

SCHOOL FOR LIFE

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Project report:

Katuuso primary and vocational school
solar power



1. Type of Project: Solar power
2. Project Summary: Installation of a solar power system to bring Katuuso primary school up to international standards through the provision of electricity
3. Location of Project: Katuuso primary school, Katuuso village, Mpigi district, Uganda.
4. Objective of the Project: To improve the services Katuuso primary and vocational school offer including:
 - a. Increasing quality of primary education
 - b. Increasing clean water provision through electronic filtration,
 - c. Increase number of students being educated through vocational training
 - d. Increase efficiency of Katuuso primary school operations
 - e. Increased nutrition due to access to refrigeration
 - f. Increased security on site through lighting,

5. Project Description and Activities:

SFL partnered with Rotary to bring electricity to Katuuso primary and vocational school. The solar power system installed consists of:

- (1) 36 x Solar world 130W panels (*See fig 1.*)
- (2) 20 x 220Ahr Victron Genuine gel batteries (*See fig. 2*)
- (3) 2 x Victron 5000VA 24V Inverter chargers (*See fig. 3*)
- (4) 4 x Steca 40A 12/24V Charge controllers (*See fig. 4*)
- (5) 10kva Generator

This system has been designed for the use of:

- (1) Internal lighting for all school buildings
- (2) External security lights
- (3) 10 x laptops
- (4) 30 x phone chargers
- (5) 3 x TV/DVD units
- (6) 6 x projectors
- (7) Printer and scanner unit
- (8) Solar fridge
- (9) Solar freezer
- (10) 10 x sewing machines
- (11) Water purifier

6. Justification: This project was selected by SFL management, Katuuso primary school staff and parents committee. The project was presented to all

members and unanimously agreed on as bringing a great benefit to the school.

7. Approval of the Project: This project was approved by the SFL Administration
8. Partners:
 - a. Rotary club of Mengo
 - b. Rotary International sponsor district 9800, Melbourne
 - c. The Rotary Foundation
 - d. Rotary club of Altona City, District 9800
 - e. Rotary club of Ku-ring-gai, District 9685
 - f. Rotary E-Club of Greater Sydney, District 9680
9. Contractor: UltraTec (U) Ltd
10. Source of Funds: See partners.
11. Budgeted Cost of the Project: Solar system \$38,175 US. Generator \$4,600 US.
Total US = \$42,775
12. Actual Expenditure of the Project: \$42,775 US
13. Participation of the Community: Katuuso community was actively involved in all aspects of the project such as design process, contractor identification and implementation.
14. Starting/Completion Time: 8th April 2013 until 22th April 2013
15. Number of Beneficiaries/Villages: The estimated number of beneficiaries from this program is 1,710, consisting of:
 - 370 students at Katuuso primary school
 - 120 Vocational training students,
 - 10 teachers,
 - 3 vocational training staff,
 - 7 support staff
 - 1,200 community members
16. Results Achieved:
 - (1) The implementation of the solar system has been completed and was officially switched on in April 2013.
 - (2) Efficiency of operations has increased as computers, phones, and printers can now be located at site.
 - (3) Increase nutrition of our feeding program due to access to refrigeration.
 - (4) Increased security of school through lighting
17. Status and Progress (percentiles) of the Project: Completed (100%).

18. Constraints and Measures Taken: Initial constraints due to number of partners involved in the project. Measures taken involved improving lines of communication

19. Lessons Learned: Adequate and realistic timelines must be implemented and communicated to all parties from the outset of any program

20. Additional Information: Monitoring and servicing will continue of solar equipment. Projects linked to the solar power system to be implemented once funding is acquired.

21. Remarks: SFL is incredibly grateful to all partners involved in the project and would like to thank the following individuals for their commitment and perseverance: Tony Castley, Ronald Kizito, Chris Davis, Martin Kasasira, and Dan Nabaasa.



Fig 1. 36 x Solar panels



Fig 2. 20 x batteries



Fig 3. 2 x inverter chargers



Fig 4. 4 x Charge controllers



Fig 5. Solar fridge and freezer



Fig 6. Solar fridge



Fig 7. Katuuso at night



Fig 8. Classrooms at night



Fig 9. Control unit



Fig 10. Phone and torch charging