Design of a Solar Power System for Ekuphileni Bible Institute

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Our Client
The Theological College of Zimbabwe (TCZ)

6.9 kW solar power system
Ekuphileni Bible Institute (EBI)
The Problem
Definition of the Problem

Power production in Zimbabwe is not sufficient for power usage.

Power loss occurs roughly 40 time per week.
Load Shedding

Definition: Power supplier systematically limits power to large areas of power grid

- Regular time intervals
- All areas treated equally
Corrupt Load Shedding

Definition: Load shedding with ulterior motives.

- Random time intervals
- Wealthy = more power
The Solar Solution
Our Solution

Solar

Batteries
System Specifications

Budget: $20,000

Required Energy Production
- 5.3 kW System (With Classrooms)
- 4.0 kW System (Without Classrooms)

Energy Storage
- 400 Ah Capacity
What We Intend to Power

Photovoltaic System

- Kitchen
- Library
- Classrooms
Why Choose the Library and Kitchen?

• Client specifications and concerns

• Prevent food loss

• Provide reliable Internet
The Design
Placement of Solar Panels

- 15 panels
- Pending funding: 3 panels
Component Board

- Custom made
- Distributor: Samansco
Outback components
Upcoming Installation

Three week site team trip will occur in May-June 2017

Team consists of 5 students and 2 advisors
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Solar PV project team members
Questions