above that productive uses of energy (electrical and thermal energy) was selected as one of the high impact priority areas for Ghana under the UN Sustainable Energy for All (SE4ALL) Initiative.

To push the productive uses of energy (PUE) agenda, the SE4ALL Secretariat organised two workshops on the 21st and 28th of July 2016 at the Energy Commission. The main objectives of the workshop are to:

- ◆ share knowledge and experiences from Government, development community, civil society and private sector on PUE interventions implemented in the past;
- ◆ deliberate on the major barriers hindering the scaling-up of PUE interventions in the country and how to address them; and
- ◆ collate all relevant data on PUE activities as well as workable business model that guarantee sustainability to produce a PUE catalogue.

Experiences were shared by Ministry of Power, Ministry of Trade and Industry, Fisheries Commission, KITE, Abantu for Development, Netherland Development Organisation (SNV) and German Development Cooperation (GIZ).

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Mr. Kwabena Otu-Danquah, Ag. Director for Renewable Energy & Energy Efficiency at the Energy Commission giving the opening remarks (top left)

Mr. Wisdom Ahiataku-Togoba, Director for Renewable and Alternative Energy at the Ministry of Power giving a presentation on PUE (right)



present workable business models.

On the issue of lack of dedicated land for PUE projects, participants recommended that the District Assemblies should acquire lands for PUE projects to facilitate the socio-economic transformation of local communities.

On the issue of inadequate linkage between policy and strategies for the promotion of PUE, it was recommended that strategies on PUE should directly link to policy.



Some participants at the PUE workshop

The following are key issues discussed:

- ◆ lack of awareness of most PUE interventions in the country;
- ◆ low involvement of private energy service providers in PUE projects; and
- ◆ high electricity tariff for PUE businesses especially for irrigation schemes.

Issues that emerged include:

- ◆ low interest from financial institutions to support PUE initiatives;
- ◆ lack of dedicated land for PUE projects; and
- ◆ inadequate linkage between policy and strategies for the promotion of PUE.

On the issue of low interest from financial institutions to support PUE initiatives, it was agreed that PUE projects should be packaged to meet the funding criteria set by financial institutions. Also, project proponents should

IMPROVE ACCESS TO IMPROVED COOKSTOVES

Under this quarter, the SE4ALL Secretariat undertook a monitoring and evaluation visit to selected EnDev projects in Mafi, Ada, Angloga, and Somanya. The monitoring team was made up of Paula Edze (Sustainable Energy for All Ghana Coordinator, Energy Commission), Doris Duodu (Senior Programme Officer, Ministry of Power), and Gideon Plange (EnDev Technical Officer, GIZ).

The purpose of the visit was to monitor progress of implementation of the EnDev project, interact with project beneficiaries, identify successes and challenges, and recommend actions to address challenges identified.

The team visited four (4) communities in Mafi where Chrisaac Stove, an improved institutional firewood stove, has been installed

for gari-frying. The communities visited are Mafi- Kumase, Amegakofe, Gidikpoe 1 and Gidikpoe 2. Five (5) beneficiaries were interviewed.

The key findings on improved institutional cookstoves during the visit to Mafi are summarised below:

- ◆ The amount of firewood used to fry a bag of gari (120kg) on the old mud stove without chimney is halved when the Chrisaac stove is used. This gives an estimated fuel cost saving of 40% to 50%. The old mud stove was constructed by the users themselves at a very low cost using locally available mud. The only cost incurred is the purchase of an aluminum frying bowl which is fixed on the combustion chamber as part of the stove. The frying bowl cost GHS40 to GHS50 per unit. The Chrisaac mud stove with chimney cost GHS1,200 but it was constructed under a 50% subsidy scheme. The Chrisaac stove is also constructed with mud and it has an aluminum frying tray embedded into the combustion chamber. Additionally, the stove has a chimney and a robust combustion chamber which is clad with a thermal material to increase heat retention in the chamber.

- ◆ Time savings realised in the use of the Chrisaac stove as compared to the old mud stove ranges from 30% to 50% (see Figure 1).

