



AHEAD Energy and Peace School: A Mutually Enhancing Partnership

AHEAD Energy is an NGO based at Marietta College in Ohio that works with schools and medical facilities in Africa to help them obtain the energy they need to carry out their vital services. AHEAD began work with Circle of Peace School in 2009. Energy is needed at the school to cook meals, refrigerate food, pump water, heat water, light classrooms and other areas of the school, charge phones, and run computers and classroom equipment. With sustainable energy systems, there are more opportunities for learning, health improvements among students and staff, and relief from the drudgery and isolation that lack of access to energy entails – all while safeguarding the environment.

Solar photovoltaics

Peace School was formerly connected to Uganda's feeble power grid, but the cost of electricity was very high. In addition, there were frequent power outages. In April 2009, AHEAD installed ten 120W solar panels, which are producing electricity to light the classrooms, the two dormitories and the school yard and run some small appliances. In April 2010, AHEAD added seven additional panels to provide electricity for the school office and a computer lab. All incandescent bulbs at the school were replaced with the more efficient compact florescent bulbs.

Efficient cookstoves

Before AHEAD's involvement, cooking was done seven days a week, using nothing more than a pot on an open fire. The school cook – a young mother – squatted on a dirt floor in a shed blackened by smoke with a baby often slung on her back, exposing them both to harmful smoke and pollutants. AHEAD arranged to construct a new kitchen and two twin-burner rocket stoves with chimneys that funnel exhaust outside.

Water heating

Working with the East Africa Energy Technology Development Network, AHEAD experimented with installing 200 liter tanks in the rocket stove chimneys so that water can be heated as food is cooking. Because this experiment has not been altogether successful, AHEAD is having solar thermal hot water units installed to provide hot water.

Rainwater harvesting

Before AHEAD's involvement, the school was purchasing municipal water at a very high price. In June 2010 AHEAD paid to have a water harvesting system installed so that rainwater can be used in the latrines, and for cleaning, laundry and bathing. In February 2011, a second system was installed to provide water to the showers that staff and boarding school students use. Most recently, AHEAD provided an electric pump to transfer water from holding tanks on the ground to elevated tanks.

Energy curriculum

AHEAD Energy is working with college faculty and students to develop an energy curriculum for Peace School. The curriculum introduces the technical aspects of energy production and explains how the systems installed at the school work and how to maintain them. Dr. David Hursh from the Warner Graduate School of Education at the University of Rochester (Rochester, New York, US) has made two trips to the school to develop and implement the curriculum. On his most recent trip (summer 2011), he brought two medical students to work on environmental health projects at the school.

Circle of Peace School is AHEAD Energy's first partner in East Africa. Learning from its experience at the School, AHEAD has gone on to assist four other entities in Uganda and Kenya with their energy needs. For more information about AHEAD Energy, visit: www.aheadenergy.org.