

African Photovoltaic Project

*“Just so,
your light
must shine
before others.”*

Matthew 5, 16

Designed and edited by
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SND SUN TIMES

What we need now are donors to step forward and embrace this project as their own (\$250K). This seems to be most compelling incentive - to be able to sense an ownership of a specific project and to see the results for a particular community of people: sisters, students, teachers, clinic staff and families. We value your support and partnership. We are deeply grateful for every donation, in whatever amount. We also welcome new donors as we look ahead to the needs of this coming year. The Sisters of Notre Dame de Namur internationally pray for all who support the photovoltaic projects.

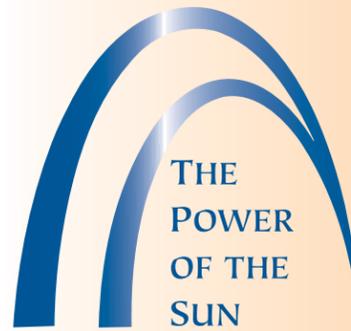
The staff members of the Congregational Mission and Finance Offices with our Congregational Leadership Team are working closely together for the successful realization of this project. From the beginning, we have believed that “Failure is not an option.” Our prayer accompanies our gratitude for all who support so generously our worldwide ministries.



Sr. Esther Adama appreciates the new system.



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SISTERS OF NOTRE DAME DE NAMUR

February 2009

The Power of the Sun

The African Photovoltaic Project (APP) continues to evolve, expand and improve from a dream and a hope in 2005 to reality for three poor communities in 2009 through very generous donors. An update of our progress follows on these pages. We hope you share our enthusiasm, continued hope and projected plans.

FIRST SITE: NIGERIA

Good news! The Photovoltaic Project in Fugar, Nigeria is producing electricity and purifying water. The first site in the Congo is also up and running in Ngidinga. This site powers electrical systems for the community house, schools and hospital. Residents come regularly to charge cell phones. The newest site in Awkunanaw, Nigeria is producing electricity to charge lights, plumbing, computers and an infrastructure for students and the community.



Louis Casey and Sisters ready the signis connection to the satellite in Fugar, Nigeria.

Considerable time has been given to insure that the first site in Fugar, Nigeria is fully operational and sustainable. The infrastructure issues as well as connectivity issues have been innumerable and require further study. There have been problems with the data link component in all of the African systems as they have come on-line. These issues prevent the transmission of information about the system operations. The technicians and sisters rely on email for correction procedures. *The data link connection is a priority project and is being addressed now in January 2009.* The learnings from all installations are invaluable as we move toward and adjust equipment needs to each site.

CHALLENGES IN THE CONGO

Sisters accompanied Louis Casey of Sustainable Energy Systems, Inc., on a three-week trip in January 2007, during which time he surveyed additional sites in Congo. The road conditions in the Congo are even more challenging than those in Nigeria. Further adjustments were needed for various elements of the design. Workers installed preliminary electrical work at Ngidinga for the school, hospital and the community house in preparation for the project installation.

*We yearn
to deepen our
fundamental
commitment
to stand with
our sisters
and brothers
who live in
poverty and
accompany
them in their
struggle.*

General Chapter, 2008, p. 5



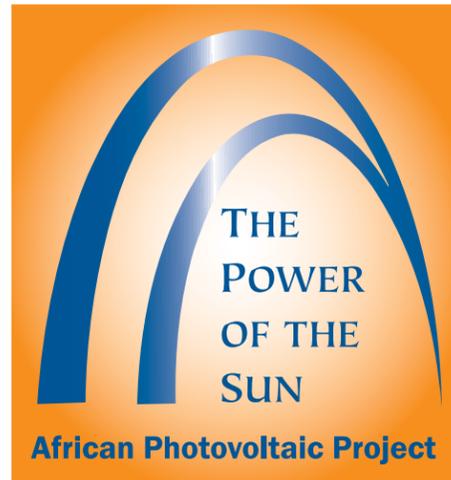
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NGIDINGA INSTALLATION

In February 2008, the installation in Ngidinga was complete and functioning properly. The APP Team worked hard and long to complete the installation. It was necessary to install and learn how to use light switches. Before the installation of the Photovoltaic Project, electricity was provided through generators. They were used only when electricity was needed for emergencies. The Photovoltaic Project allows for electricity all the time. In order to store generated electricity, it is necessary to turn off usage during the day. This was a new concept for the people.



Road conditions challenge workers.



A Sister checks the equipment.

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LIGHT OF LIFE

The sisters and community welcomed the LIGHT of the project with celebration and the gift of life with the birth of "Louie" who was born during the night of the first light to come from the project.



Louie was born the first night with light from the project.



Sr. Margaret Goode oversees workers in Ngidinga.



Sr. Suzanne Luntadila prepares the way for a new site.



Ngidinga community celebrates the photovoltaic installation.

MODIFICATIONS IN NIGERIA

Modifications were needed for the project in Awkunanaw, Nigeria to accommodate the projected electrical usage of the school and community needs. Shipping and delivery delays necessitated the project activation beyond the August 2008 completion date.



New system installed in Awakunanam.

In October 2008, the APP Team proceeded with the installation of the project in Awkunanaw.

NEXT THREE SITES IN THE CONGO

The Sisters have determined the locations of the next three project sites in the Congo. We are in the process of ordering project materials for Pelende and Kitenda. The actual construction date is yet to be finalized because of the uncertainty in the procurement and transportation process as well as in the funding. SATTEL, a Congolese company, is under contract to provide the satellite connections for the existing project in Ngidinga and the intended projects in Pelende and Kitenda.

IMPROVEMENTS

Our troubleshooting experience for the existing systems is invaluable as we prepare for these new sites. All existing systems are producing electricity with storage capacity and purifying water, but there continues to be issues with data collection and transmission of electricity. We have replaced and redesigned some project components according to specific needs of each site. The improvements include a better method of procuring and setting up the computers that monitor and transmit the data. We have also improved the system for lightning protection.

TRAINING OF SNDs

The educational and interactive components of the system are most important. Classroom training and electrical component interaction as well as project construction with hands-on configuration are integral to the development of each project installation both for sisters and community members at each site. With help through remote monitoring in the United States, African technicians are able to maintain project components. They develop and implement an operational plan for the intricate details of electrical and connective elements of the filtration and battery systems. Correcting the issues with the data link connection will facilitate the flow of information between the electrical engineers and each program operational engineer at each site.



Training session for Sisters and laity in Nigeria.

EFFORTS TO SIMPLIFY DESIGN

Current work is targeting the data link programming. Our consultant, Louis Casey is working with a manufacturing company to streamline and simplify the design of the system, to make maintenance simpler, and to reduce costs. He has the benefit of experience in the installation and maintenance of the three working systems, with their individual adaptations. Louie uses the field experience of the sisters in Nigeria and Congo who are responsible for the ongoing oversight of the project.



An SND views the project gauges and battery array.