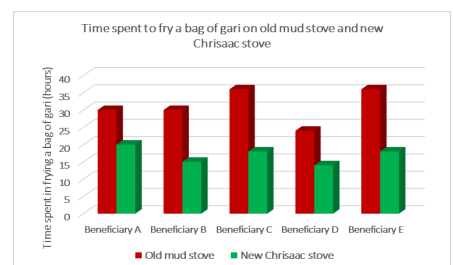


Figure 1: Comparison of time savings made in frying a bag of gari on the old mud stove and the Chrisaac stove



Old mud stove (above) used prior to the EnDev intervention and Chrisaac stove introduced (below)



- ◆ Rotary Club Ho (2015/2016 group) has financed the construction of three Chrisaac stoves at Mafi-Amegakofe for use by a group of gari-processors. To maintain the stove and ensure that it is used for a long time, members of the beneficiary group contribute a token in the form of gari worth GHS7.00 to the leadership of the group for every one (1) bag of gari fried. The group intends to use part of the contribution to construct a permanent wall around the facility to enhance the security of the stoves.



The following impacts were reported by the beneficiaries:

- ◆ smokeless work space
- ◆ fuel efficient
- ◆ less drudgery required to collect enough firewood to fry a bag of gari
- ◆ time saving, hence more gari can be fried for more revenue
- ◆ higher quality of gari
- ◆ safer to use and less exposure to heat

A few recommendations were made by beneficiaries with regard to the stove design and materials used. The SE4ALL Secretariat will work with the stove builder to address recommendations made.

In Ada and Angloga, the team interacted with beneficiaries of grid-electrification for irrigation. Also, the first two beneficiaries of the subsidy scheme for solar PV powered irrigation in Somanya were engaged.

IMPROVE ACCESS TO LPG

Under the Rural LPG Promotion Programme being implemented by the Ministry of Petroleum, 7,000 cylinders, stoves and accessories have been disseminated in the first three quarters of 2016. The beneficiary districts are Sekondi-Takoradi, Ahanta West, Aowin, Bodi, Sefwi Wiaso and Sefwi Akotombra.

PROFILES OF IMPROVED COOKSTOVES PRODUCERS (Continued)

The last set of profiles of improved cookstoves producers visited by the SE4ALL

Secretariat in the first quarter of 2016 is presented in this edition of the newsletter.

MORRISON ENERGY

Morrison Energy is a builder of institutional stoves for pito brewing, gari frying and fish smoking. Mr. Kojo Morrison, builder of the Morrison Energy stove got his inspiration from a quest to solve a domestic cooking problem of a smoking and inefficient biomass stove being used to cook "Fante kenkey" (a corn meal) prepared and sold in commercial quantity by his wife. What began as an experiment grew into a commercial business in 2014 with support from development partners such as SNV.



Improved firewood stove built by Mr. Morrison for "Fante kenkey" preparation

Morrison Energy has worked with organisations such as SNV, the Central and Western Fishmongers Improvement Association (CEWEFIA) and Daasgift to promote improved woodstoves for commercial cooking and heating purposes nationwide.

Morrison Energy has built about 1,094 improved firewood stoves for fish smoking, gari frying and other cooking interventions. Typically, a fish stove of 35 x 39 inches cost about GHS2,000 for a brick stove or GHS1,200 for a mud stove.



Mr. Morrison (right) with the SE4All Team

Capacity Building and Training

Morrison Energy has a working relationship with 10 artisans who are engaged on contract to build stoves as and when needed. Mr. Morrison has supported two of his trainees to set up their own stove construction business.

Challenge

- ◆ Slow adoption of stoves due to its high price

Future Outlook

Mr. Morrison aspires to further research and improve upon his stove design, thermal efficiency and emission attributes. Morrison Energy is also developing an improved mud stove that uses saw dust.

He has interest in training more entrepreneurs to further promote the Morrison Energy stove.

GREEN ENERGY AND BIOFUELS GHANA LIMITED

Green Energy and Biofuels Ghana Limited is a subsidiary of the parent company Green Energy and Biofuels Limited, Nigeria, manufacturers and producers of KIKE green

cookstove and ethanol gel. The KIKE green cookstove is manufactured in Hong Kong and assembled in Nigeria. The ethanol gel on the other hand is produced in Nigeria.

Green Energy and Biofuels Ghana Limited began stove and gel distribution in Ghana in 2015. The company is managed by Mr. Isaac Amponsah.

The KIKE Green Cookstove

KIKE green cookstove is made of stainless steel. It has a regulator which regulates the thermal intensity and a burning chamber that holds the ethanol gel. The stove comes in two sizes: single and double burner. It is sold at GHS 84.00 for the single burner and GHS137.00 for the double burner.

