Enhancement Document for 20MW Solar Power Plant Simbrofo in Ghana

Hydroponic food production

Small Solar Panels for homes

charging points for mobile phones

Graduate Renewable Energy Course

Solar PV LED Street Lighting

Solar PV Water Pumps

New Schools

New University Technician Courses

Local Employment

Contents

1. Solar Farm at Simbrofo 20MW

Our partners in Simbrofo Light Ghana Ltd are proposing to build the 20MW Solar Farm at Simbrofo in Ghana, which could form the basis of their New Educational Programme in Renewable Energy.

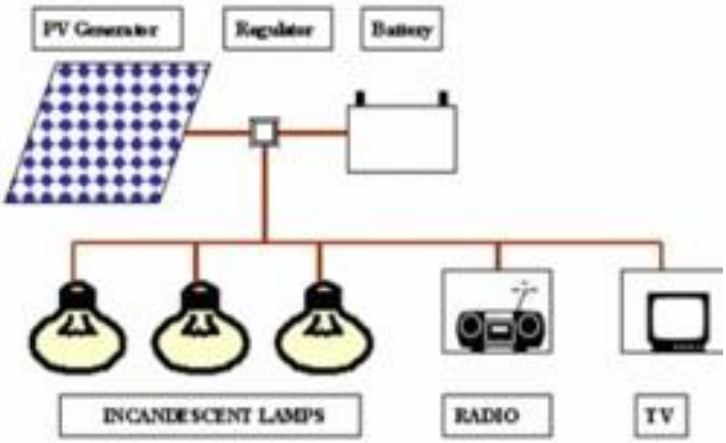
The Solar Farm will form the basis for the financial input stream for the other Enhanced Renewable Energy Technologies that will be given FREE to the Local Government and Villagers in the area of our Solar Farm at Simbrofo in Ghana.

It has been agreed that a percentage of the solar farm profits will go to the Local Government and Ghana Light Project Ltd will provide FREE Solar PV for Homs in the villages near to the solar farm and also offer FREE Solar PV Water Pumps, Solar PV LED Street Lighting together with small living PoD Home production and construction, and also a New School will be built at no cost to the Government.

In Kenya Riara University will provide training courses to train local people in Technician services and also offer a higher Degree Course in Renewable Energy & Climate Change Mitigation. This could be made possible with a link to Winneba University near ACCRA in Ghana.

2. Solar PV for Homes – small 10W to 20W Solar Panel

Larger 100W Solar Panels can be provided on a finance scheme basis so the villager can have a large Solar PV system for TV, Radio and more lights.



Each Home in the villages near to the solar farm will be given FREE Solar PV panel and lighting system together with a mobile phone charging point.

3. Solar PV Water Pumps

To assist the villagers in Simbrofo with water being made available more easily. Pumping water is a sensible and effective use of solar electric power. During the hot months, when water requirements are highest, a solar pump will provide a reliable water source for the farm. A solar water pumping system is essentially an electrically driven pumping system. Electricity, in this instance is produced by the sunlight energizing photovoltaic (Solar) modules.

A solar pumping system is available for almost all applications where an electric pump can be used. Because solar energy varies from one location to another, and over the course of a day, system design is important.

Adequate water storage ensures that water is available whenever needed, and balances daily variations in water supply and demand. Thus a small pump only running when the sun shines, plus water storage, can provide the average requirement for water supply.

Solar Pumping Systems

Although solar water pumps have been developed from some fairly sophisticated 'hi-tech' components they are relatively simple, uncomplicated packages of equipment.

Solar water pumping systems consist of three basic components:

Power source (photovoltaic solar modules), Motor/pump assembly, and Power controller (maximizers / optimizers / MPPT's) for matching the changing electrical output of the array to suit the motor/pump.

Benefits of Solar Pumping

Solar pumping uses a free, easily accessible and renewable source of energy.

Power bills are eliminated. With solar pumping, maintenance costs are minimized.

Solar modules are strong, robust and encapsulated into toughened glass, in a sturdy, aluminium frame that will last even in harsh environmental conditions.

Using solar allows opportunities for livestock, vegetables, trees and other crop production to be developed in areas where other forms of pumping are impractical.

Solar water pumping systems are reliable and perform at their best and provide water throughout summer months when demand is greatest. Solar water pumping systems need little supervision requiring only periodic checking.

Solar pumps automatically start soon after sunrise and continue to work unattended until sunset.

Solar water pumping systems operate all year round, even on cloudy dull days with little or no direct sunlight.

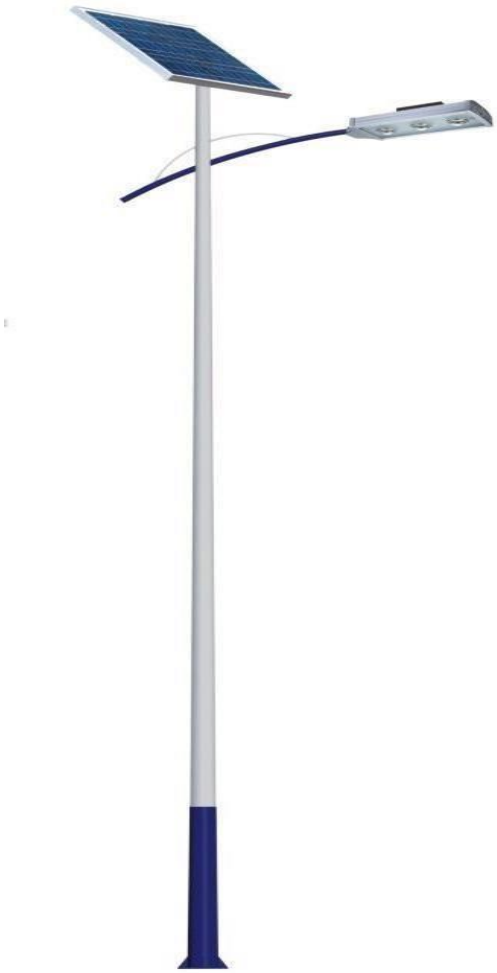
Solar modules have no moving parts and an expected working life of at least 30 years.

4. New Schools

With each Solar Farm for Ghana that Simbrofo Light Ghana Ltd build we will also FREELY build a school in the area of the Solar Farm and a Library.

The students and the new school will also be able to have electricity from Solar Panels and Solar PV Water Pumps. It may also be possible to supply Laptops for each child to enhance their learning capabilities and might continue their educational pathway at Riara University at a later stage.

5. Solar PV LED Street Lighting



6. Irrigation for Food Production

More Sustainable farming could result from increased water availability - larger scale crop production and smaller scale Hydroponic food production.

Water supplied via Solar Water pumps.

7. Local Employment & Technician Courses

Local workforce could be trained by us and by Winneba University at MSc, Bsc & Technician Level to install all our Renewable Energy Technologies. Ghana Light Project Ltd have arranged assistance in training course formation from three UK Universities – Portsmouth, Southampton and Southampton Solent University In Hampshire, UK.

The benefit to Ghana will be to have a skilled workforce for the 21st Century in the area of Renewable Energy.

8. University Course in Renewable Energy - Winneba University

Alan Brewer MSc of PSECC Ltd in the UK the parent company of Simbrofo Light Ghana Ltd has formed links with two Hampshire based UK Universities who wish to work alongside the University in Winneba and Licence Structured Renewable Energy & Climate Change Degree Courses & possibly offer student placements & exchange

. The benefit once more to Ghana if winneba University come on board with this project will be to have a highly educated Graduate students who can assist Ghana in Renewable Energy but also understand Environmental Law and Climate Change Mitigation.

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