



Dream Renewables: Solar PV for Bomigo Basic School

Our ask

Dream Renewables are asking for £1,200 to cover the remaining costs of a solar power system and IT lab for an off-grid school in rural Ghana. This system will have a transformative effect on the school's ability to teach IT, and run 'out of hours' education activities.

[Kwanda](#) originally agreed to fund half the project and Dream Renewables match funded the remainder. However unfortunately Kwanda recently sent communications stating that they have suspended disbursements to new projects. Therefore, we now have a funding deficit of £1,200. Once we receive this we will be ready to install and commission this system, with a full project plan and approvals already in place and many of the works already started.

Introduction

Dream Renewables design and deliver educational programmes inspiring young Ghanaians about renewable energy through practical, hands-on learning.

During these programmes, students design renewable energy systems for businesses or organisations in the local community. During our 2019 programme, Bright Mensah designed a solar power system for his local school, Bomigo Basic School, which currently has no access to electricity. This system will power a small computer lab, a Lighting system to enable after-hours extracurricular activities, and a phone charging hub for the community.

The total budget for the project is £2,400, and £1,200 has already been raised:

- £1700 for the solar energy system
- £200 to ship 16 donated laptops and computer
- £300 for lighting and electrical work
- £200 project management costs



The school will own the system, and take responsibility for operating and maintaining it. A member of the Parent and Teacher Association will be trained in basic operation and maintenance, while the school will generate revenue by using the spare electricity on weekends and sunny days to provide






services to the community. This revenue will go into a fund for maintenance and repair of the system.

Stakeholders

- **Bright Mensah Senam:** a student who completed our 2019 programme and developed this project proposal. Bomigo Basic School is his old school. Bright would be acting as the project manager for this project, organising the design and installation of the system and monitoring the impact of the project post-installation.
- **Lady Volta Green Tech Academy(LVGTA):** a Renewable energy training institute that focuses on training women and girls in renewable energy. They have an expert team of installers who will carry out the design and installation of the system along with bright Mensah
- **The Parent and Teachers Association of Bomigo School:** a group of parents and teachers who oversee the operation of Bomigo basic school. They have agreed to own and manage the system after installation. And therefore will undergo training on how to look after the system. They also represent the students who will benefit from the system

Project plan and current progress

There are three elements to this project:

1. **Preparing classroom for the installation of the IT lab.** Doors, windows and iron bars will be installed to ensure the IT lab will be dustproof and secure from thieves, a ceiling and ceiling fans will be installed to reduce the temperature in the classroom.
 - a. Dustproofing  - completed
 - b. Security measures  - completed
 - c. Desks and cabinets - currently being constructed
 - d. Ceiling - will be constructed once the electrical wires have been installed
2. **Acquiring IT equipment.** 12 laptops and 4 desktops are required, along with a printer and network equipment
 - a. Sourcing equipment  - all computers have been donated as a result of a campaign
 - b. Testing and recondition of equipment  - completed
 - c. Shipping equipment -
3. **Installing the renewable energy system**
 - a. Design the system  a 1.5kW, 6kWh solar hybrid system has been designed
 - b. Commission installer
 - c. Install and commission system

Upon completion, these facilities will be used to take each class through a structured IT program, increasing the skills and employability of the students. The solar installation itself provides an excellent educational resource for the students at the school. Increasing awareness of renewable energy, and the benefits it can provide rural communities.

A phone charging hub will be available to the community 7 days a week, while on the weekend the power will be used to run a printing shop or internet cafe, which the PTA will use to generate revenue to conduct maintenance and repairs

One year after the installation, Bright will perform a project review and impact evaluation. This will seek to understand the impact of clean electricity on students' education and determine what improvements could be made regarding the technical, cultural and logistical aspects. This will

include interviewing the students and teachers, as well as determining direct economic and educational impact through quantitative data collection.