The ethanol gel is produced from a mixture of water hyacinth, woodchips, sawdust, seaweed and grass. The gel is currently sold at GHS 20.00/5litres, GHS12.00/3litres and GHS3.00/0.75litres.



A single burner KIKE Green Cookstove and ethanol gel

Marketing Strategy Used

The stoves and gel are sold through what Green Energy calls "Ambassadors" (distributors). These ambassadors are sensitised on the benefits of the product and how to maintain the stove to enable them market it to consumers.

Green Energy Ghana has a target to disseminate 1 million cookstoves by the year 2018. The company has sold about 1,131 stoves as at September 2016.



The SE4All team with Mr. Isaac Amponsah, the Country Manager

Challenges

- ◆ Low public confidence in the stove and sustainability of gel supply since it is a new product
- ◆ Difficulty in convincing older people on the benefits of the green cookstove

Future Outlook

The company is working with the Ministry of Power to conduct a feasibility study on availability of biomass resources for sustainable local production of the ethanol gel in Ghana instead of importing it from the parent company in Nigeria. This would not only create more jobs in Ghana but it would also boost availability of the product on the Ghanaian market and increase consumer confidence in sustainability of supply.

SECOND GHANA RENEWABLE ENERGY FAIR

The Energy Commission of Ghana, in collaboration with the Ministry of Power organised the Second Ghana Renewable Energy Fair (International Conference and Exhibition) from the 9th to 11th of August 2016

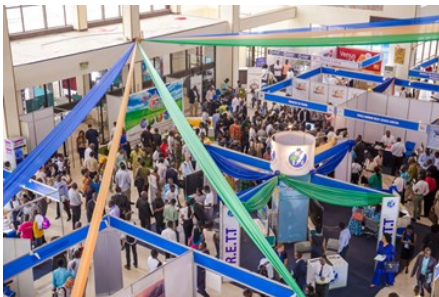
at the Accra International Conference Centre. The Fair was under the theme: Renewable Energy and Energy Efficiency – Accelerating Energy Security and Access.

The three-day event was attended by over



2,000 participants, and 58 exhibitors from renewable energy, energy efficiency and improved cookstove companies. There were six technical sessions under the themes: Rooftop solar; Energy efficiency as a tool for development; Productive uses of renewable energy; Innovations in Renewable energy and energy efficiency; Improved cookstoves and alternative fuels; and Biogas technology.

Digitaries in attendance include: Hon. Mrs.



Marietta Brew Appiah-Oppong, Minister for Justice & Attorney General; Hon. Mrs. Mona Quartey, Deputy Minister for Finance; Hon. Dr. Bernice Adiku Heloo, Deputy Minister for Environment, Science Technology and Innovation; Mr. Solomon Asoalla, Chief Director, Ministry of Power; Dr. Fred McBagonluri, Executive Director of the Ghana Climate Innovation Centre; Ambassadors; Development Partners, etc.

Speakers at the event were over 40 experts from government, private sector, academic and research institutions, innovators and beneficiaries of RE interventions implemented by the Government of Ghana with support from development partners like the UNDP.

The session on innovations in renewable energy and energy efficiency was organised in partnership with the Ghana Climate Innovation Centre (GCIC) at Ashesi University. This session was used to discuss and create public awareness on creative products being developed by young entrepreneurs in Ghana under a mentorship programme run by the GCIC.

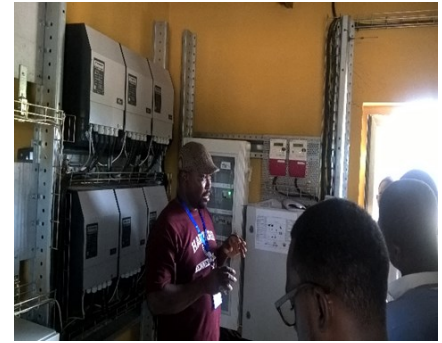


Some panelists at the innovation session of the Fair

A field trip was organised to Peditarkope, one of the island communities that has been electrified using renewable energy mini-grid under the World Bank supported Ghana Energy Development and Access Project (GEDAP)



A group of Fair participants at Peditarkope mini-grid site



Ing. Seth Mahu (Deputy Director, Renewable Energy, Ministry of Power) explaining how the mini-grid system works

The Fair was supported by Volta River Authority, Yingli Namene, UNDP Ghana, Ecobank, Electricity Company of Ghana Wilkins Engineering and the Media.

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