DAASGIFT QUALITY FOUNDATION

Provision of Business Development and Micro Finance Services

To The Rural and Urban Poor

PROVIDE SOLAR LANTERNS FOR 50 HOUSEHOLDS

About 80% of the existing Daasgift Quality Foundation clients use expensive and crude traditional energy sources such as kerosene and charcoal to meet their cooking and lighting needs. The energy sources are dirty and unhealthy and may cause severe lung problems or eye problems and also contribute to global warming due to constant emissions of greenhouse gases.

Some families living in remote off grid[1] communities may even have no night life i.e. after sunset and before dawn: adults cannot have any active income generating activities while children cannot continue their studying. The destitute situations cannot make them even afford a one-time investment to improve their life. These families fall into a vicious circle of poverty.

Therefore, DQF plans to provide solar lanterns as an alternative to kerosene lamps and battery powered lamps for 50 households living in off grid communities in the Western Region of Ghana, and around 300 individuals can benefit from this project.

THE HOUSEHOLDS AND COMMUNITIES

The intended beneficiary households are found in communities located about 20 km from the district capitals. They have populations of about 500 individuals per community. They are characterized by the lack of amenities like electricity, pipe borne water, schools, roads, drainage systems, hospitals and proper housing. Economically they are mostly peasant farmers with very low incomes. Each household is made up of about 6 to 8 individuals. Petty trading and other economic activities like video rentals. And the use and sale of mobile phone and phone credits are minimal or non-existent due to the lack of electricity and adequate illumination in the night. Children in these households drop out of schools or attain the

[1] National Electricity Grid

minimum of junior high school certificate. This can be partly attributed to the lack of light for studying in the night.

THE SOLAR LANTERNS

The solar lanterns supplied by DQF are the types supplied by Power World Company Ltd. The lanterns come along with a Solar panel board, an AC charger, a rechargeable Lead-Acid battery (6V 2.5Ah) and a universal mobile phone charger for an integrated charging unit in the lantern. It has a power output of 7W and can produce illumination for up to 8 hours when fully charged. The lanterns have an estimated life span of about 30 years. The unit cost of the lanterns at the moment is 90 Ghana Cedis (65 US Dollars).

At the moment the lanterns cost 90 Ghana Cedis, (65 US dollars). The lanterns are equipped with an integrated universal mobile phone charger including the lantern, solar panel, a charger and another universal charger for cell phone batteries. Though expensive for these families, solar lanterns are durable products, which can last for at least 30 years.

IMPACTS

Socio-economic

It will directly improve use of energy efficient systems for lighting thereby save villagers' money.

The availability of solar lanterns will enable existing traders to conduct business in the evenings and generate additional income. Night micro-business such as VCD rentals, beverage vendors and grocery stores will be sustained.

The business will improve quality of life and health conditions in households and communities, especially women and children, and small business as well as rural institutions. This is due to convenience of payment for products that would avoid indoor pollutions such as kerosene lanterns.

It will enable students to study in the night thereby enhancing their performance in school and opening up opportunities for smart students.
It will increase the popularity of solar PV, generating more demand.
It will demonstrate the viability of off grid rural electrification by private sector.
It has the potential to create jobs for technicians, night food and supplies vendors; and other rural business will also be created.
Villagers can also use the universal charger provided in the package of the solar lantern to charge their phones which give them a better opportunity to contact their friends.

Environmental

The Environmentally friendly solar lanterns will offer households cleaner energy options and thus reduce the health and physical dangers households are exposed to through the use of kerosene and candles as a source of lighting in rural communities.
The project will help reduce Green House Gas (GHG) emissions and this will contribute to the reduction in global warming.

Average Household Energy Cost per Month

Item	Amount GH₵	Amount US$
Charging of battery for black and white TV 2x every week. Cost of charge is GH₵ 3 plus transportation of GH₵ 0.5 (₵ 3.5*8)	28.00	20
Dry cell battery for radio 1pkt per month	3.00	2.2
Kerosene-2 gal per month	5.00	3.6
Dry cell battery for flash light (6)	1.5	1.1
TOTAL	37.5	26.9