**SUSTAINABLE ENERGY FOR ISLAND COMMUNITIES – BOMIGO PROJECT**

The Bomigo community is an island comprised of around 1500 inhabitants in the coastal areas close to Anloga in the Keta District of the Volta Region of Ghana. It is a post surrounded by the salty waters of the Keta Lagoon, around 146 kilometers from Ho, with a final journey by boat, the only way to reach the island from the mainland. Bomigo is off the electricity grid, with minimal access to public services – it is one of the poorest and most deprived areas of Ghana.

For island communities such as Bomigo, it is difficult and uneconomical to connect them to the main electricity grid. Therefore, the local population has to use kerosene lamps or candles. Kerosene lamps burn kerosene which emits black carbon. Black carbon is both bad for the environment as it is a hazard for people’s health since it affects air quality. Other hazards of kerosene use include poisoning, fires, and explosions. Besides the health benefits to the local population of switching to solar, the community will also experience many gains in productivity because they are continuously provided with energy; which in turn will produce economic growth.

The goal of the proposed project is to use technology, in the form of more efficient solar lighting solutions to improve the health, education, water access, security and economic livelihoods of 500 youth, women, and children in the Bomigo community.

By implementing an awareness and education program we also want to make these communities understand the harmful effects using unsustainable lighting on their health, climate, and the environment, and demonstrate alternative methods. The project will also train 5 young artisans from the Bomigo Youth Development Association to be able to install and maintain the solar systems, thereby creating employment for them, and catalyzing a sales and marketing opportunity for them in the community.

The project also seeks to install 5 standalone solar systems in various centers within the community, by installing 0.5kw-1kw for the hospital to improve health care, 1kw for the community school to help children to study in the evening for their exams, 2kw solar water pumping system for the water pumping and irrigation to help improve the economic activities and all year round farming in the community and 1kw worth of street lighting at the community center to help improve security. By installing these solutions in the community, we hope to create an enabling environment improving the lives of the local people and catalyzing economic prosperity.

The project will also promote small DC powered solar lighting solutions and solar generators in the community to create avenues for households to adopt solar lighting solutions for phone charging

The project will through the educational programs institute an end-user financing scheme in line with the Village Savings and Loans Scheme (VSLA) Model to encourage local households and small enterprises to save to procure small scale solar generating sets after the project period to ensure sustainable demand and supply of solar lighting solutions within the Bomigo and surrounding communities to create business for the trained youth.

The project will strengthen the capacity of the Bomigo Youth Development Association and Women Groups through leadership skills training to enhance improved governance and advocacy in the community, during the planned educational programs.

The project will also help establish ISEES presence in the community to work with the Bomigo Youth Development Association to introduce other climate-smart renewable energy solutions to the community and also develop further interventions to improve energy access and the economic livelihoods of the community members.

**Expected Outcomes:**

* 5kw decentralized solar lighting solutions will be installed in the community to improve healthcare, education, water access, security, and economic livelihoods.
* At least 500 people will benefit directly from reduced exposure to kerosene smoke, and reduction on lighting expenditure, and improved health
* 500 indigenous residents will become aware of the benefits of switching from traditional kerosene wick lamps to improved solar lighting
* At least 5 young artisans (including females) trained in the technical and business aspects of installing and maintaining solar lighting systems as a business.
* At least 50 households are aware of the benefits of saving to procure solar lighting systems (through VSLA) end-user financing schemes.
* At least 100 children directly benefiting from improved education, clean lighting and to see the educational results of Junior high school graduates improving.
* 20 tonnes of carbon dioxide saved/avoided yearly from the use of improved lighting systems.
* Improved access to healthcare by the local residents due to doctors becoming interested to relocate in the community to provide healthcare.
* Improved teacher retention due to improved lighting and laptop charging in the school
* Improved economic livelihoods since residents will be able to use the water pumping system for irrigation to increase food security and yield.
* Reduced rural-urban migration due to the youth now willing to stay.

**Activities include the following**

1. One day stakeholder consultation and launching of the project coupled with educational program on the benefits of solar lighting in the community

2. Training for 5 youth in the technical and maintenance and business aspects of installation of solar lighting systems as a business.

3. Installation of 5kw solar lighting systems for the health center (1kw), the basic school (1kw), the Community borehole (1kw) and 0.5 kw worth of solar street lights and 0.5kw of DC powered home systems for relevant selected community households to improve economic livelihoods.

4. One day awareness creation and education on the usage, maintenance, and benefits of the solar lighting system for the community.

5. Project Closure and sustainability management to ensure that 5 trained young people are able to maintain the system and that the system is effectively managed by the community leadership.

Activity 1 - Training Venue, transportation, food and drinks, training materials, awareness creation materials and publicity - $300

Acitivity 2 - ISEES will bring its training equipment to the community, so food, drinks, training materials, and honorarium for resource person, transportation - $400

Activity 3: Procurement of 5kw solar panels, solar water pump, batteries, accessories, installation cost, feeding for ISEES technical persons and accommodation $4000

Activity 4: Event venue, transportation, food and drinks, publicity materials, accommodation for facilitators, 200

Acitivity 5: Development of publicity materials for trained youth, demand aggregation for DC powered solar home systems for households and businesses, community leadership management and support, project management expenses - $100