As part of an effort to improve access to health services and education in Sierra Leone, Zion Ministries has partnered with Seven Hills Global Outreach (SHGO) in order to create a centralized campus for the purpose of providing maternal and infant health services, a nutrition center, a well, a primary school and a community meeting space for a population of over 13,000 people.

Currently, there is not a sustainable way to charge mobile electronics on this campus. NewBorn Solutions has researched the systems most commonly employed for mobile device charging in rural Africa, with the goal of providing recommendations to Zion Ministries outlining a sustainable and cost-effective charging strategy. One device stands out as the most promising solution: the ReadySet Solar Kit, a simple, reliable and low-cost solar charging product produced by Fenix International. Working with Seven Hills, NewBorn Solutions has developed a set of guidelines for installation, maintenance and use of the Readyset system on campus. If this pilot implementation is a success, it can serve as a model for future implementation in other regions of Sierra Leone and elsewhere in Africa.

### References

## Methodological Overview

### Background Research Phase

Initial research topics included:
- History of Sierra Leone: long-term effects of Civil War.
- State of the Bandawa community campus.
- Previous implementations of cell phones for rural health initiatives:
  - General research
  - Campus-specific (discussion with SHGO)

### Recommendations Phase

How can we enable mobile phone charging on the Bandawa campus?
- Determined preferred charging method: solar (PV cell).
- Selected ReadySet Solar Kit by Fenix International as a possible solution and evaluated its viability.
- Established recommendations.

### Implementation Strategy

**Installation, Training and Usage Protocols**
- Chief health and education officers will maintain a ReadySet unit on campus and ensure that it is kept charged whenever possible.
- When the campus generator is operating to provide light at night, the ReadySet battery may be charged directly via AC.
- The solar panel is small and light; it may be brought indoors during the night to avoid damage or theft.

### Potential Health and Education Benefits

- For mobile health services.
- To charge medical electronics.
- To charge cell phones for educational purposes.
- To charge personal electronic devices.

### Future Development Goals

#### On Campus
- Electronic relationships with doctors should be formed to enhance the level of expertise available.
- As cell phone infrastructure improves, internet access could be made available on campus.

#### Off Campus
- Citizens with ReadySet units could act as “micro-utilities” for their communities.

### Conclusion

The correct application of a power system such as the ReadySet will result in an improvement in the quality of campus services. This conclusion is based upon the assumption that new technologies can be introduced to the campus over time, and that Seven Hills and Zion Ministries can establish partnerships with medical professionals in and out of Sierra Leone.

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