Newsletter

GHEL Activities

Introduction to our Programs

Green Housing and Energy Ltd. (GHEL) is a social impact business dedicated to combating poverty in Bangladesh by empowering low-income people and making a better living environment available to them. Therefore, GHEL has designed 8 Programs to tackle the socioeconomic issues that hamper the expansion of rural communities.

1/Green Low Cost Housing

GHEL Green Low Cost Housing Program has been set up to offer a resistant and decent home to every Bangladeshi households. The durability of GHEL Low Cost Housing, as well as the affordable prices and customized mode of payment, corresponds perfectly to the needs of low and middle-income people living in rural areas.

By choosing the best construction materials, talented engineers and architects have developed and designed five different models of houses (from 350 ft^2 to 1,000 ft^2) to accurately meet the needs of the people and improve living conditions in rural Bangladesh. Thanks to its concrete blocks, GHEL Green Low Cost Houses are around 30% cheaper than traditional houses made of bricks. Our houses also benefit from greater durability and can resist cyclones and fire better than any traditional housing construction. Finally, the entire construction process, as well as the houses themselves, is completely eco-friendly.

GHEL believes that housing solutions specifically designed for rural living conditions will have a significant impact on the economic situation and social status of families. In addition to providing comfortable living conditions, GHEL Green Low Cost Housing is designed to accommodate home grown businesses and foster the productivity of the household.

8,000 houses by 2013

2/ Solar Home System

GHEL Solar Home System is designed to provide the household with a complete set of solar energy products to cater to the energy need in rural areas. Our Solar Home Systems are customized for low to medium income households and can power any electric device according to the power capacity.
The GHEL Solar Home System consists of: a solar panel + a solar battery + a charge controller + an inverter + low-energy light bulbs

The installation and training on use are included in the price of the Solar Home System. GHEL guarantees high quality of its components with competitive warranties. And trained local technicians will ensure the maintenance over 3-5 years depending on the component.

10,589 satisfied clients

3/ Battery Plant

GHEL is currently building a Battery Plant in the outskirts of Dhaka (Gazipur). The factory will be operational in 2013 and will manufacture all kinds of solar batteries used for our various programs. The production capacity will be of 3,300 pieces per month and 60 employees will work permanently to maintain the production flows and the high quality standard.

4/ Battery Optimizer

Besides its Battery Plant, GHEL is developing a Battery Optimizer to prevent premature lead-acid battery failure due to sulfation. Applied to all conventional flooded lead-acid – either old or new – the optimizer will increase and maintain the level of efficiency around 85 %. Thanks to this device, companies and individuals will be able to double the lifetime of their batteries.

5/ Battery Water

Battery Water is demineralized water suitable for any kind of lead-acid battery, radiator or generator. Battery Water increases the efficiency and lifespan of the battery as it improves the recharging capacity of the battery. Power Battery Water is also suitable for use in radiators, generators or automotive applications, such as cooling systems.

6/ Biogas

GHEL has launched a Biogas Plant Program in Bangladesh to address the pressing need to adopt a wide-scale use of clean energy sources for cooking.

Biogas is a bio fuel which originates from the biological breakdown of organic matter in the absence of oxygen. Biogas offers a low-cost and clean alternative to traditional cooking methods.

The Biogas plants also support income generation since the excess production of gas can be distributed to other households. The byproduct—bio-fertilizer—can be collected and provide the household with a valuable additional income.

The ultimate goal of GHEL's Biogas Plant Program is to foster biogas for everyday household needs.

GHEL targets all rural households currently using traditional harmful and dangerous fuels for cooking purposes. Women and children are the most affected by diseases related to indoor air pollution.

GHEL provides its clients with a customized financial solution with a 10-20% down payment and additional monthly instalments for a period of 2-3 years.

In addition to domestic use, biogas can be processed for industrial purposes. Indeed, GHEL Biogas Plants can welcome a generator to produce electricity from biogas. This second function of GHEL Biogas Plant will depend on the input capacity of the village: 50 cows are, in fact, needed to fuel a power generator.

153 Biogas Plants installed

7/ Solar Irrigation

GHEL has introduced the solar water pump in its sustainable farm of Bogra. After successful tests on the field, GHEL is now installing 14 solar water pumps with a capacity of 600,000 L/day, enough to supply a 120-Bigha land. 6 locations in Bogra District will benefit from this program. Group discussions have already been organized and farmers have welcomed this initiative.

GHEL Solar Irrigation system will consist of a solar panel that powers an electric motor, which in turn powers a bore or surface pump. The water is pumped from the ground or stream and stored into a raised tank. GHEL deeply believes that solar energy will emerge as a sustainable and clean supply for

8/ Mini and Smart Micro Grid

As part of GHEL's pioneering sustainable village model, GHEL has started a pilot program of Mini and Smart Micro Grid Plants. These plants are designed to provide power to a group of households through collective distribution and centralized monitoring. This systematic approach to energy supply is an efficient way of making electricity and biogas more available to the villages. This way, GHEL can offer an affordable distribution channel to regions and households unable to invest in an independent solar home system or biogas production plant. The GHEL Mini and Smart Micro Grids can further provide villages with collective benefits — such as powering solar irrigation for improved cultivation techniques or supplying schools with energy to support computerization. GHEL is piloting the GHEL Mini Grid joint venture in Bogra and Shahjahanpur.

GHEL Mini Grid is an off grid solar energy system, installed in villages with a collective need of electricity of at least 100 kW.

GHEL Micro Grid is a hybrid construction of an off grid solar energy system and a biogas production plant. The system has a power capacity ranging from 30kW to 50kW. And the additional Biogas Plant can provide beneficiaries with clean and affordable fuels for cooking.

9/ Enterprise Development

Taking a step beyond grassroots poverty reduction, GHEL has set up an Enterprise Development program as a response to the need of capacity building within the SME sector. GHEL believes, in fact, that a traditional financing method of providing only money is not enough for real development to take place. That is why the program will mobilize both capital and consultancy expertise to be distributed to SMEs that currently do not have access to this kind of support. GHEL model has four key components:

- Equity or debt financing by GHEL
- Skill training by industry experts and consultants
- Legal, administrative and market support
- Technological and operational support systems

10/ Citi—GHEL Solar Project for Rural Microenterprises

The Citi—GHEL Solar Project for Rural Microenterprises was introduced in 2011 in selected villages around the country to give communities access to electricity. The program was initiated by AUP, financed by Citi Foundation and executed by GHEL. The project provided 369 rural households with Solar Home Systems. The total number of beneficiaries reached 1,845 people, what includes microentrepreneurs and their household. These people have seen their living standards rise substantially due to the access to solar energy. Additionally, 141 microenterprises got access to solar home systems in order to extend their working hours and increase their productivity.