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**TCP Project in Rubaare, Uganda**

***Our Mission:***

The mission of **The Charcoal Project (TCP)** is to promote, facilitate, and advocate for the widespread adoption of energy efficient solutions for those who depend on wood, charcoal and other biomass for their primary fuel. TCP’s work in Rubaare is only one example of our on-the-ground projects that are intended to develop models for replication and scaleability in other parts of the Uganda and East Africa.

***The Problem:***

Roughly half of the world depends on wood, charcoal, and other biomass fuels for cooking and heating. Over 90% of the population in sub-Saharan Africa depends on biomass. Most biomass consumed today in the developing world is unsustainably produced and inefficiently burned, and offers few good alternatives for adequate lighting. Kerosene and candles are often used for lighting and they also produce indoor air pollution and negative health consequences. In addition, they do not produce light that is adequate enough for reading, studying or working in the evenings. Lack of sufficient lighting has a significant negative effect on productivity and learning in the developing world.

***Biomass Energy Efficiency Program (BEEP):***

The **Rubaare Education Foundation (REF)** is a rural school district in Southwestern Uganda serving over 1,600 students, many of whom are orphans or very poor. The Director of REF is **Henry Twinemasiko**, an inspirational and dynamic leader who is well respected in the local community. TCP is working with REF to provide a comprehensive energy efficiency program for the schools and the surrounding community, which are in dire need of fuel for cooking and lighting. TCP has established a fuel briquette program at REF using waste streams to provide fuel in a heavily deforested area. The students at REF’s main campus have been trained in the art of making fuel briquettes and are now producing briquettes to satisfy the needs of the main campus, which encompasses a high school/vocational school and a primary school. In addition to the briquette program, TCP has built a shelter to house the briquette making operation and installed solar lighting at one of REF’s primary schools. Thanks to the generous contribution by the Unitarian Church of Summit, NJ in 2013, the schools’ cookstoves have been upgraded with custom built, clean-burning efficient stoves. With these custom stoves, REF has the flexibility to use briquettes, wood or charcoal, and has reduced its fuel costs by 50%.

In 2014, TCP will initiate a comprehensive solar lighting program, which will start at the main campus and then be spread to the other schools as funding permits. The program will focus on providing lighting in all of the school’s buildings as well as some capability for the administrators to use laptops and other small appliances. The system will be designed so that it can be expanded as the school grows or its power needs change.

***Key Components of the Solar Program***

* In the first phase, 700-800 students and staff will benefit from classrooms and dormitories being lit for the first time. In addition, all common areas will be lit and there will be outdoor security lighting.
* The system installed will be expandable for the time in the future when the school grows or it is able to establish a computing center.
* Local technicians will receive training to maintain the system and will be acquiring skills for a new and growing industry.
* A local Ugandan company will be responsible for engineering and installation of the system, contributing to the local economy. (We are receiving proposals from five local companies)
* Maintenance will be given a top priority. Some funds will be set aside for battery replacement and other unanticipated maintenance events.
* Income will be earned via a cell-phone charging kiosk to pay for maintenance costs. A stand alone kiosk will be set up to so that people in the local community can pay a small fee to charge their phones (currently they would have to travel into town for this service and pay relatively high fees).
* All equipment will be installed with security in mind to reduce any chance of theft or vandalism.
* In subsequent phases, three more schools with almost 1,000 students will benefit from the lighting and power.

***How You Can Help:***

We are currently raising funds to install solar lighting at the REF schools. With your contributions, we can **supply REF with solar lighting for their main campus** **and the Rubaare Junior Primary School,** which is just down the road**. One hundred percent of your contributions will go toward the purchase and installation of the solar system.**

***Project Status***

TCP is currently interviewing and accepting preliminary proposals from five solar installation companies in Uganda. Once we have determined the best technical solution, we will ask for final bids from the vendors. Depending on the success/timing of our fundraising campaign we will begin installation of the system in the spring.

***Summary of Projected Costs:***

**Main Campus:** **Additional Primary Schools:**

Equipment - $12,000-$15,000 Kabayanda Junior $6,000-$7,000

Labor/Installation - $2,000-$4,000 Buhanda Junior $6,000-$7,000

Rubabdo Junior $6,000-$7,000

Total Main Campus $14,000-$19,000

Rubaare Junior Primary School **Total Phase II $18,000-$21,000**

Equipment $5,000-6,000

Labor/Installation $1,000

Total Rubaare Junior $6,000-$7,000

**Total Phase I $20,000-$25,000**